MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Physiology			
2.2 Course coordinator: Șef l dr Metz Erzsebet-Julia			
2.3 Practical activities coordinator(s): Conf. dr. Orbán-Kis Károly, Sef lucr. dr. Metz Júlia, Asist. univ. dr. Nyulas Tiberiu			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 10		3.2 lecture: 4	3.3 practical activities: 6
3.4 Total hours in curriculum: 70		3.2 lectures: 28	3.6 practical activities: 42
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			40
- supplemental documentation at the library, from specialized information portals and in the field			5
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			5
- tutorial activities			2
- examinations			3
- other activities			5
3.8 Total hours of individual study			60
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Knowledge of basic concepts before the beginning of the lectures: mass, volume, density, force, velocity, acceleration, pressure, friction, yield, frequency, wave, ion, current, ionic current, current intensity, electric field, tension, matter, molecule, solution, mole, concentration, diffusion, osmosis, affinity, pH.
4.2 competency: A. understanding the difference between process and structure B. understanding the difference between the properties and components of a structure, understanding the difference between a process and its parameters C. characterization of substructures and subprocesses (a smaller structure can be part of a larger one, a process can be part of a process line etc.) D. understanding the chronology of processes E. understanding causality and effect

5. Conditions

5.1 for lectures:
Lecture hall equipped with blackboard and digital projector

5.2 for practical activities:
Rooms equipped with laboratory equipment necessary for „hands on" type laboratory practices

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The correlation is made in the ESCO logic with the descriptors relevant to the dental medicine area and for the training of the future dentist, by focusing on: knowledge of medical sciences and human physiology, interpretation of medical results, analysis of scientific and medical data, critical thinking, application of medical sciences in problem solving and integration of knowledge in professional contexts.

7. Objectives of the discipline

7.1 General objective:
Integrated understanding the principles of normal body functions. The effect on the human body of the interaction between the body and its environment.

7.2 Specific objectives:
Knowledge of the physiological functions of the body as a whole and of the different systems and organs (macro-, microscopic and molecular details).
Recognition of problems caused by disturbances of the normal function.
Knowledge of the mechanisms of homeostasis.
Ability of individual learning and documentation.
Elaboration of functional tests and understanding, interpretation of the results.
Development of verbal skills, proper knowledge of terminology.

8. Learning outcomes

8.1 Knowledge:
Describe the normal functioning of major body systems, with emphasis on the stomatognathic system and its regulatory mechanisms.
Explain the physiological processes underlying mastication, salivation, swallowing, and speech.
Understand the principles of neurophysiology related to pain perception and oro-facial sensory control.
Recognize the mechanisms of homeostasis and their relevance to oral and systemic health.

8.2 Skills:
Apply physiological principles to interpret normal and altered oral functions in clinical contexts.
Correlate systemic physiological processes with oral health conditions and dental treatments.
Analyze patient-related factors (e.g., salivary flow, neuromuscular coordination) that influence dental procedures.
Use appropriate scientific terminology to communicate effectively within the dental healthcare team.

8.3 Responsibility and autonomy:
Demonstrate responsibility in applying physiological knowledge to ensure patient safety and comfort.
Make informed decisions within their scope of training when evaluating functional aspects of oral health.
Engage in self-directed learning to update and integrate physiological knowledge into clinical practice.
Collaborate responsibly with other healthcare professionals.

9. Specific competencies acquired

9.1 professional competencies:
Attending the Physiology lectures will allow the students to understand the functions of different organs and organ systems, and the integration of these functions. Besides the acquisition of the knowledge regarding the basic functions their correlation with the clinical practice is required as well, based also on the Pathophysiology and Pharmacology studied after the understanding of normal function. After attending the lectures students should be familiarized with the principles of the most frequently performed functional tests and able to perform simple experiments and interpret their results.
At the end of the lectures students should know the following key concepts and principles:
1. The general structure of the cells, with emphasis on the structure and functions of the cell membrane. Types and mechanisms of transport across the cell membrane.
2. The generation and spread of the electric impulse (resting membrane potential and action potential). The synaptic transmission, the general synaptic organization of the nervous system. The principles of muscle contraction.
3. The cardiovascular function, electrical and mechanical phenomena, heart cycle, principles of hemodynamics and circulation.
4. Physiology of blood: the role of red blood cells, white blood cells, platelets.
5. Physiology of respiration: respiration, ventilation, gas transport, control of respiration.
6. Physiology of the kidneys, filtration, tubular function, dilution and concentration of urine.
7. Gastrointestinal tract: salivary secretion, digestion, principles of nutrition.
8. Organization of the endocrine system, effects and mechanism of action of the main hormones, role of the endocrine system in the maintenance of homeostasis.

9.2 transversal competencies:
Knowledge of the connection between different mechanisms of homeostasis, the influence of the changes of the outer and inner environment, the multidisciplinary approach of the main mechanisms of life.
To work individually and in group to perform functional tests during the implementation of the theoretical knowledge.
Computer usage, continuous learning and self-testing.
To determine the necessity of biological tests, to plan and perform these.
To present the result of their own research in written or oral form in student's scientific events.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction, levels of organization of the human body. Inner environment and homeostasis. Cell membrane. Body fluid compartments. Diffusion. Osmosis. Oncotic pressure.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Oedema, joint swelling, loose stools, raised intracranial pressure, electrolyte and water balance.
2	Functions of the membrane proteins. Receptors. Types of the receptor-ligand interaction. Intracellular signal transduction. Activation-inactivation of proteins. Blood: introduction, hematocrit. Blood proteins. Red blood cells: morphology, number, function. Regulation of the red blood cell number. Hemoglobin. Iron metabolism. Blood types, blood transfusion.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Anemia, Rhesus haemolytic disease, transfusion of blood products, cyanosis, hetapomegaly, jaundice, acute liver disease/failure, chronic liver disease, gallbladder disease, breathlessness, malabsorption, tiredness, palpitations, drug reactions
3	White blood cells: general description, classification. Mechanisms of the immune system. Innate and adaptive immune system. The cells of the immune system and interactions between immune cells. Antigen and antibody. Antibodies: production, structure, roles, types. MHC antigens. CD antigens. Immune tolerance and immune vigilance.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Infectious disease of childhood, myeloproliferative disorders, Rhesus haemolytic disease, pruritus
4	Primary and secondary immune response. Effector mechanisms of the immune system: the cytotoxic T cell, the complement system, phagocytosis, killing (enzymatic and oxidative). Macrophage: role, substances produced by the macrophage. Eicosanoids. Mast cell.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Immunisation, allergic disorders, asthma, bullous/ vesicular skin eruption, shock
5	Histamine and its effects. Inflammation. Hemostasis: introduction, phases. Platelets	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Allergic disorders, asthma, coagulation disease, purpura.

6	Coagulation. Modulation of the coagulation cascade. Regulation of hemostasis. Laboratory assessment of hemostasis.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Coagulation disease, purpura, thromboembolic disease.
7	Physiology of the cardiovascular system – introduction, functional levels. Systemic and pulmonary circulation. Mechanical activity of the heart. Heart cycle. Heart sounds. Ionic channels and pumps. Membrane potential. Equilibrium potential. Action potential. Role of intracellular calcium ions. Generation and propagation of excitation. Recording of the electrical activity of the heart.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Cardiac conduction/rhythm disorder, cardiac valve disease, cardiorespiratory arrest, palpitations.
8	Elastic blood vessels. Pulse. Relationship between the diameter and elasticity of the vessels and the blood flow. Resistive blood vessels. Redistribution of circulation. Blood pressure. Control of the blood pressure. The renin-angiotensin system. Exchange level. Capillaries. Capacitive level. Regulation of the cardiac output. Factors that influence the venous return.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Cerebrovascular disease, peripheral vascular disease, shock, hypertension, varicose veins.
9	Renal physiology. Morpho-functional description of the kidneys. Clearance. Primary and final urine. Glomerular filtration and its control. Tubular function. Glucose-type resorption. The diluting and concentrating function of the kidneys. Control mechanisms.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Electrolyte and water balance, drug reactions, Acid base disturbance, acute renal disease/failure, anemia, chronic liver disease, disorders of lipid metabolism, hypertension, oedema, polyuria
10	Physiology of respiration. Ventilation. Perfusion. Alveolar gas exchange. Control of respiration.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Breathlessness, dizziness, pleural effusion, pneumothorax, respiratory tract infections.
11	Physiology of the nervous system: introduction. Neuron. Interneuronal communication types. Synaptic signaling. Excitatory and inhibitory neurotransmitters. The role of noradrenalin, dopamine, serotonin and acetylcholine in the nervous system.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Terminal care, post-operatie care, pre-operative care, cranial nerve disorders, brain tumor.
12	Sensory systems. Nociception. Receptors. Peripheral transmission of the nociceptive signal. Spinal processing of the nociceptive signal, cerebral polymodal integration.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Abdominal pain, back pain, pain management, migraine, peripheral nerve disorders.
13	Endocrine system: principles. Autocrine, paracrine and endocrine control. The hypothalamo-pituitary	Oral and multimedia presentation.	2	-	Psychosexual dysfunction, infertility, pituitary disorders, brain tumor, diabetes mellitus,

	system. Anterior and posterior pituitary gland. Adrenal cortex. Calcium and phosphate metabolism	Development of logical diagrams on the blackboard, discussion with students.			disorders of calcium and vitamin D metabolism, thyroid disorders, hypoglycaemia, hypogonadism.
14	Digestive physiology. Salivary secretion. Mastication. Secretion of gastric juice and its control. Gastrointestinal motility. Emesis and the control of emesis.	Oral and multimedia presentation. Development of logical diagrams on the blackboard, discussion with students.	2	-	Infant feeding, carcinoma of the stomach, carcinoma of the pancreas, gastroenteritis, acute liver disease/failure, gall bladder disease, chronic liver disease, oral disorders, eating disorders, peptic ulcer

Bibliography
Metz Júlia, Orbán-Kis Károly, Szilágyi Tibor: Physiology - lecture notes, 2021.
web-page of the Department of Physiology
Optional:
- Linda S. Costanzo: Physiology, Elsevier, 2017
- Berne & Levy Physiology, Elsevier, 2017
- W. Boron: Medical Physiology, Elsevier, 2016
- Guyton AC, Hall JE.: Textbook of Medical Physiology, Elsevier, 2016

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	General presentation of the laboratory of physiology. Safety procedures and rules in the physiology laboratory. Standards of professional ethics in experimental laboratory.	Oral presentation	3	-	not applicable
2	Measurement of plasma electrolytes.	Oral presentation + laboratory activity	3	-	Electrolyte and water balance, loose stools, oedema, vomiting.
3	Acid-base balance. The role of acid-base balance in homeostasis.	Oral presentation + laboratory activity	3	-	Electrolyte and water balance, acid-base disturbance.
4	Principles of blood cell count. Counting of red blood cells, leucocytes and eosinophiles	Oral presentation + laboratory activity	3	-	Anemia, cyanosis.
5	Leucogram. Peripheral blood smear.	Oral presentation + laboratory activity	3	-	Immunisation, asthma, pruritus.
6	Counting of thrombocytes. Bleeding and coagulation times.	Oral presentation + laboratory activity	3	-	Coagulation disease, purpura, thromboembolic disease.
7	Blood typing. Hemoglobin	Oral presentation + laboratory activity	3	-	Jaundice, Rhesus haemolytic disease, transfusion of blood products
8	Assessment of the cardiovascular system: pulse, blood pressure	Oral presentation + laboratory activity	3	-	Drug reactions, chest pain, disorders of lipid metabolism, ischemic heart.
9	Assessment of the cardiovascular system. Recording the electrical activity of the heart	Oral presentation + laboratory activity	3	-	Cardiac conduction/rhythm disorder, cardiorespiratory arrest, palpitations.

10	Functional assessment of the respiratory system.	Oral presentation + laboratory activity	3	-	Breathlessness, dizziness, stridor, pleural effusion, pneumothorax, reapiratory tract infection.
11	Functional assessment of the nervous system: reflexes, reaction time	Oral presentation + laboratory activity	3	-	Peripheral nerve disorders
12	Functional assessment of the endocrine system	Oral presentation + laboratory activity	3	-	Psychosexual dysfunction, infertility, pituitary disorders, brain tumor.
13	Assesment of the visual system. Assessmentof the auditory system	Oral presentation + laboratory activity	3	-	Visual impairment, visual loss, hearing loss
14	Formative evaluation: evaluation of knowledge obtained at the laboratory practices	-	3	-	not applicable
Bibliography web-page of the Department of Physiology					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

- the integration of molecular/cellular functions in organism-level functions;
- the normal function is on the base of pathological clinical conditions;
- performing experiments;
- interpretation of clinical tests.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Assessment of knowledge acquired during the semester	Written/MCQ/oral exam	30
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Assessment of theoretical knowledge gained during the semester	Summative assessment – Written/MCQ test	70

Minimal performance standards:
Students are required to attend laboratory practices according to the schedule of groups and rooms. Students should have a proper theoretical background. Students should perform certain practical activities and will be evaluated during the labs. If the student fails to fulfill the requirements, the lab should be repeated.
Students are allowed to attend further examinations only if they have no missed laboratory practices (regardless if the student was not present or validation of the laboratory practice was denied).
Students who failed to fulfill their obligations during the year have to repeat all the laboratory practices during the next academic year. The missed laboratory practices (regardless the cause: absence or not validated) can be recovered during the cycle of the laboratory practices (according to the schedule) or during the recuperations scheduled at the end of the module, but not more than one laboratory practice per day, depending on the existence of vacant seats in the room and with the permission of the teacher. According to The Rulebook of Didactic and Professional Activity of Students in Bachelor's and Master's Programs, the existence of a motivation form the Dean's Office means only that the student can recuperate without paying a fee.
Students are required to perform the given practical exercises and to keep a record of them. At the end of each laboratory practice, the assistant lecturer will certify with his/her signature the lab's validity.
Evaluation of knowledge obtained at the laboratory practices will be done by a formative assessment at the end of the semester (compulsory in the last week of the semester). This formative evaluation is part of the evaluation of the student's activity throughout the year: If the grade obtained at this evaluation is below 5.00, the physiology exam is automatically considered failed. If the formative assessment at the end of the semester is failed, it can be repeated in the reexamination sessions. Students who were absent for medical reasons (they must present proof), can recuperate the formative assessment at the end of the semester during the first, ordinary, session. The grade from the formative evaluation during the last week of the semester accounts for 30% of the final grade.

The final summative evaluation is a written test. At the final summative evaluation, only those students can participate who attended the formative assessment at the end of the semester. Students who were absent at the formative evaluation at the end of the semester are not allowed to participate at the final summative evaluation, as they did not complete their professional obligations.
At the summative evaluation, the entire curriculum is considered for integrative questions. The time for testing and the number of questions and answers may vary according to the number of lecture hours of the specialization. To pass the final summative evaluation, at least 50% of the maximum score of the test should be obtained. The final summative evaluation accounts for 70% of the final grade.
The mean value calculated from all the grades must be ≥5.00; otherwise the exam is considered failed.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Metz Erzsebet-Julia	Joi 10-12 --- Csütörtök 10-12

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Anatomy and embriology			
2.2 Course coordinator: Șef l dr Balmos Ioan-Alexandru			
2.3 Practical activities coordinator(s): Sef L dr/ Nechifor-Boila Ioan-Alin, Asist. Stanciu Nicolae			
2.2 Course coordinator: Șef l dr Nechifor-Boila Ioan-Alin			
2.3 Practical activities coordinator(s): Șef l dr Nechifor-Boila Ioan-Alin, Asist Stanciu Nicolae, Sef lucr Balmos Ionut			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 10		3.2 lecture: 4	3.3 practical activities: 6
3.4 Total hours in curriculum: 70		3.2 lectures: 28	3.6 practical activities: 42
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			30
- supplemental documentation at the library, from specialized information portals and in the field			10
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			20
- tutorial activities			0
- examinations			0
- other activities			0
3.8 Total hours of individual study			60
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Not applicable
4.2 competency: Basic knowledge in biology, a fair command of the English language, basic understanding and communication skills

5. Conditions

5.1 for lectures: A blackboard of min. 5 m2, colored chalks, projecting device, inclusive an adequate software for presenting static and motion pictures
5.2 for practical activities: Anatomical specimens, human corpse

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and

Occupations)

The discipline of Anatomy correlates closely with the ESCO (European Skills, Competences, Qualifications and Occupations) framework, primarily through the knowledge pillar, functioning as foundational 'Knowledge' (K) and 'Skill' (S) concepts essential for numerous healthcare and life science occupations. Anatomy acts as a core scientific pillar, supporting clinical diagnosis, physical examination, and procedural skills
In the ESCO taxonomy, anatomy-related knowledge is frequently categorized under 'Health and welfare' (ISCO-08 group 22).
- Key Correlations in ESCO
ESCO classifies skills into knowledge, skills, and competences. Anatomy correlates to several areas:
1. Human Anatomy Knowledge: This includes detailed knowledge of body structures, organ systems, and spatial relationships, which is essential for diagnosing diseases.
2. Physical Examination Skills: Anatomy is essential for skills related to palpation, identifying anatomical landmarks, and examining patients.
3. Clinical Imaging/Radiology: Knowledge of anatomy enables professionals to interpret diagnostic imaging, such as X-rays, MRIs, and CT scans.
4. Surgical and Invasive Procedures: Anatomy is critical for professions requiring precision in surgical procedures, ensuring patient safety and treatment effectiveness.
5. Anatomical Pathology: Knowledge related to diagnosing diseases based on macroscopic, microscopic, and biochemical examination of organs and tissues.
- ESCO Occupations Correlated with Anatomy
Anatomy knowledge is essential or optional for the following ESCO-listed occupations:
1. Doctors/Medical Practitioners: Surgeons, General Practitioners, Radiologists, Pathologists, Dentist
2. Nursing and Midwifery Professionals:
3. Emergency Service Personnel: Paramedics and medical assistants
- Mapping Anatomy to ESCO Structure
Anatomy knowledge connects to ESCO through:
1. Essential Skills/Knowledge: For surgeons, deep anatomical knowledge is marked as essential.
2. Optional Skills/Knowledge: For administrative staff in health settings, general anatomy knowledge may be optional.
3. Cross-sectoral Reusability: Anatomy knowledge is useful in various sectors, including education (teaching biology) and health research
Through these correlations, ESCO uses anatomy as a foundational knowledge component to build professional occupational profiles that ensure safe and competent healthcare delivery

7. Objectives of the discipline

7.1 General objective:
The student becomes acquiesced with the principles of organization, development and functions of the dentomaxillary apparatus generally, and with the specific human aspects particularly. He becomes able to observe and to anticipate the topographic relations between the components of the human dentomaxillary apparatus and to interpret them in a functional context. The student will gain practical and detailed knowledge about the development of the dentomaxillary apparatus and the oral cavity, parts of the body that yet are to be studied which represent the area of their medical activity. The student will comprehend the interrelations between the various components and will be able to make distinction their variations falling within the normal limits versus the pathological phenomena and will also acquire the ability to communicate about this the observations and share his experience with others.

7.2 Specific objectives:
Learning the functional anatomy of the dentomaxillary apparatus, its components, the philogenesis and ontogenesis of the face and of the neck, of the regional anatomy, radiologic anatomy, anthropometry and biochronology. From a functional point of view, emphasis is set on the biomechanics of the motions in the TMJ, of the mastication and of the deglutition. The student will be able for a theoretical and a practical orientation in the oral cavity, especially in the entourage of the dentomaxillary arches. He will develop a vision about the shape and content of the oral cavity with a clear notion of the normal within, both morphologically and functionally, which in turn will serve as a reference when the task will be the restoration of normal relations through his therapeutical activity. The student will also develop an appropriate and detailed vocabulary used in all of the branches of the science he has chosen. The acquired knowledge will serve as a basis for the further studies and the specific sciences in dentistry.

8. Learning outcomes

8.1 Knowledge:
knowledge of anatomy of the trunk and limbs

8.2 Skills:
knowledge of anatomy of the trunk and limbs

8.3 Responsibility and autonomy:
none

9. Specific competencies acquired

9.1 professional competencies: Describing and interpreting fundamental notions of the morphology and functioning of the dentomaxillary apparatus, integration of these in concepts/situations meant to apply solutions with the aim of formulating hypotheses and to correctly interpret signs, symptoms and paraclinical modifications for building a morphological and a clinical diagnosis, developing of novel professional competences in the general and the specific dentistry healthcare.
9.2 transversal competencies: Acquiring skills and techniques which enable identification of objectives to be fulfilled, of resources available, of the conditions to match, of the work phases, of the deadlines and afferent risks according to a minimal standard: implementation of projects under coordination for solving certain problems specific of the field
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to the study of the anatomy. General osteology.	Oral presentation, Powerpoint presentation, Video materials	2	-	Osteoarthrits. Osteomyelitis. Osteoporosis
2	The articulated skeleton (vertebral column, osteothorax, pelvis)	Oral presentation, Powerpoint presentation, Video materials	2	-	Vertebral pathology Thoraco abdominal trauma
3	General arthrology and myology. Biomechanics of joints and muscles	Oral presentation, Powerpoint presentation, Video materials	2	-	Movement disorders, joint pain, joint swealling
4	Upper and lower limb muscles	Oral presentation, Powerpoint presentation, Video materials	2	-	Oral presentation, Powerpoint presentation, Video materials
5	Blood supply of the superior limb. Brachial plexus	Oral presentation, Powerpoint presentation, Video materials	2	-	Peripheral vascular disorders
6	Blood supply of the inferior limb. Lombosacral plexus	Oral presentation, Powerpoint presentation, Video materials	2	-	Peripheral vascular disorders
7	Application of the knowledge on clinical cases	TBL	2	-	-
8	A topographic synthesis of the walls of the cavities of the torsA topographic synthesis of the walls of the cavities of the torso. The zones of lesser resistance.	Oral presentation, Powerpoint presentation, Video materials	2	-	Muscular disorders. Herniae
9	Anatomy of the mediastinum. Functional anatomy of the lungs Functional anatomy of the heart.	Oral presentation, Powerpoint presentation, Video materials	2	-	Pleuraesia Pneumothorax Thoracoabdominal trauma
10	Anatomy of the abdominal cavities. Peritoneum and the peritoneal formations.	Oral presentation, Powerpoint presentation, Video materials	2	-	Peritonitis Appendicitis Feeding disorders

11	Blood supply of the abdominal organs Functional anatomy of the liver. System of the port hepatic vein. Vascularization and innervation of retroperitoneum.	Oral presentation, Powerpoint presentation, Video materials	2	-	Hepatomegalia, Coagulopathies, Chronic hepathic disorders, Hepatic encephalopathies, Gall bladder disorders, Acute hepatic disorders
12	Functional anatomy of the urogenital organs	Oral presentation, Powerpoint presentation, Video materials	2	-	Chronic renal disorders Pathology of the prostate Urinary incontinence
13	A topographic synthesis of the of the pelvis and perineum in male and in female	Oral presentation, Powerpoint presentation, Video materials	2	-	Anorectal pain
14	Application of the knowledge on clinical cases	TBL	2	-	-

Bibliography

1.Richard Drake, PhD, A. Wayne Vogl, PhD and Adam W. M. Mitchell. Gray's Anatomy. ISBN: 978-0-443-06952-9.
2.Romanes: Cunningham’s Practical Anatomy vol I.-I.-III.

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The bones of the torso. The bones of the facial skeleton, the maxilla, the mandible, the hyoid bone. Frontal, parietal and ethmoid bones. Temporal and occipital bones.	Demonstrations on preparats human corpse	3	-	-
2	The bony nasal cavity, the bony orbit, the pterygopalatine fossa. The infratemporal fossa, the temporal fossa and the bony palate. The internal and external skull base	Demonstrations on preparats human corpse	3	-	-
3	The bones of the superior limb. Muscles of the superior limb.	Demonstrations on preparats human corpse	3	-	-
4	Vessels of the superior limb. Regions of the shoulder girdle. Nerves of the super limb. Regions of the arm of the elbow and of the forearm. Regions of the forearm, of the wrist, of the hand	Demonstrations on preparats human corpse	3	-	-
5	The bones of the inferior limb. Muscles of the inferior limb.	Demonstrations on preparats human corpse	3	-	-
6	Vessels of the inferior limb. Regions of the pelvic girdle. Nerves of the inferior limb. Regions of the thigh, knee and calf.	Demonstrations on preparats human corpse	3	-	-
7	Osteology seminar	Demonstrations on preparats human corpse	3	-	-
8	Muscles and regions of the trunk. Intercostal spaces. Descriptive anatomy of the lungs and pleurae.	Demonstrations on preparats human corpse	3	-	-
9	External configuration of the heart, its cavities, the great vessels. Topography of the mediastinum. Pericardium and the diaphragmatic region.	Demonstrations on preparats human corpse	3	-	-
10	Anatomy of the stomach, of the liver and of the pancreas. The hepatic compartment.	Demonstrations on preparats human corpse	3	-	-
11	The compartment of the stomach. Descriptive anatomy of the intestines. The inframezocolic compartment.	Demonstrations on preparats human corpse	3	-	-
12	Descriptive anatomy of the kidneys and urinary ways.	Demonstrations on preparats human corpse	3	-	-
13	Anatomy of the retroperitoneum	Demonstrations on preparats human corpse	3	-	-

14	Application of the knowledge on clinical cases	Demonstrations on preparats human corpse	3	-	-

Bibliography
1.Richard Drake, PhD, A. Wayne Vogl, PhD and Adam W. M. Mitchell. Gray's Anatomy. ISBN: 978-0-443-06952-9.
2.Romanes: Cunningham’s Practical Anatomy vol I.-II.-III.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Practical value of the classes, not merely of the practical for gaining skills and competence for qualification.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Seminar of osteology	Oral examination	20
- lecture	TBL	MCQ TEST	10
Final evaluation			
- practical final exam	Paper based exam	Identifying structures on pictures	30
- theoretical final exam	Paper based exam	MCQ TEST	40

Minimal performance standards:
Student is supposed to know the interrelations between the systems and subsystems of the body, to make a distinction between variations within the limits of normal and to discern the pathological. He is also due to communicate about these with others. The student develops a correct vision about the shape and content of the living body, the functional normality which is to re-establish by his therapeutic attitude. The student also builds up a vocabulary that well be used in his further day-by day work

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Balmos Ioan-Alexandru	Every Wednesday during Module 1, from 6PM to 8PM, in the Anatomy Department Library.
Șef l dr Nechifor-Boila Ioan-Alin	Marti 10-12 biblioteca disciplinei de anatomie

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Behavioral sciences. Medical sociology. Medical psychology			
2.2 Course coordinator: Conf dr Sălcudean Andreea			
2.3 Practical activities coordinator(s): Cimpian Dora, Bodo Cristina Raluca			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			7
- supplemental documentation at the library, from specialized information portals and in the field			7
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			4
- tutorial activities			2
- examinations			2
- other activities			2
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: lecture theatre, video projector, blackboard, chalk, internet connection
5.2 for practical activities: lecture theatre, video projector, blackboard, chalk, internet connection

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The course ‘Behavioral Sciences: Medical Sociology and Medical Psychology’ contributes to the development of the competences defined within the ESCO framework for the occupations relevant to the study programe, by developing the knowledge, skills and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective: To raise awareness of the importance of human knowledge in various aspects by adopting an appropriate behavioral attitude
7.2 Specific objectives: - applying strategies to understand the age-related characteristics of patients - introduce students with the elements of psychotherapy specific to patients' diagnoses - understanding the ways in which human behavior manifests itself in all its complexity

8. Learning outcomes

8.1 Knowledge: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.
8.2 Skills: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.
8.3 Responsibility and autonomy: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.

9. Specific competencies acquired

9.1 professional competencies: - A professional approach to the health-illness relationship in the context of understanding human development factors - Drawing up a personality profile based on bio-psycho-social factors - Social integration of the patient
9.2 transversal competencies: - Developing concepts of prevention and psychosocial recovery for patients
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Medical sociology – definitions, research methods and techniques. The social aspect of health and illness	conversation, discussion, explanation, demonstration, case study	2	-	no
2	Healthcare and its social role. The psychosocial impact of the hospitalisation process on the patient. Elements of social thanatology	conversation, discussion, explanation, demonstration, case study	2	-	no
3	Elements of medical psychology – the health-illness duality	conversation, discussion, explanation, demonstration, case study	2	-	no
4	Structures of doctor-patient communication and interaction	conversation, discussion, explanation, demonstration, case study	2	TBL	no
5	Human behaviour – general aspects of assessment and the bio-psycho-social factors of development	conversation, discussion, explanation, demonstration, case study	2	-	no
6	Distinctive and dysfunctional personality traits	conversation, discussion, explanation, demonstration, case study	2	-	no
7	Emotional instability and how to deal with it	conversation, discussion, explanation, demonstration, case study	2	-	no

Bibliography
1. STRETE EG. Concepts of behavioural sciences in medical practice. 2024.
2. Salcudean A, Strete E.G, Ban A.R, Lica (Cozma) M.M., Nan A.G., Bodo C.R.: Concepts of Medical Ethics and Malpractice – Ed University Press, 2021
2. Gabos Grecu Marieta: Bioethics, Ed University Press, Tg Mureș, 2015.
3. Gavrilovici C. – Introduction to Bioethics. Lecture Notes, Ed. Junimea Iași 2007.
4. Bonnie Steinbock (editor): The Oxford Handbook of Bioethics. Oxford University Press, 2007

10.2 Content of seminar, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The Origins of Human Behavior. Case study.	conversation, discussion, explanation, demonstration, case study	2	-	no
2	Types of human behavior. Deviant behavior. DISC Model. Case study.	conversation, discussion, explanation, demonstration, case study	2	-	no
3	The OCEAN model of human personality.	conversation, discussion, explanation, demonstration, case study	2	-	no
4	The cluster approach of the personality disorders. Case study cluster A,C	conversation, discussion, explanation, demonstration, case study	2	-	no
5	The cluster approach of the personality disorders. Case study cluster B.	conversation, discussion, explanation, demonstration, case study	2	-	no
6	Sociological aspects of the approach to illness. Case study.	conversation, discussion, explanation, demonstration, case study	2	-	no
7	Functions of the Human Mind: A Practical Overview	conversation, discussion, explanation, demonstration, case study	2	-	no

Bibliography
1. STRETE EG. Concepts of behavioural sciences in medical practice. 2024.
2. Salcudean A, Strete E.G, Ban A.R, Lica (Cozma) M.M., Nan A.G., Bodo C.R.: Concepts of Medical Ethics and Malpractice – Ed University Press, 2021
2. Gabos Grecu Marieta: Bioethics, Ed University Press, Tg Mureș, 2015.
3. Gavrilovici C. – Introduction to Bioethics. Lecture Notes, Ed. Junimea Iași 2007.
4. Bonnie Steinbock (editor): The Oxford Handbook of Bioethics. Oxford University Press, 2007.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	Depending on the nature of the subject	TBL	30
Final evaluation			
- practical final exam	Depending on the nature of the subject	Essay on the topics covered in the course	10
- theoretical final exam	Depending on the nature of the subject	Theoretical exam	60

Minimal performance standards:
- to be familiar with and defend the subject matter with logical arguments
- to identify elements of human behavioural pathology in everyday situations
- demonstrate the ability to approach the subject from a multidisciplinary perspective

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Sălcudean Andreea	15 minutes after each lecture / practical session

Head of departament	Course coordinator	Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Diet principles in oral pathology			
2.2 Course coordinator: Prof dr Tarcea Monica			
2.3 Practical activities coordinator(s): Asist. Maior Raluca			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			6
- supplemental documentation at the library, from specialized information portals and in the field			6
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			6
- tutorial activities			4
- examinations			2
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: - nu e cazul
4.2 competency: - nu e cazul

5. Conditions

5.1 for lectures: minim 15 cursanti
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

assess the nutritional status in relation with dental status, evaluate the food and nutritients needs, create a dietetic plan

7. Objectives of the discipline

7.1 General objective: - Learning of basic diet principles and how to elaborate on specific diets recommended in various oral and dental illnesses. - To monitor and evaluate the hazards related to nutrition, their effects on teeth and oral mucosa, and proper intervention to reduce and prevent the illnesses related to it and to promote the dental health status of the population.
7.2 Specific objectives: - Analysis of main components of a healthy diet with a good impact on teeth - Identification of general functions and major food sources for each nutrient necessary for dental and oral system - To know the methodology of evaluation of food quality and food safety.

8. Learning outcomes

8.1 Knowledge: to know the basic principles related to adequate nutrition during lifecycle to evaluate the nutritional status of a patient and know how to intervene to manage the oral health status by applying proper preventive measures manage obesity and malnutrition conditions evaluating the nutritional needs of a patient with chronic illnesses or cancer
8.2 Skills: knowing how to evaluate the nutritional and health status of a patient to elaborate proper recommendations for preventing or treating oral diseases through diet and lifestyle to manage malnutrition to calculate the needs for energy and nutrients for a person
8.3 Responsibility and autonomy: • Selects appropriate bibliographic sources and analyzes them. • Respects the principles of academic ethics, correctly citing the bibliographic sources used. • Demonstrates receptivity to new learning contexts • Demonstrates collaboration with other colleagues to support work in the multidisciplinary team. • Demonstrates autonomy in organizing the learning context or the problem situation to be solved • Promotes correct education and information in the field of nutrition, contributing through new solutions related to the field to improve the quality of social life and community health. • Analyzes and interprets business opportunities and/or entrepreneurial development in the field of nutrition and health. • Demonstrates disease management skills through appropriate mediation, communication and counseling.

9. Specific competencies acquired

9.1 professional competencies: - Description of concepts specific to nutrition and diet. - Analysis of dental health issues related to food and nutrition. - Evaluation of nutrition status and nutrition needs during the life cycle and oral illnesses. - Plan and elaborate, specific menus linked to oral pathology - Implementation of projects, ability to collect information, and to train health education on various topics in patients, to promote the population's health status.
9.2 transversal competencies: • - To monitor the child's dental development based on healthy nutrition, as well as education in school-related to preventive oral medicine. • - To identify roles and responsibilities in a multidisciplinary team and specific projects, with proper evaluation and enforcement of ethics and professional ethics • - To know how to elaborate on the effective use of information sources and communication, for professional training and personal development. • - To identify lifestyle health risks and the proper ways to prevent them.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Definition and importance of nutrition in for a healthy dental status and prevention of chronic diseases. Healthy diet principles for mouth and teeth.	Oral presentation and multimedia	2	-	disorders of calcium and vitamin D metab
2	Dietary assessment. Digestion, absorbtion and metabolism of food and nutrients and dental impact.	Oral presentation and multimedia	2	-	eating disorders
3	Dietary reference and nutrients and caloric intakes for the body. Major food sources recommended in oral pathology and cooking technics	Oral presentation and multimedia	2	-	eating disorders
4	Diet recommendations during life cycle for healthy teeth: children, teenagers, adults, senior, athletes and pregnant women.	Oral presentation and multimedia	2	TBL	malabsorbtion
5	Diets and menus recommended in various oral and dental ilnesses like: caries, edentations, trush, granulomatosis, dermatosis, candidiasis or viral infections.	Oral presentation and multimedia	2	-	candidiosis
6	Diets and menus recommended in cancer	Oral presentation and multimedia	2	-	malnutrition
7	Diets and lifestyle practices recommended in diabetes, heavy metals poisoning, fluorosis or xerostomia	Oral presentation and multimedia	2	Final evaluation by Essay	xerostomiosis

Bibliography

1. Mahan LK, Escott-Stump S. - Krause's Food, Nutrition, and Diet Therapy. 14th ed. W.B. Saunders Co, Philadelphia, 2014.

Bibliografie suport:

2. Nnakwe NE. – Community Nutrition, Planning Health promotion and Disease Prevention, 3rd edition, Edit. Jones & Bartlett Learning, 2017

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	1. Definition and importance of nutrition in for a healthy dental status and prevention of chronic diseases. Healthy diet principles for mouth and teeth.	Oral presentation and multimedia	2	-	-
2	2. Dietary assessment. Digestion, absorbtion and metabolism of food and nutrients and dental impact.	Oral presentation and multimedia	2	-	-
3	3. Dietary reference and nutrients and caloric intakes for the body. Major food sources reccomended in oral pathology and cooking technics.	Oral presentation and multimedia	2	-	-
4	4. Diet recommendations during life cycle for healthy teeth: children, teenagers, adults, senior, athletes and pregnant women.	Oral presentation and multimedia	2	-	-
5	5. Diets and menus recommended in various oral and dental ilnesses like: caries, edentations, trush, granulomatosis, dermatosis, candidiasis or viral infections.	Oral presentation and multimedia	2	-	-
6	6. Diets and menus recommended in cancer.	Oral presentation and multimedia	2	-	-
7	Verificare practica	Test grila	2	-	-

Bibliography

1. Mahan LK, Escott-Stump S. - Krause's Food, Nutrition, and Diet Therapy. 12th ed. W.B. Saunders Co, Philadelphia, 2008. ISBN: 9781416034018.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Evaluation and analysis of food nutritional risk factors and proper implementation of dental health programs, preventive measures, and education training forthe population.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final

			grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	TBL	test grila	10
Final evaluation			
- practical final exam	Studii de caz	Discutii, dezbateri	30
- theoretical final exam	Verificare	Referat	60
Minimal performance standards: - admitere la examenul practic doar daca nu depaseste 50% din absente nerecuperate - nota minima 5 la practic si teoretic			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Tarcea Monica	30 minute dupa curs sau lucrări practice

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: -
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Cybersecurity awareness training			
2.2 Course coordinator: Prof dr Enăchescu Călin			
2.3 Practical activities coordinator(s): Șef l dr Pop Dănuț-Ovidiu			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: knowledge of PC use, knowledge of Internet use

5. Conditions

5.1 for lectures: classroom with video projector and Internet
5.2 for practical activities: classroom with video projector and Internet

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Advanced Digital Competencies contributes to the development of the competencies defined within the ESCO framework for occupations relevant to the study program, by developing knowledge, skills and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective: The discipline underpins the field of cyber security – terminology, threats, vulnerabilities, risks, cyber attacks, protection and response measures to IT security incidents, disaster recovery measures. Through the topics covered, the course raises the degree of preparation and awareness of students in the field of the urgent need to protect data, services and systems in the context of the Security by Design paradigm.
7.2 Specific objectives: After completing the assignments, students will be able to understand the fundamental concepts of cyber security in the context of an increasingly digitized society. The content is focused on the concrete presentation of the main topics in the field of cyber security adapted to the requirements necessary to protect data, IT systems and services, and the appropriate tools for developing cyber resilience capacities and increasing the level of culture in the field of cyber security. Students will understand the risks related to the processing and storage of data in a virtual environment, the risks of using the Internet and interconnected computing systems, and will be able to identify and choose methods and mechanisms that provide an adequate degree of protection of personal IT data, systems and services and organizational.

8. Learning outcomes

8.1 Knowledge: RI-DF 6.1. The student / graduate explains theoretical results, experimental results and technical documentation associated with industrial products, phenomena and processes. RI-S 11.1. The student / graduate recognizes current trends in digitalization, Industry 4.0 and intelligent production management.
8.2 Skills: RI-DF 6.2.3 The student / graduate interprets industrial phenomena and processes and operates with them. RI-S 11.2 The student / graduate analyzes the impact of digital transformation on production flows and economic decisions.
8.3 Responsibility and autonomy: RI-S 11.3.1 The student / graduate coordinates digitalization activities, taking responsibility for implementing technological change.

9. Specific competencies acquired

9.1 professional competencies: Elaboration and communication of plans and projects in the field of ensuring cyber security. Identifying cyber security dimensions. The use of cyber security techniques, mechanisms and procedures for the protection of personal and organizational data.
9.2 transversal competencies: Optimum management of professional tasks and learning to execute them on time, rigorously, efficiently and responsibly; Compliance with ethical rules specific to the field (eg: confidentiality) Application of team communication techniques; the development of empathic interpersonal communication skills and the assumption of specific roles in teamwork with the aim of making the group's activity more efficient and saving resources, including human resources Identifying and using effective learning methods and techniques; awareness of the extrinsic and intrinsic motivations of continuous learning.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to Cyber Security. The need for cyber security. Domains of cyber security.	Problem-based learning (lecture / description of the problem, problematization / parameterization,	2	-	-

		identification of solutions, explanation / conversation, case studies, dissemination of results)			
2	Protection of data and personal privacy. Organizational protection. Behavioral approach to cyber security. Programmatic approach to cyber security.	Problem-based learning (lecture / description of the problem, problematization / parameterization, identification of solutions, explanation / conversation, case studies, dissemination of results)	2	-	-
3	Dimensions of cyber security. The CIA Triad (Confidentiality, Integrity, Availability). Cyber security guarantees.	Problem-based learning (lecture / description of the problem, problematization / parameterization, identification of solutions, explanation / conversation, case studies, dissemination of results)	2	-	-
4	Cyber Threats, Vulnerabilities and Attacks – Concepts, Mechanisms and Techniques. Countermeasures against cyber threats. Understanding reactive, proactive and operational security.	Problem-based learning (lecture / description of the problem, problematization / parameterization, identification of solutions, explanation / conversation, case studies, dissemination of results)	2	-	-
5	Data encryption as a mechanism to provide data privacy. Access control. Data masking as a data security and protection mechanism.	Problem-based learning (lecture / description of the problem, problematization / parameterization, identification of solutions, explanation / conversation, case studies, dissemination of results)	2	-	-
6	Data integrity. Types of data integrity checks.	Problem-based learning (lecture / description of the problem, problematization / parameterization, identification of solutions, explanation / conversation, case studies, dissemination of results)	2	-	-
7	Availability of IT systems and services (The Five Nines concept). Responding to IT security incidents. Disaster recovery.	Problem-based learning (lecture / description of the problem, problematization / parameterization, identification of solutions, explanation / conversation, case studies, dissemination of results)	2	-	-

Bibliography

1. Augenbaum S., The Secret to Cybersecurity: A Simple Plan to Protect Your Family and Business fromCybercrime, Forefront Books, 2019.
2. Cisco Networking Academy, Cybersecurity Essentials, v1.1, https://www.netacad.com.
3. Evans L., Cybersecurity: What You Need to Know About Computer and Cyber Security, Social Engineering,The Internet of Things + An Essential Guide to Ethical Hacking for Beginners, Independently published, 2019.
4. Evans L., Cybersecurity: An Essential Guide to Computer and Cyber Security for Beginners, Including EthicalHacking, Risk Assessment, Social Engineering, Attack and Defense Strategies, and Cyberwarfare, Independentlypublished, 2018.
5. Kennedy G., Data Privacy Law: A Practical Guide to the GDPR, Bowker, 2019.
6. Stallings W., Cryptography and Network Security: Principles and Practice, 8th Edition, Pearson, 2020.

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Identification of security risks and threats at personal and organizational level. The concept of exploit	Project-based learning (exposure / description of the project problem, project management, parameterization of input data, examples, demonstrations and practical solutions, dissemination, analysis and collaborative interpretation of results)	2	-	-
2	Types of attack. Analysis of a cyber attack.	Project-based learning (exposure / description of the project problem, project management, parameterization of input data, examples, demonstrations and practical solutions, dissemination, analysis	2	-	-

		and collaborative interpretation of results)			
3	Penetration testing and vulnerability scanning – methods of protecting and evaluating the security of an IT system / service / application or a communications infrastructure.	Project-based learning (exposure / description of the project problem, project management, parameterization of input data, examples, demonstrations and practical solutions, dissemination, analysis and collaborative interpretation of results)	2	-	-
4	Symmetric and asymmetric encryption mechanisms. Digital data integrity. Infrastructures based on public keys.	Project-based learning (exposure / description of the project problem, project management, parameterization of input data, examples, demonstrations and practical solutions, dissemination, analysis and collaborative interpretation of results)	2	-	-
5	IT security incident response methods and procedures.	Project-based learning (exposure / description of the project problem, project management, parameterization of input data, examples, demonstrations and practical solutions, dissemination, analysis and collaborative interpretation of results)	2	-	-
6	Practical implementation of a set of security procedures and policies at personal and organizational level.	Project-based learning (exposure / description of the project problem, project management, parameterization of input data, examples, demonstrations and practical solutions, dissemination, analysis and collaborative interpretation of results)	2	-	-
7	Security by Design – designing and implementing an IT security system architecture.	Project-based learning (exposure / description of the project problem, project management, parameterization of input data, examples, demonstrations and practical solutions, dissemination, analysis and collaborative interpretation of results)	2	-	-

Bibliography

1. Cisco Networking Academy, Cybersecurity Essentials, v1.1, https://www.netacad.com.
2. Clark K., Hacking, The Ultimate Comprehensive Step-By-Step Guide to the Basics of Ethical Hacking, 2019.
3. Neil I., CompTIA Security+ Certification Guide: Master IT security essentials and exam topics for CompTIASecurity+ SY0-501 certification, Packt Publishing, 2018.
4. Pillay R., Learn Penetration Testing: Understand the art of penetration testing and develop your white hathacker skills, Packt Publishing, 2019.
5. Stallings W., Cryptography and Network Security: Principles and Practice, 7th Edition, Pearson, 2016.
6. Walker M., CEH Certified Ethical Hacker All-in-One Exam Guide, Fourth Edition, 4th Edition, McGraw-HillEducation, 2019.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Corroboration of the contents of the discipline with the expectations of community representatives, professional associations and representative employers in the field related to the program:
Today's society has become totally dependent on technology, and especially on managing data in digital format. The role of cyber security, both for individuals and organizations, regardless of their business, is vital for data protection and for guaranteeing the functioning of IT services, systems and infrastructures. The inclusion of security procedures and policies within professional activities is no longer an end in itself, but an objective necessity. For this reason, the discipline is structured in a practical and pragmatic way to respond to these realities. Moreover, the entry into force of the GDPR legislation imposes strict measures regarding the protection of personal data in the European Union space, which determines the obligation of digital culturalization in the field of cyber security of every employee in every organization / company. In this context, the topics studied provide the set of information necessary for the understanding and application of the protection mechanisms of digital data and IT infrastructures.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Acquiring and understanding the treated issue	written test	50

- lecture	Formative assessment to verify preparation throughout the semester. The ability to analyze and synthesize	TBL testing	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Summative evaluation to verify the preparation and understanding of the course topic. Knowledge of fundamental notions and concepts.	written test	20
Minimal performance standards: - Knowledge of the concepts, mechanisms and techniques that underpin the field of cyber security. - Identifying the dimensions of cyber security. - Designing basic sets of security procedures and policies at personal and organizational level. - A minimum grade of 5 must be obtained for each evaluation and each exam.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Enăchescu Călin	tuesday from 12 to 14

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Medical deontology. Bioethics			
2.2 Course coordinator: Conf dr Sălcudean Andreea			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			10
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			10
- tutorial activities			2
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: Not applicable
4.2 competency: Not applicable

5. Conditions

5.1 for lectures: Not applicable
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The Bioethics and Medical Deontology course is aligned with the competences and knowledge defined in the ESCO framework, supporting the development of skills related to the application of ethical principles, adherence to deontological norms, and the assumption of professional responsibility in medical practice.

7. Objectives of the discipline

7.1 General objective: - To understand the importance of medical ethics / ethics and bioethics from a multidisciplinary perspective involving medicine, philosophy, psychology, theology and law, as well as their application in the medical context; - To ensure optimal preparation and awareness by students of the imminent problems of medical ethics and bioethics.
7.2 Specific objectives: - To learn and apply the principles of medical ethics and bioethics in relation to patients; - To demonstrate respect for the rights of patients, taking into account the concepts of suffering and dignity; - To know the legislation regarding the current ethical issues in the medical context.

8. Learning outcomes

8.1 Knowledge: -Understanding the specific features of the discipline and operating within this context using its cognitive strategies -Applying bioethical and medical deontological principles appropriately within a given context
8.2 Skills: -Integrating medical ethics into clinical practice -Using appropriate terminology related to the Code of Medical Deontology -Solving ethical problems in a responsible manner -Understanding elements of cultural diversity -Promoting non-discrimination in medical practic
8.3 Responsibility and autonomy: The knowledge acquired in this field represents the practical means of applying, both individually and collectively, the norms of medical ethics and deontology.

9. Specific competencies acquired

9.1 professional competencies: - To acquire the skills for integrating the principles of ethics and bioethics in the practice of the medical profession; - To understand the issues and implications of ethics and bioethics in the medical field; - To recognize the importance of the therapeutic relationship and respect for patients' rights, in accordance with ethical and bioethical rules; - To correlate bioethics concepts with health legislation.
9.2 transversal competencies: - To acquire knowledge about avoiding malpractice and other unethical attitudes; - To understand the connection between the practice of the medical profession and medical ethics; - To develop problem-solving skills in the medical profession, from the perspective of medical ethics and deontology.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	An introduction in the problematics of ethics and bioethics	Oral presentation, Powerpoint presentation	2	-	Without ICS correlation
2	Consent, truth telling, and confidentiality in relation to patients	Oral presentation, Powerpoint presentation	2	-	Without ICS correlation
3	Genetic interventions. Is everything that can be scientifically proven also ethical?	Oral presentation, Powerpoint presentation	2	-	Without ICS correlation
4	Physician-Assisted Death and Euthanasia	Oral presentation, Powerpoint presentation	2	-	Without ICS correlation
5	Ethical and bioethical issues regarding abortions	TBL	2	-	Without ICS correlation
6	The implications of ethics and bioethics in mental disorders	Oral presentation, Powerpoint presentation	2	-	Without ICS correlation

7	Conflict of interest and medical disclosure. Multicultural and religious perspectives in bioethics	Oral presentation, Powerpoint presentation	2	-	Without ICS correlation

Bibliography
1. Dunn, M., Hope, T., (2018). Medical Ethics: A Very Short Introduction, Oxford: OUP Oxford.
2. Pattinson S.D. (2020) Medical Law and Ethics, 6th edition, London: Sweet & Maxwell.
3. Sokol, D. (2018) Tough Choices: Stories from the front line of medical ethics, London: Book Guild Publishing Ltd.
4. Di Maria, A. (2019). Exploring Ethical Dilemmas in Art Therapy: 50 Clinicians From 20 Countries Share Their Stories, Londra : Routledge.
5. Kaczor, C. (2020). Disputes in Bioethics: Abortion, Euthanasia, and Other Controversies, Indiana: University of Notre Dame Press.
6. McLean. S.A.M. (2006) First do no harm: law, ethics and healthcare, Hampshire: Ashgate Publishing Limited.
7. Pattinson S.D. (2020) Medical Law and Ethics, 6th edition, London: Sweet & Maxwell.
8. Singer, P.A., Viens, A.M. (2008). The Cambridge Textbook of Bioethics, New York: Cambridge University Press.
9. Sokol, D. (2018) Tough Choices: Stories from the front line of medical ethics, London: Book Guild Publishing Ltd.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

By focusing on issues such as human dignity and suffering, emphasizing the importance of respecting patients' rights, medical ethics and bioethics are integrated into all medical specializations, both in terms of clinical practice and research.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	Comprehension of bioethics and medical deontology concepts	Project/TBL	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Acquisition of theoretical knowledge and application of bioethics and medical deontology concepts	Multiple choice test/ Final theoretical project	70

Minimal performance standards:
The examination will take place at the end of each semester, during the pre-examination period. The final grade will be calculated with the above formula. Students must understand and apply the specific methods of bioethics and medical deontology, arguing each case logically, coherently and correctly.
The minimum graduation grade is 5 (five).

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Sălcudean Andreea	15 de minute după fiecare curs / activitate practică

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Cell and molecular biology			
2.2 Course coordinator: Șef l dr Zazgyva Ancuța-Marilena			
2.3 Practical activities coordinator(s): Asist dr Huma Laurențiu			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			27
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			5
- tutorial activities			0
- examinations			4
- other activities			4
3.8 Total hours of individual study			48
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: None
4.2 competency: None

5. Conditions

5.1 for lectures: Amphitheater with projection system
5.2 for practical activities: Laboratories with specific equipment for practical activities Students will wear the appropriate equipment for practical activities Practical activities will be carried out in a room with specific equipment, which must include: optical microscopes

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

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7. Objectives of the discipline

7.1 General objective:
- In the medical curriculum, Cell and Molecular Biology serves as the foundation through which all other medical sciences are viewed, providing the essential bridge between basic chemistry and complex human physiology.
- Cell and Molecular Biology sits at the absolute core of modern biomedicine. While anatomy describes the structure of the body and physiology describes its functions, this discipline explains the molecular mechanisms that make those structures and functions possible. In the modern era, medicine has shifted from treating symptoms to targeting specific molecular pathways (such as in gene therapy or oncology), making this field the primary driver of medical innovation.
- Placed at the beginning of the preclinical stage of medical studies, it is meant to provide a 'common biological language.' Before a student can understand how an organ fails (pathology) or how a drug works (pharmacology), they must first master how a cell signals, divides, and maintains its genome. It acts as the conceptual prerequisite for almost every subsequent subject in the medical program.

Topics covered include:
- Genome Architecture: DNA replication, repair, and the flow of genetic information (transcription/translation)
- Cell dynamics: Transport mechanisms, the cytoskeleton, and intracellular signaling
- The fate of cells: Regulation of the cell cycle, apoptosis (programmed cell death), and stem cell differentiation

7.2 Specific objectives:
- Learning the basics of cell and molecular biology, with subsequent applications in the study of other morphological sciences
- Understanding mechanisms of action at the cellular and molecular level with applications in medical practice

8. Learning outcomes

8.1 Knowledge:
At the end of this course, the student will be able to:
- Enumerate the main structural components of the eukaryotic cell and their specific biochemical roles
- Recognize the stages of the cell cycle (interphase, mitosis, meiosis) and the key regulatory checkpoints
- Identify in diagrams or electron micrographs the ultrastructure of organelles such as the mitochondria, endoplasmic reticulum, and Golgi apparatus
- Explain the molecular mechanisms of signal transduction and how cells communicate with their environment
- Classify different types of stem cells based on their potency (totipotent, pluripotent, multipotent) and their medical applications
- Summarize the process of apoptosis (programmed cell death) and its vital role in embryonic development and tissue homeostasis
- Distinguish between the structural organization of chromatin (euchromatin vs. heterochromatin)
- Explain domain-specific notions

8.2 Skills:
At the end of this course, the student will be able to:
- Identify the solution or visualizing specific intracellular structures by selecting the appropriate staining methods and microscopy techniques
- Select and group relevant information from molecular databases to explain the genetic basis of a specific metabolic disease
- Anticipate the stages of cellular degeneration in the absence of specific growth factors or signaling molecules
- Develop a scientific text (poster or short report) that synthesizes the molecular mechanisms of a specific disease
- Express points of view regarding the impact of epigenetic modifications on human health and disease susceptibility
- Compile and group relevant information from scientific databases to create a scientific text or a presentation on a specific molecular pathology
- Transfer concepts of molecular biology to other disciplines, such as Medical Genetics or Pharmacology, to explain drug-receptor interactions

8.3 Responsibility and autonomy:
At the end of this course, the student will be able to:
- Select appropriate bibliographic sources and analyze them to solve complex biological questions
- Demonstrate autonomy in organizing their learning environment or a specific problem-solving scenario, such as a laboratory research project
- Differentiate between various types of cell signaling pathways and formulate conclusions regarding their impact on tissue homeostasis
- Distinguish between normal molecular processes and pathological alterations, demonstrating a high degree of independent judgment

- Demonstrate receptiveness to new learning contexts and integrate them into their existing knowledge base
- Respect the principles of academic ethics by correctly citing all bibliographic sources used in scientific reports and presentations
- Manifest collaboration with colleagues and teaching staff during laboratory activities and group-based tasks
- Demonstrate real-life management skills, such as time management and conflict resolution, when working in a multidisciplinary team
- Become aware of the value of their contribution to identifying viable and sustainable molecular solutions for real-world health problems
- Analyze and interpret entrepreneurship opportunities within the field of biotechnology and molecular diagnostic

9. Specific competencies acquired

9.1 professional competencies:
- Initiation into Microscopic Analysis: Introduction to the fundamental principles and applications of both optical and electron microscopy
- Technical Proficiency in Laboratory Practice: Acquisition of hands-on skills for the precise handling of microscopes and specialized laboratory equipment
- Advanced Theoretical and Practical Integration: In-depth study of cellular structure, ultrastructure, and the molecular mechanisms that govern biological life
- Clinical Correlation of Molecular Pathology: Demonstration of the essential role that cellular and molecular pathology plays in understanding disease mechanisms across all medical disciplines
- Application in Scientific Scholarship: Competence in utilizing learned molecular concepts and techniques to conduct and advance scientific research

9.2 transversal competencies:
- Orientation toward the study of Morphological Sciences, providing a foundational entry into the structural organization of the human body
- Mastery of theoretical and practical concepts regarding the microcosmos of living systems, from molecular pathways to cellular architecture
- Development of clinical reasoning and the application of scientific data to understand the physiological and pathological processes underlying various diseases
- Design and production of scientific reports, through the identification of specific objectives, management of available resources, and the systematic planning of workflows, milestones, and deadlines
- Demonstrate a commitment to professional development by actively engaging and refining critical thinking skills
- Show readiness and availability for involvement in scientific research activities
- Demonstrate the ability to utilize digital resources and tools for advanced medical information and evidence-based study
- Possess effective communication skills, essential for interacting within the scientific community and professional environments

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to Cell and Molecular Biology. Prokaryotes. Eukaryotes	Oral, multimedia presentation	1	-	Acid based disturbance. HIV. Immunodeficiency. Chromosomal disorders
2	Cell Membrane Structure (I)	Oral, multimedia presentation	1	-	Acid based disturbance. HIV. Immunodeficiency. Chromosomal disorders
3	Cell Membrane Structure (II)	Oral, multimedia presentation	1	-	Hemolytic disease in the Rh system
4	Lipid Rafts. Glycocalyx	Oral, multimedia presentation	1	-	Hemolytic disease in the Rh system
5	Cell Membrane Functions (I)	Oral, multimedia presentation	1	-	Congenital metabolic disorders
6	Transmembrane transport	Oral, multimedia presentation	1	-	Congenital metabolic disorders

7	Cell Membrane Functions (II)	Oral, multimedia presentation	1	-	Immunization. Malabsorption
8	Intercellular Junctions	Oral, multimedia presentation	1	-	Immunization. Malabsorption
9	Extracellular Matrix (EM)	Oral, multimedia presentation	1	-	Muscle pathology
10	Basement Membrane. Cell-Extracellular Matrix Junctions	Oral, multimedia presentation	1	-	Muscle pathology
11	Cytoskeleton	Oral, multimedia presentation	1	-	Muscle pathology. Inflammatory bowel diseases
12	Cell Surface Adaptations. Cell Motility	Oral, multimedia presentation	1	-	Muscle pathology. Inflammatory bowel diseases
13	TBL. Nucleus	Oral, multimedia presentation	1	TBL	Chromosomal pathologies
14	Chromatin. Transcription	Oral, multimedia presentation	1	-	Chromosomal pathologies
15	Cell Cycle. DNA Replication	Oral, multimedia presentation	1	-	Chromosomal pathologies
16	Cell Division (I)	Oral, multimedia presentation	1	-	Chromosomal pathologies
17	Cell Division (II)	Oral, multimedia presentation	1	-	Chromosomal pathologies
18	Gametogenesis	Oral, multimedia presentation	1	-	Chromosomal pathologies
19	Cell organelles (I)	Oral, multimedia presentation	1	-	Disorders of uric acid metabolism
20	Cell organelles (II)	Oral, multimedia presentation	1	-	Disorders of uric acid metabolism
21	Golgi Apparatus	Oral, multimedia presentation	1	-	Hydro-electrolyte balance. Congenital metabolic disorders
22	Cell Secretion. Lysosomes	Oral, multimedia presentation	1	-	Hydro-electrolyte balance. Congenital metabolic disorders
23	TBL. Mitochondria. Peroxisomes	Oral, multimedia presentation	1	TBL	Disorders of lipid metabolism. Degenerative diseases of the CNS
24	Cellular Senescence	Oral, multimedia presentation	1	-	Degenerative CNS disease. Disorders of lipid metabolism. Ischemic heart disease
25	Apoptosis and Necrosis	Oral, multimedia presentation	1	-	Carcinoma of the breast, bladder and prostate
26	Stem cells	Oral, multimedia presentation	1	-	Carcinoma of the breast, bladder and prostate. Inflammatory bowel disease. Lymphoproliferative disorders
27	Cell Pathology	Oral, multimedia presentation	1	-	Inflammatory bowel disease. Lymphoproliferative disorders
28	Techniques in cell and molecular biology	Oral, multimedia presentation	1	-	Inflammatory bowel disease. Lymphoproliferative disorders

Bibliography

1.Molecular biology of the cell – Alberts B., Heald R., Johnson A., Morgan D., Raff M., Roberts K., & Walter P. W. W. Norton & Company. 7th edition, 2022
2. Essential cell biology – Alberts B., Heald R., Hopkin K., Johnson A., Morgan D., Roberts K., & Walter P. W. W. Norton & Company. 6th edition, 2023
3.Karp's cell and molecular biology: Concepts and experiments – Karp G., Iwasa J., & Marshall W. Wilwy. 9th edition, 2020
4. The cell: A molecular approach – Cooper G., & Adams K. Oxford University Press. 9th edition, 2023
5.Molecular cell biology – Lodish H., Berk A., Kaiser C. A., Krieger M., Bretscher A., Ploegh H., Martin K. C., Yaffe M., & Amon A. W. H. Freeman. 9th edition, 2021
6.Cell biology – Pollard T. D., Earnshaw W. C., Lippincott-Schwartz J., & Johnson G. T. Elsevier. 4th edition, 2023
7.Histology: A text and atlas: With correlated cell and molecular biology – Pawlina W., & Ross M. H. Wolters Kluwer. 9th edition, 2023
8.Histology and cell biology: An introduction to pathology – Kierszenbaum A. L., & Tres L. L. Elsevier. 5th edition, 2020
9. The material presented during the lectures

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Microscopy techniques. Light microscopy. Steps for preparing a permanent microscopy slide. Steps for preparing a native specimen for microscopy. Electron microscopy	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Carcinoma of head and neck
2	Shapes of the cells from the the gums, lip, dental pulp, mandible	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Carcinoma of the cervix. Disorders of muscle. Oral disorders (inlcl. Caries)
3	Chemical composition of the cell. Decalcification methods for the study of soft structures	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Inborn errors of metabolism. Disorders of calcium and vitamin D metabolis
4	Extensions of the cell surface. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Inflammatory bowel disease. Acute renal disease
5	Extracellular matrix. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Connective tissue disease
6	Shapes of the nuclei. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Lymphoproliferative disorders
7	Mid-term evaluation test	-	2	-	-
8	Cell division. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Chromosomal disorders. Malformations of lip/palate
9	Endoplasmic reticulum. Ribosomes. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Chromosomal disorders. Malformations of lip/palate
10	Golgi apparatus and cell secretion. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Disorders of lipid metabolism
11	Lysosomes. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Thyroid disorders. Disorders of pancreas. Disorders of lipid metabolism. Oral disorders (inlcl. Caries)
12	Mitochondria. Examples from the orofacial sphere	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Inborn errors of metabolism
13	Cell senescence. Cell death	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	Electrolyte and water balance
14	Review: review of all studied specimens, re-testing	Specimen examination in optical microscopy. Practical demonstrations. Multimedia presentation	2	-	-

Bibliography

1. Molecular biology of the cell – Alberts B., Heald R., Johnson A., Morgan D., Raff M., Roberts K., & Walter P. W. W. Norton & Company. 7th edition, 2022

2. Essential cell biology – Alberts B., Heald R., Hopkin K., Johnson A., Morgan D., Roberts K., & Walter P. W. W. Norton & Company. 6th edition, 2023

3. Karp's cell and molecular biology: Concepts and experiments – Karp G., Iwasa J., & Marshall W. Wilwy. 9th edition, 2020

4. The cell: A molecular approach – Cooper G., & Adams K. Oxford University Press. 9th edition, 2023
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6. Cell biology – Pollard T. D., Earnshaw W. C., Lippincott-Schwartz J., & Johnson G. T. Elsevier. 4th edition, 2023
7. Histology: A text and atlas: With correlated cell and molecular biology – Pawlina W., & Ross M. H. Wolters Kluwer. 9th edition, 2023
8. Histology and cell biology: An introduction to pathology – Kierszenbaum A. L., & Tres L. L. Elsevier. 5th edition, 2020
9. The material presented during the practical activities

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

-

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	The activity throughout the semester (test and presentations) and practical works attendance	Practical evaluation, examination in optical microscopy	15
- lecture	Two TBL evaluations during the semester – the evaluation is mandatory and eliminatory – each represents 10% of the final grade	TBL	20
Final evaluation			
- practical final exam	Practical work: Recognition and description of the studied microscopic specimens: organ diagnosis, diagnosis of staining, description of studied structures, differential diagnosis. The practical exam is mandatory and eliminatory	Practical examination (Examination of microscopic specimens)	20
- theoretical final exam	Theoretical knowledge about the structure and ultrastructure of the cell and the molecular mechanisms of the living world. Multiple choice tests for the assessment of the theoretical notions taught during the semester. The theoretical exam is mandatory and eliminatory	Theoretical examination based on multiple choice tests, during the session	45
Minimal performance standards: Minimal performance standards: - The mid-term evaluation during the semester is compulsory and eliminatory (minimum passing grade is 5); recognition of a microscopic specimen: organ/ tissue diagnosis, diagnosis of staining, description of studied structures, differential diagnosis - The minimum passing grade for both exams – theoretical and practical – is 5 - To obtain a grade of 5 for the practical exam, it is necessary to recognize and describe the studied microscopic specimens: organ diagnosis, diagnosis of staining, description of studied structures, differential diagnosis			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Zazgyva Ancuța-Marilena	30 minutes after each lesson / practical activity

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Biophysics			
2.2 Course coordinator: Conf dr Szakács Juliánna			
2.3 Practical activities coordinator(s): Conf dr Szakács Juliánna, Șef lucr. dr. Albert Etele			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			22
- supplemental documentation at the library, from specialized information portals and in the field			10
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			10
- tutorial activities			2
- examinations			3
- other activities			1
3.8 Total hours of individual study			48
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: not applicable
5.2 for practical activities: Knowledge of the topic of the practical works, the principle and work method of each experiment. Preparation of report before the given deadline.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Biophysics contributes to the development of the competencies defined by ESCO by building knowledge of the physical processes and phenomena in biological systems, as well as the principles underlying the operation of medical diagnostic and treatment equipment.

7. Objectives of the discipline

7.1 General objective: Identification and explanation of physical phenomena of biologycal system’s function, explanation of functional principles of medical apparatus.
7.2 Specific objectives: Usage of some practical methods and physical tools of medical investigation. To measure, describe and explain physical phenomena in biological systems at the atomic to large molecular structure level. To explain the operating principles of medical devices (for best operating and safe use of the equipment).

8. Learning outcomes

8.1 Knowledge: Assimilation of information through learning principles, theories, physical laws.
8.2 Skills: Use of specific medical equipment and physical instruments.
8.3 Responsibility and autonomy: Ability to apply knowledge and skills autonomously and responsibly.

9. Specific competencies acquired

9.1 professional competencies: Knowledge and understanding of basic concepts, theories and methods of the topic and the field of study, proper usage of them in professional communication. Description of basic methodology of scientific research. Description of basic concepts, theories which influence the health condition of a definite community.
9.2 transversal competencies: Identification of roles and responsabilities in a pluridisciplinary team and application of relationship and efficient work techniques. Execution of a work / project effectuation specific tasks in a pluridisciplinary team.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	1. A short introduction to Biophysics. Biophysics in general context of the biological sciences. The subject and methods of Biophysics. The origin and development of Biophysics. Achievements and perspectives in Biophysics.	oral presentation powerpoint presentation blackboard drawings	2	-	Diagnosis at the cellular/ molecular/quantum level
2	2. Basic concepts of biological thermodynamics. Biological thermodynamics concepts. First principle of thermodynamics. Thermodynamics state functions. The biological applicability of the first law of thermodynamics. Second principle of thermodynamics. The biological applicability of the second law of thermodynamics. Free energy fluxes in biological systems.	oral presentation powerpoint presentation blackboard drawings	2	-	Disorders of Metabolism, Malnutrition, Inborn errors of metabolism, Eating disorders
3	3. Water in the biological systems. Structure of the Water Molecule. Physical Properties of Water. The Heavy Water. Models of Liquid Water Structure and Transformations in Presence of Solutes. Water in Living Organisms.	oral presentation powerpoint presentation blackboard drawings	2	-	Hypothermia, Acid based disturbance

4	4. Biomembranes. Models: The lipid amphiphilic bilayer model. The Danielli-Dawson-Robertson model. Models based on sub-units. The fluid mosaic model. Biomembranes components structuring: arrangement of lipids, proteins and carbohydrates	oral presentation powerpoint presentation blackboard drawings	2	-	Disorders of lipid metabolism, Electrolyte and water balance
5	5. General Considerations of Permeability and Transport through Membranes. Passive transport: Simple diffusion, Osmosis, Facilitated diffusion Active transport: Primary active transport, Secondary active transport, Transport by membrane vesicles. Research on the transmembrane transport.	oral presentation powerpoint presentation blackboard drawings	2	-	Disorders of lipid metabolism, Electrolyte and water balance
6	6. Membrane Potentials. The Resting Potential. The Action Potential	oral presentation powerpoint presentation blackboard drawings	2	-	Spinal disorders, EKG, EEG, EMG, ERG
7	7. Biophysics of Respiration. Basically laws involved in the process of respiration.	oral presentation powerpoint presentation blackboard drawings	2	-	Respiratory tract infection, Pneumothorax, Cardiorespiratory arrest
8	8. Biophysics of Blood Circulation. Haemodynamics. Biophysics of Cardiac Contractions. The Elasticity of Large Blood Vessels and of Heart . The Pulse.	oral presentation powerpoint presentation blackboard drawings	2	-	Cardiac conduction/rhythm disorder, Cardiac valve disease, Hypertension, Ischemic heart disease, Malformations of cardiovascular system, Pericardial disease, Peripheral vascular disease
9	9. Muscle Contraction. Chemo-Mechanical Conversion of Energy. Muscular Mechanics and Energetic. Striated Muscle Structure. Muscle Shortening Mechanism.	oral presentation powerpoint presentation blackboard drawings	2	-	Movement disorders, Disorders of muscle, Inflammatory arthritis
10	10. Biophysics of the Vision System. The eye as an optical system. Mechanisms of photoreception. Spectral sensibility of the eye. Visual acuity. Chromatic view. Eye defects and their correction.	oral presentation powerpoint presentation blackboard drawings	2	Test 1	Vision defects
11	11. Biophysics of the Hearing System. The auditory receptor’s structure. The electric potential of the internal ear. The genesis of the nervous impulse in the auditory recipient. Information’s transmission to the nervous centres.	oral presentation powerpoint presentation blackboard drawings	2	-	Otitis media
12	12. Nuclear Radiations. Sources of nuclear radiations. Characteristic physical quantities of radioactive sources. The interaction of the radiations with the substance. The biological action of radiations. The radiosensitivity of cells and tissues. Biological effectivity. The measurement of biological effects. Iradiation sources of the body. The principles of the present norms of radioprotection.	oral presentation powerpoint presentation blackboard drawings	2	-	Radiology and radiotherapy

13	13. Biological action of non-ionizing radiation. Bunsen's Law. Grotthus' Law. The biological effects of the ultraviolet radiation. The biological effects of the radiations from the visible spectrum. The biological effects of the infrared radiation. The biological effects of the microwaves	oral presentation powerpoint presentation blackboard drawings	2	Test 2	Radiology and radiotherapy
14	14. Imagistic Methods. Röntgen Computerized Tomography. Nuclear Magnetic Resonance.	oral presentation powerpoint presentation blackboard drawings	2	-	Radiology and radiotherapy

Bibliography

Bibliografie obligatorie:
1. Medical Biophysics (3rd edition, Editors: S. Damjanovich, J. Fidy, J. Szöllősi, Medicina, Budapest, 2019, ISBN: 978-963-226-127-0)
2. Miklós Kellermayer, Medical biophysics practices, Semmelweis Publisher, ISBN: 9789633314517, Budapest, 2018, 376 p.
3. Biophysics practicals, Volume I-II., University of Pécs, Medical School, Department of Biophysics, ISBN: 9789634297543, Pécs, 2023.

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	1. Physical quantities. Measurements of physical quantities. Units. Types of errors. Data processing.	oral instruction practical demonstration	2	-	does not correlate
2	2. Determining the solids density by the help of a pycnometer	oral instruction practical demonstration	2	-	Anemia, Acid based disturbance
3	3. Determining the liquids density by the help of a pycnometer	oral instruction practical demonstration	2	-	Anemia, Acid based disturbance
4	4. The Höppler and Ostwald viscosity instrument	oral instruction practical demonstration	2	-	Anemia, Acid based disturbance
5	5. Measuring electrical resistances. Measuring the electromotive force	oral instruction practical demonstration	2	-	Disorders of lipid metabolism, Electrolyte and water balance
6	6. Determining the angular magnification of a microscope. Determining the index of refraction	oral instruction practical demonstration	2	-	Anemia, Acid based disturbance
7	7. Determining the focal distance of a thin lens	oral instruction practical demonstration	2	-	Vision defects
8	8. Determining concentrations of solutions through the polarimetric method.	oral instruction practical demonstration	2	-	Diabetes mellitus
9	9. Determining the solution concentration through the refraction method	oral instruction practical demonstration	2	-	Nephrosis
10	10. Determining concentrations of solutions through spectrophotometric method. Plotting the absorption spectrum.	oral instruction practical demonstration	2	-	Electrolyte imbalance
11	11. Determining the enthalpy variation in the dissolving process	oral instruction practical demonstration	2	-	Metabolic disorders, Malnutrition, Inborn errors of metabolism, Eating disorders
12	12. Determining the specific heat of a solid body	oral instruction practical demonstration	2	-	Metabolic disorders, Malnutrition, Inborn errors of metabolism, Eating disorders

13	13. Determining the activity of a gamma source. Plotting the Curve of Statistical Distribution of the Counting Speed.	oral instruction practical demonstration	2	-	Radiology and radiotherapy, Bereavement
14	14. Examination of practical work.	Individual work	2	-	not applicable

Bibliography

Bibliografie obligatorie:
1. Miklós Kellermayer, Medical biophysics practices, Semmelweis Publisher, ISBN: 9789633314517, Budapest, 2018, 376 p.
2. Biophysics practicals, Volume I-II., University of Pécs, Medical School, Department of Biophysics, ISBN: 9789634297543, Pécs, 2023.
Bibliografie suport:
Nicolaescu Ioan, Moldovan Mircea, Szakács Juliánna, Mesaroş Cornelia, Biofizică şi Fizică Medicală – Lucrări Practice, University Press, Târgu Mureş, 2008, 176 p.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

By acquisition of our discipline's content, the student accumulates the basic knowledge needed to understand courses of speciality, like: physiology, biochemistry, cell biology.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Correlation between theoretical and practical notions Capacity of performing practical work	-validation of the practical activities during the semester -practical examination	10
- lecture	Understanding and integration of all theoretical concepts Knowing of bibliographical references	10% 1st Test (Test1) and 10% 2nd Test (Test2)	20
Final evaluation			
- practical final exam	Correlation between theoretical and practical notions Capacity of performing practical work	-validation of the practical activities during the semester -practical examination	20
- theoretical final exam	Understanding and integration of all theoretical concepts Knowing of bibliographical references	Evaluation (MCQ test) on the UNIX platform.	50

Minimal performance standards:
Minimal performance standards:
The minimum passing grade for theoretical exam and practical exam is 5 (five).
FG-final grade
weight of the grades:
10% 1st test (Test1)
10% 2nd test (Test2)
10% lab activity (LA)
20% lab exam (LE)
50% theoretical exam (TE)
$FG= 0,1 \cdot Test1+0,1 \cdot Test2+0,1 \cdot LA+0,20 \cdot LE+0,5 \cdot TE$

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Szakács Juliánna	30 minutes after each lecture/practical activity

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Biochemistry			
2.2 Course coordinator: Prof dr Tero-Vescan Amelia			
2.3 Practical activities coordinator(s): Asist Nicoleta Arnaut Asist Ingrid Nadasan			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 6		3.2 lecture: 2	3.3 practical activities: 4
3.4 Total hours in curriculum: 42		3.2 lectures: 14	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			22
- supplemental documentation at the library, from specialized information portals and in the field			10
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			5
- other activities			10
3.8 Total hours of individual study			62
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

este corelat cu recomandarile ESCO

7. Objectives of the discipline

7.1 General objective:

The aim of the discipline is the formation of a general professional view of medical students. Our aim is presenting the main metabolic pathways taking place în the living cells, with remarks referring to the metabolism of dental and periodontal tissues. Another objective of this course is a general presentation of bacterial metabolism related to tooth decay

7.2 Specific objectives:
Assimilating knowledge regarding the particularities of biochemical metabolism at the level of the oral cavity.
Knowledge of the degradation processes during the formation of dental caries and periodontal diseases

8. Learning outcomes

8.1 Knowledge:
La finalul disciplinei, studentul va demonstra cunoașterea și înțelegerea:
-principiilor fundamentale de biochimie structurală necesare interpretării proceselor din chimia medicală (structura proteinelor, acizilor nucleici, carbohidraților și lipidelor);
-mecanismelor catalitice ale enzimelor, cineticii enzimatice și modului în care medicamentele acționează ca inhibitori sau activatori;
-principalelor căi metabolice ale organismului (glicoliza, ciclul Krebs, β-oxidarea, sinteza proteinelor, metabolismele lipidic și glucidic) și interconectării lor cu procese patologice;
-rolului cofactorilor, vitaminelor și metalelor de tranziție în reacțiile biochimice relevante pentru chimia medicală;
-bazelor biochimice ale stresului oxidativ, echilibrului redox și mecanismelor antioxidante;
-relațiilor dintre biochimie și farmacologie: mecanisme de acțiune, biotransformare, detoxifiere hepatică (faze I și II), transportorii membranari;
-principiilor biochimice ale terapiei medicamentoase în boli metabolice, inflamatorii, cardiovasculare și neurodegenerative;
-modului în care structura moleculară influențează funcția biologică, toxicitatea și eficacitatea terapeutică.

8.2 Skills:
La finalul cursului, studentul va fi capabil să:
-aplice concepte biochimice în analiza structurii și funcției biomoleculelor relevante pentru chimia medicală;
-interpreteze mecanismele biochimice implicate în patogeneza unor boli si modul de acțiune al medicamentelor utilizate în tratamentul acestora;
-coreleze date biochimice din laborator (enzime hepatice, markeri inflamatori, profil metabolic) cu procese chimico-biologice și patologii specifice;
-utilizeze principii de cinetică enzimatică pentru a evalua potențiale inhibitoare sau activatoare de interes farmacologic;
-analizeze critic literatura științifică din domeniul biochimiei și chimiei medicale pentru a formula concluzii argumentate;
-interpreteze diagrame, structuri moleculare și mecanisme biochimice la nivel avansat;
-integreze noțiuni de biochimie cu concepte de toxicologie, biofizică, farmakinetică și farmakodinamică.

8.3 Responsibility and autonomy:
La finalul disciplinei, studentul va demonstra:
-capacitatea de a lucra autonom în analizarea proceselor biochimice relevante pentru chimia medicală;
-responsabilitate în utilizarea instrumentelor de laborator și interpretarea datelor biochimice și chimice;
-abilitatea de a lua decizii bazate pe dovezi științifice privind mecanismele moleculare implicate în patologie și terapeutică;
-respectarea normelor etice și de bună practică în cercetarea biomedicală și analiza datelor;
-inițiativă în identificarea problemelor biochimice și formularea de soluții chimico-medicale;
-autonomia în continuarea studiului, actualizarea cunoștințelor și integrarea inovațiilor științifice în practica profesională;
-capacitatea de a comunica eficient rezultate și interpretări biochimice în contexte interdisciplinare (medică, farmaceutică, biochimică).

9. Specific competencies acquired

9.1 professional competencies:
Correlation of the diseases with biochemical processes at molecular level involved in imbalances which can affect the state of health of dental tissues.
Conservative treatment behaviour of dental and periodontal structures according to biochemical aspects which can influence of above mentioned structures.
Diagnosis and therapy of dento-maxillary anomalies taking into consideration any enzyme and vitamin deficiency involved în the development of dento-maxillary area.
Prosthetic restoration of dental arches using the most suitable dental materials in correlation with the biochemical peculiarities of each patient.

9.2 transversal competencies:
dentification of objectives achieved, resources available, conditions for their completion, phases of work, working time, periods of achievement and risk factors.
Identification of roles and responsibilities in a multidisciplinary team in which biochemical metabolism-related knowledge may provide crucial information on the treatment and techniques applied and application of bonding

techniques and efficient work within the team and in conjunction with the patient.
Efficient usage of informational sources and resources for communication and assisted training.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Amino acids: classification, physical and chemical properties. Peptides with biological importance. Proteins: structure and biological role	oral presentation	2	-	-
2	Lipoproteins. Glycoproteins. Chromoproteins: myoglobin and hemoglobin - structure, biological role, transport of oxygen, CO and CO2. Nucleoproteins, nucleosides and nucleotides. Structure of nucleic acids. Macroergic nucleotides	oral presentation	2	-	-
3	Enzymes (I): structure, classification, nomenclature, specificity, active centers. Models of ES complex formation.	oral presentation	2	-	-
4	Enzymes (II): enzyme kinetics, enzyme activators and inhibitors. regulation of enzyme activity. The localization of enzymes and their origin in plasma	oral presentation	2	-	-
5	Water-soluble vitamins: thiamin, riboflavin, niacin, pyridoxine, biotin, pantothenic acid, folic acid, cobalamin, ascorbic acid - biological role and deficiency	oral presentation	2	-	-
6	Fat-soluble vitamins: carotenes and retinoids, vitamins D, tocotrienols, vitamins K - biological role and deficiency	oral presentation	2	-	-
7	Metabolic processes: general ways of metabolizing organic compounds in the body. central pathways of metabolism: Krebs cycle - mechanism, energy balance, anaplerotic reactions, amphibolic character. The respiratory chain and oxidative phosphorylation	oral presentation	2	-	-

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David L Nelson, Michael M Cox - Lehninger Principles of Biochemistry, 8th Edition, 2021
Jeremy M. Berg, Lubert Stryer, John Tymoczko, Gregory Gatto - Biochemistry 9th Edition, 2019
Thomas M. Devlin - Textbook of Biochemistry with Clinical Correlations, 7th Edition, 2015
Tero-Vescan A, Ősz BE, Imre S – Principii de Biochimie Medicală, Ed University Press Tîrgu Mureş, 2018

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Biochemical analysis. Biological materials used in the biochemistry laboratory. Techniques for plasma protein precipitation and supernatant collection.	individual practical activity or in a group of 2 people	2	-	-
2	The concept of pH. Colorimetric and potentiometric determination of pH. Buffer capacity	individual practical activity or in a group of 2 people	2	-	-
3	Preparation of percentage, molar, normal solutions. Preparation of a 0.1N HCl solution, determination of the factor. Errors of volumetric determinations. titration of a NaOH solution with HCl solutions. preparation of a solution of NaCl 2g% and physiological serum	individual practical activity or in a group of 2 people	2	-	-
4	Color reactions of amino acids and proteins (biuret reaction, ninhydrin, xanthoprotein reaction, identification of amino acids with sulfur, Pauli reaction). Protein precipitation reactions	individual practical activity or in a group of 2 people	2	-	-

5	Determination of the concentration of amino acids in the serum by the Sorensen method	individual practical activity or in a group of 2 people	2	-	-
6	Spectrophotometry. Determination of proteins by the biuret method	individual practical activity or in a group of 2 people	2	-	-
7	The chemical composition of teeth. Mineralization of teeth	individual practical activity or in a group of 2 people	2	-	-
8	Determination of calcium by the photometric method. Determination of magnesium in serum by the Mann-Yoe method	individual practical activity or in a group of 2 people	2	-	-
9	determination of serum phosphate by the Briggs method. Determination of fluorine by the potentiometric method	individual practical activity or in a group of 2 people	2	-	-
10	Determination of direct and total bilirubin in the serum	individual practical activity or in a group of 2 people	2	-	-
11	Determination of blood glucose by the enzymatic method. Using the glucometer	individual practical activity or in a group of 2 people	2	-	-
12	Determination of serum iron. Determination of hemoglobin as oxyhemoglobin	individual practical activity or in a group of 2 people	2	-	-
13	Pathological urine analysis. Rapid laboratory tests	individual practical activity or in a group of 2 people	2	-	-
14	Blood vitamin C determination	individual practical activity or in a group of 2 people	2	-	-

Bibliography

Oşan A, Nagy E, Tero-Vescan A - Biochimie practică, Ed University Press Tîrgu Mureş, 2008

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Knowledge of biochemistry is necessary for understanding at molecular level the processes that occur in the dental tissues.
Metabolic pathways involved in the process of caries formation and inflammatory processes that occur in periodontal tissues must be known.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	quizzes or lab reports	MCQ or lab report	20
- lecture	TBL evaluation	MCQ	10
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Theoretic exam	MCQ	70

Minimal performance standards: General knowledge of the main metabolic pathways. The role of vitamins in the body. Biochemical aspects of the dental caries formation process

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Tero-Vescan Amelia	luni 16-18

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: -
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Physical education			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Lect dr Steff Zakarias			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Șef l dr Țurcanu Dana-Simona			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2	3.2 lecture:	3.3 practical activities: 2
3.4 Total hours in curriculum: 14	3.2 lectures: 0	3.6 practical activities: 14
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		
- supplemental documentation at the library, from specialized information portals and in the field		
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		
- tutorial activities		
- examinations		
- other activities		
3.8 Total hours of individual study		0
3.9 Total hours		14
3.10 Credits		2

4. Prerequisites (where applicable)

4.1 curricular: good health - harmonious physical development - adequate physical qualities
4.2 competency: Knowledge of techniques learned in high school to develop body strength and physical qualities. - practice of sports (competitive/leisure)

5. Conditions

5.1 for lectures: -
5.2 for practical activities: Sport gym, fitness gym, tennis courts, outdoor, swimming pool, football court

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The Physical Education discipline contributes to the alignment with the European ESCO framework by developing transversal competences relevant to all occupational sectors, including teamwork, self-discipline, and interpersonal communication, facilitated through structured sports activities. Additionally, it supports the acquisition of competences related to health promotion and physical well-being management, which are essential for sustaining work performance, strengthening resilience to stress, and enhancing professional productivity. These outcomes ensure improved adaptability of graduates to the dynamics of the European labour market.

7. Objectives of the discipline

7.1 General objective:
Systemic and organized practice of physical exercise and favored sports

7.2 Specific objectives:
1) Continuous improvement of healthy condition, physical and mental vigour and harmonious body development ;
2) Raising of the general motricity level and aquirement of basical sport skills;
3) Participating at interuniversity's competiotions

8. Learning outcomes

8.1 Knowledge:
Students/
-knows the general concepts of the phisycal education lesson , for own health.
-knows the role of conceptsin the generl formation of human motor skills
-knows specific concepts of phisycal education leson
-knows the particularites of developing motor skills through different types of exercises and can apply them for optimal physical maintenance

8.2 Skills:
Students/
-correctly perform fundamental motor exercises and simple exercises programs to maintain health and phisical fitness.
-self-regulates the intensity of effort and applies protective measures during activity.
-uses tehnical executions and identifies mistakes in order to correct them.
-actively participate in team sports games, respecting the rules.

8.3 Responsibility and autonomy:
Students/
-shows responsability for this own health and constantly participates in phisical activities
-works effectivelyboth individualy and in a team, demonstrating fair- play and respect.
-autonomously apply safety rules and appropriate behavior inmotor activities .
-respect the principles of academic ethiks.

9. Specific competencies acquired

9.1 professional competencies:
- Making use of the information, methods and means specific to physical education and sports in order to optimize health and harmonious physical development
- Building the skill of knowledge transmission referring to exercises to develop basic physical skills, qualities and muscle usage
- Application of specific methods to develop physical qualities

9.2 transversal competencies:
- Application of rule systems specific to the organization and practice of physical education and sports, as well as acquisition and application of adequate behavior in interpersonal relations and in groups
- Using body language to express and understand ideas, feelings, general and physical aethethics of the body
- Using electronic means to select information regarding elements that are characteristic to physical development
- Active integration into various groups

9.3 related to the study program:

10.1 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introductory lesson ; the requirements of a Physical Education class	explication, demonstration, repetition	2	-	-
2	Athletics – the school of running	explication, demonstration, repetition	2	-	-
3	Basketball – checking the initial level of acquiring the basic elements	explication, demonstration, repetition	2	-	-
4	Volleyball - checking the initial level of acquiring the basic elements	explication, demonstration, repetition	2	-	-

5	Basketball – repeating the elements of moving in the court	explication, demonstration, repetition	2	-	-
6	Basketball – repeating the elements of moving in the court	explication, demonstration, repetition	2	-	-
7	Basketball – repeating the elements of moving in the court	explication, demonstration, repetition	2	-	-

Bibliography

1. Badau D., Tanase T. ¬ Volei, teorie si metodica, Ed. OMNIA, Brasov, 2006
2. Carstea G. ¬ Teoria si metodica educatiei fizice, Ed. An¬Da, Bucuresti, 2000
3. Hantiu I. ¬ Teoria educatiei fizice si sportilui, note de curs, Univ. Oradea, 2012
4. Macovei S. ¬ Stretching, Ed AFIS, Bucuresti, 2012
5. Neagu N ¬ Teoria si practica activitati motrice umane, Ed. University Press, Tg. Mures, 2010
6. Filipescu, D., Gherghişan, D., Bologa, M., ¬ Educaţie fizică în învăţămîntul superior medical, Editura UMF, 2001
7. Badau D. ¬ Metodica disciplinei sportive ¬ handbal, Ed. Universitatii Transilvania din Brasov, 2009
8. Badau A, Ungur R, Badau D. – Activitatile fizice acvatice indoor, Ed, Universitatii Transilvania Brasov, 2016

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

- Development of the capacity to choose healthy life-style, by practicing sports, combining physical exercise with intellectual efforts, motion and rest, work and leisure.
- Availability to practice physical exercise independently
- Constant interest in sports as a phenomenon

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	the attendance on the lessons - control test of the 1st semester - control test for 2nd semester	Total attendances for the both of semester -finish all the control tests -effectuate two essay one in each semester for the students those exempt from physical education	100
- lecture	-	-	0
Final evaluation			
- practical final exam	Minimal performance standards: 1. Assist for at least 70% of the lessons, that means 20 attendences/year (including the exempted students) 2. The final examination contains 2 motor tests, at the student choice, as follow: long jump from standing position, testing the force of the abdominal strength (sit ups during 30 sec.), testing the back muscle strength (back extention during 30 sec.), speed running on 30m or the swimming test which means to swimm 25m pool length in one of the 4 main events of swimming. For the students who are exempted from effort, they need to realize a paperwork on the final of the semester, in domain of physical education, theme which is chosen by the own teacher. (they don’t need to go to the physically tests.)	Total attendances for the both of semester -finish all the control tests -effectuate two essay one in each semester for the students those exempt from physical education	0
- theoretical final exam	-	-	0

Minimal performance standards:

Minimal performance standards:

1. Assist for at least 70% of the lessons, that means 20 attendences/year (including the exempted students)
2. The final examination contains 2 motor tests, at the student choice, as follow: long jump from standing position, testing the force of the abdominal strength (sit ups during 30 sec.), testing the back muscle strength (back extention during 30 sec.), speed running on 30m or the swimming test which means to swimm 25m pool length in one of the 4 main events of swimming.

For the students who are exempted from effort, they need to realize a paperwork on the final of the semester, in domain of physical education, theme which is chosen by the own teacher. (they don’t need to go to the physically tests.)

13. Appointment timetable (for students)

Lect dr Steff Zakarias	Luni 19-20
Șef l dr Țurcanu Dana-Simona	30 de minute dupa fiecare activitate practica

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: SL1 - Humanities
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Romanian language			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Asist dr Rațiu Bogdan			
2.4 Year of study: I	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2	3.2 lecture:	3.3 practical activities: 2
3.4 Total hours in curriculum: 28	3.2 lectures: 0	3.6 practical activities: 28
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		
- supplemental documentation at the library, from specialized information portals and in the field		
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		
- tutorial activities		
- examinations		
- other activities		
3.8 Total hours of individual study		24
3.9 Total hours		52
3.10 Credits		2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: Videoproiector

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: Cunoașterea limbii române la nivel mediu pentru a putea înțelege mesajul unui text scris sau audiat.
7.2 Specific objectives: La finalul cursului, studentul va prezenta abilități de comunicare, formulare de întrebări și răspunsuri pe teme precum: prezentare, casa, ocupație, interese, familie.

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: Studentul va prezenta, la nivel începător, următoarele abilităţi: -citirea corectă şi fluentă, precum şi înţelegerea conţinutului şi ideilor generale ale unui text simplu -înţelegerea mesajelor receptate pe cale auditivă -vorbirea cu respectarea regulilor gramaticale şi de pronunţie -cunoaşterea şi utilizarea corectă a unui vocabular de bază
9.2 transversal competencies: Utilizarea limbii române ca mijloc de comunicare cu alţi vorbitori ai acelei limbi, în situaţii generale.
9.3 related to the study program:

10.1 Content of seminar, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Alfabetul si sunetele limbii române. Prezentarea. Formule de salut	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
2	Date personale (nume, naţionalitate, ţară) Pronumele personal, verbul „a fi”	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
3	Date personale (vârstă, adresă, profesie) Mulţumiri şi scuze	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
4	Verbul „a avea”, „a face” Numeralul cardinal	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
5	Substantivul: număr, gen. Sala de clasa: obiecte inconjuratoare Articolul nedefinit plural	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
6	Culorile, acordul adjectivului Conversaţia telefonica	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
7	Exprimarea timpului: ora, zile, luni, anotimpuri, vremea Exerciții. Recapitulare	Rezolvarea unor probleme, conversația, dialogul, munca pe perechi și în grup; PBL; TBL	4	-	-

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Hedeşan,Otilia(coordonator),Jebelean,Elena, Leucutia Florentina, Musat, Nicoleta, Percec,Dana, Popa,Corina Bun venit in România!Manual de limba română şi de orientare culturală ,Imprimeria MIRTON,Timişoara, ,2008
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11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Cunoasterea limbii romane va facilita comunicarea cu pacientii si personalul medical in timpul stagiilor de practica si integrarea in comunitatea locala

12. Evaluation

Type of	Evaluation criteria	Evaluation methods	Percent

activity			of final grade
Evaluation during the semester			
- practical activities	Abilitatea de a intelege si completa exercitii de multiple choice, potrivire, folosirea corecta a numarului, articolului verbelor invatate	Test scris care cuprinde exercitii de vocabular si gramatica	50
- lecture	-	-	0
Final evaluation			
- practical final exam	Abilităţile de citire, vorbire, receptarea și transmiterea de mesaje pe cale orală	Verificare orală - extragerea unui bilet care cuprinde citirea unui text, raspuns la intrebari, dialog medic-pacient	50
- theoretical final exam	-	-	0
Minimal performance standards: Să se poată prezenta, să răspundă la întrebări legate de familie, casă, interese,timp, să poată formula întrebări și cere informații folosind un vocabular de bază, o pronunție clară şi fără greşeli mari la nivelul organizării discursului şi al folosirii structurilor gramaticale necesare comunicării.			

13. Appointment timetable (for students)

Asist dr Rațiu Bogdan	

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Artificial inteligence in dentistry			
2.2 Course coordinator: Conf dr Olah Peter			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			4
- tutorial activities			1
- examinations			1
- other activities			2
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: -
4.2 competency: -

5. Conditions

5.1 for lectures: Lecture room with projection and audio system
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

1. Skills / competences Attitudes and values • Ethics in the use of health data • Responsibility in the use of artificial intelligence

• Critical thinking in analyzing scientific information
• Responsible use of digital technologies
Knowledge
• Artificial intelligence in healthcare
• Data science in dentistry
• Evidence-based medicine (EBM)
• Discriminative artificial intelligence
• Generative artificial intelligence
Competences and language skills
• Artificial intelligence terminology
• Dental terminology
• Data science terminology
• Scientific communication
• Medical and technological English
Skills
• Analysis of dental/clinical data
• Organization and management of biomedical data
• Use of AI tools for data analysis
• Formulating prompts for generative AI models
• Use of digital platforms and e-learning
2. Occupations (relevant occupations)
• Dentist
• Dental hygienist
• Health data analyst
• Digital health specialist
• Dental researcher
3. Qualifications (relevant qualifications)
• University studies in Dentistry / Dental Medicine
• University studies in Medicine
• University studies in Public Health

7. Objectives of the discipline

7.1 General objective:
The progress of modern medicine is becoming increasingly dependent on the ways in which large volumes of biomedical data (Big Data) can be processed and interpreted. Therefore, the main objective of the discipline is to familiarize biomedical students with the vocabulary and skills specific to data science and Artificial Intelligence, as well as its applications in medicine and dentistry, in the era of Evidence-Based Medicine.

7.2 Specific objectives:
• Demonstrating the student's ability to understand and use the main concepts related to data, information and knowledge in the medical field
• Developing a basic understanding of the vocabulary related to the use of discriminative and generative AI, as well as learning the benefits and limitations of these technologies when applied in the biomedical field
• Developing basic skills to create queries (prompts) when interacting with large language models that use generative AI technology (Prompt Engineering)

8. Learning outcomes

8.1 Knowledge:
Identifies the fundamental concepts related to data, information and knowledge in the field of dentistry and health. Explains the role of data science and artificial intelligence in analyzing dental/clinical information. Describes the main data-processing mechanisms used in the field of dentistry. Recognizes the differences between discriminative and generative artificial intelligence and their applications in dentistry.

8.2 Skills:
Organizes and manages dental/clinical data using digital tools. Applies basic data science concepts to interpret dental/clinical information. Uses artificial intelligence tools for analyzing data in the field of dentistry. Formulates effective prompts for interacting with generative AI models. Uses digital platforms and e-learning tools in the learning process.

8.3 Responsibility and autonomy:
Critically analyzes information generated by artificial intelligence tools. Responsibly uses AI technologies in the analysis of dental/clinical data. Respects ethical principles and data-security rules when using digital technologies. Demonstrates autonomy in selecting and interpreting relevant scientific information in the field of dentistry.

9. Specific competencies acquired

9.1 professional competencies:
• The student must demonstrate the ability to understand the role of data in the biomedical sciences, as well as

the stages of their transformation into information that may eventually lead to the generation of knowledge, in the era of Evidence-Based Medicine (EBM)
• The student must demonstrate the ability to understand the main types of data-processing mechanisms used in the field of medicine, including the new tools available in the field of Artificial Intelligence (AI)
• The student must demonstrate the ability to understand, at a basic level, what AI is and how it works, as well as the ability to critically analyze and differentiate the capabilities of discriminative and generative AI, and their uses in the biomedical field
• The student must be able to apply the acquired knowledge in practice, regarding the structuring, transformation and manipulation of relevant data in the biomedical field

9.2 transversal competencies:
• Familiarization with technologies specific to the Information Society, with norms of ethics and online conduct.
• Familiarization with the use of synchronous and asynchronous e-learning platforms.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Data, information, knowledge: The concept of data. Information. Transformation of data into information and generation of knowledge. The role of the human specialist versus the computer/Artificial Intelligence (AI) in these processes.	Oral and multimedia presentation	2	-	-
2	Introduction. Biomedical data – general aspects. Importance of analyzing large volumes of data (Big Data) in the era of Evidence-Based Medicine (EBM): challenges and opportunities.	Oral and multimedia presentation	2	-	-
3	Brief history and key moments in the evolution of AI, with examples from the biomedical field: from Eliza (1960) and Mycin (1970) to IBM Deep Blue (1997), IBM Watson (2014), Google AlphaGo (2016), AlphaFold (2018), and Generative AI/ ChatGPT (2018-present). Opportunities and challenges encountered throughout these AI developments.	Oral and multimedia presentation	2	-	-
4	Artificial Intelligence (AI) – definition, general aspects; discriminative vs. generative AI. Large Language Models (LLM) - ChatGPT. Opportunities and challenges of AI in the EBM era.	Oral and multimedia presentation	2	-	-
5	Innovative applications of discriminative AI in modern society and in the biomedical field (e.g. improved medical predictions, new clinical scores, etc.) - in the EBM era. Opportunities, challenges, and impact on society.	Oral and multimedia presentation	2	-	-
6	Innovative applications of generative AI in modern society and in the biomedical field (e.g. synthetic data, pseudo-synthetic data, AI agents, etc.) - in the EBM era. Opportunities, challenges, and impact on society.	Oral and multimedia presentation	2	-	-
7	Short- and medium-term development directions of AI in society and in the biomedical field: opportunities (e.g. AGI - Artificial General Intelligence) versus challenges (e.g. AI hallucinations, AI cheating, etc.).	Oral and multimedia presentation	2	-	-

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11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Proper acquisition of the above-mentioned curricular content ensures students' understanding of the basic glossary of specialized terms in the field of Information and Communications Technology (ICT) and Artificial Intelligence, with direct applications in the biomedical field (medical informatics), as well as the ability to understand and efficiently use the new Artificial Intelligence (AI) technologies that underlie the tools and services provided in the biomedical field at present and in the near future.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			

- practical activities	-	-	0
- lecture	Knowledge of the bibliographic material. Understanding of basic concepts and their integration in solving domain-specific problems.	questions and discussions	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Knowledge of the bibliographic material. Understanding of basic concepts and their integration in solving domain-specific problems.	multiple choice test	70
Minimal performance standards: • Understanding the basic glossary of specialized terms regarding the representation and processing of biomedical data in the era of Artificial Intelligence (AI). • Ability to effectively use advanced AI solutions to retrieve, organize, process and graphically represent biomedical data.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Olah Peter	30 de minute după fiecare curs / activitate practică

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Medical first aid			
2.2 Course coordinator: Conf dr Lazăr Alexandra-Elena			
2.3 Practical activities coordinator(s): Asist univ dr Branea Oana, Asist univ dr Almasy Emoke, Asist univ dr Butiulca Mihaela, Drd Pui Mihai, Drd Cehan Vlad, Drd Katona Orsolya, drd Danilesco Alina, drd Keresztes Matild, drd Cristian Ionescu			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4	3.2 lecture: 2	3.3 practical activities: 2	
3.4 Total hours in curriculum: 28	3.2 lectures: 14	3.6 practical activities: 14	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			30
- supplemental documentation at the library, from specialized information portals and in the field			10
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			4
- tutorial activities			4
- examinations			2
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: Basic anatomy and physiology knowledge
4.2 competency: --

5. Conditions

5.1 for lectures: Internet access. Video-projection possibility
5.2 for practical activities: Internet access Training manikins

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Resuscitation, First Aid, Medical Emergencies

7. Objectives of the discipline

7.1 General objective: Life-saving first aid maneuvers.
7.2 Specific objectives: First-aid situations can be encountered in a dental practice and if not solved, can endanger a patient's life.

8. Learning outcomes

8.1 Knowledge: Lists the main stages of providing first aid in situations commonly encountered in dental practice. Identifies vital signs and their critical changes in medical emergencies. Explains the mechanisms underlying the most common emergencies (syncope, allergic reactions, airway obstruction). Classifies medical emergencies in the dental office based on severity and life-threatening potential. Recognizes the instruments and materials used in first aid and describes their role.
8.2 Skills: Applies the ABC algorithm correctly in the initial assessment of a patient in an emergency. Identifies appropriate solutions and proposes an intervention plan for situations such as respiratory arrest, foreign body aspiration, or convulsive episodes. Uses the principles of adult cardiopulmonary resuscitation (CPR) appropriately in simulated scenarios. Anticipates the steps required to stabilize the patient until specialized medical personnel arrive. Adapts first aid techniques to the specific context of the dental office (patient positioning, limited space, available equipment).
8.3 Responsibility and autonomy: Evaluates the correctness of procedures applied in first aid scenarios and identifies strengths and limitations of their own intervention. Concludes regarding how the decisions taken influenced the progression of the emergency. Adheres to safety, ethical, and professional responsibility standards during first aid interventions. Demonstrates autonomy in organizing the initial intervention and prioritizing life-saving actions. Demonstrates effective collaboration with colleagues during simulations and justifies the role of each team member in the emergency response.

9. Specific competencies acquired

9.1 professional competencies: After this course, the student will be able to recognize a life-threatening situation that implies first aid measures. Can recognize respiratory and cardiac arrest, and traumatic and neurologic emergencies. Will be able to execute first aid measures in the situations mentioned above.
9.2 transversal competencies: After this course, the student will recognize the specific cases where he is legally bound to intervene, know his competency level, and be trained to activate the emergency system 'survival chain'. The student will understand the ethical and legal aspects of his intervention, identifying the priorities and his role in a particular emergency situation.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	First aid measures: definition, objectives. Guidelines and protocols. Ethical and legal aspects of first aid.	Oral presentation Multimedia presentation	2	-	Cardio-respiratory arrest, sudden death, infant s sudden death
2	Cardio-respiratory arrest diagnosis. Resuscitation history. Chain of survival. Rescuers risks	Oral presentation Multimedia presentation	2	-	Cardio-respiratory arrest, sudden death, infant s sudden death
3	Children and infants Cardio-respiratory arrest resuscitation guidelines. Foreign body airway obstruction: diagnosis and first aid protocols in children and infants	Oral presentation Multimedia presentation	2	-	Cardio-respiratory arrest, sudden infant death, stridor
4	Adult Cardio- respiratory arrest resuscitation guidelines. Foreign body airway obstruction: diagnosis and first aid protocols in adults.	Oral presentation Multimedia presentation	2	-	Cardio-respiratory arrest, sudden death, stridor
5	Automatic external defibrillation. Special situation resuscitation: drowning, electrocution, pregnancy, hypothermia.	Oral presentation Multimedia presentation	2	-	Rhythm abnormalities, hypothermia.
6	Trauma. Acute coronary syndromes, dyspnea, fainting, convulsions, stroke, diabetic coma- first aid measures. Animal/ insects bites/ stings, behavioral emergencies: diagnosis and first aid measures	Oral presentation Multimedia presentation	2	-	Thoracic and abdominal trauma, head trauma, limb trauma, spine trauma. Ischemic cardiac pathology. Diabetes. Epilepsy.
7	Shock. Hemorrhage. Diagnosis and first aid protocols.	Oral presentation Multimedia presentation	2	-	Shock
Bibliography http://www.cprguidelines.eu/2025					

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Basic Life support- Chain of survival - evaluation	Multimedia presentation, task trainer simulation	2	-	Cardiorespiratory arrest
2	Adult and child Chocking	Multimedia presentation, task trainer simulation	2	-	Breathlessness
3	Basic life support protocol- adult and child	Multimedia presentation, task trainer simulation	2	-	Cardiorespiratory arrest
4	Defibrillation	Multimedia presentation, task trainer simulation	2	-	Rhythm abnormalities
5	Trauma - soft tissue	Multimedia presentation, task trainer simulation	2	-	Trauma to chest/ abdomen Trauma to head Trauma to limbs Trauma to spine
6	Trauma - fractures, transportation	Multimedia presentation, task trainer simulation	2	-	Trauma to chest/ abdomen Trauma to head Trauma to limbs Trauma to spine
7	Examination	-	2	-	-
Bibliography Basic life support protocol- European Resuscitation council - 2025 https://www.erc.edu/science-research/guidelines/guidelines-2025/guidelines-2025-english/					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The knowledge of basic first aid ensures the first-year student the capacity to intervene with competence in

possible situations that could affect him/her directly, the family or the professional community where he/she conducts his/her activities or the community in general. The theoretical and especially practical knowledge acquired throughout the course will set the base for learning, as a first contact with the medical terms for the disciplines in the years to come.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Maneuvers	-	15
- lecture	Case discussion	-	15
Final evaluation			
- practical final exam	Knowledge and execution of basic first aid maneuvers.	Practical demonstration on simulation manikins	20
- theoretical final exam	Knowledge of theoretical aspects of first aid.	Multiple choice written test	50
Minimal performance standards: Minimum knowledge should comprise: - definition and diagnostic criteria for cardiac arrest - correct execution of first aid techniques in adults, children, and infants - airway obstruction recognition and first aid maneuvers - particularities of first aid in special situations - legal and ethical aspects of first aid - understanding and using a communication protocol			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Lazăr Alexandra-Elena	30 de minute dupa fiecare curs

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Histology. Cytology			
2.2 Course coordinator: Conf dr Nechifor-Boila Adela-Corina			
2.3 Practical activities coordinator(s): Conf. univ. dr. Adela Nechifor-Boilă, Șef. lucr. dr. Laura Chinezu, Asist. univ. dr. Sălăgean Alex, Asist univ. dr. Ramona Cătană			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8	3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56	3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		36
- supplemental documentation at the library, from specialized information portals and in the field		4
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		4
- tutorial activities		0
- examinations		4
- other activities		0
3.8 Total hours of individual study		48
3.9 Total hours		104
3.10 Credits		4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Lecture hall equipped with a projection system
5.2 for practical activities: Laboratories equipped with facilities specific to practical activities. Students are required to wear appropriate equipment for practical activities. • The laboratory will take place in a room with specific equipment, which must include: optical microscopes • For conducting laboratory activities, histological slides with tissues/organs of normal structure are required

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The histology course contributes to the development of competencies defined within ESCO for occupations relevant to the study program, by enhancing the knowledge, skills, and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective:
The purpose of Histology is constituted by the study and knowledge of normal tissue and organ structure with the help of optic microscopy in usual stains (hematoxylin and eosin), special stains, immunohistochemistry stains and also in electron microscopy.

7.2 Specific objectives:
- Thoroughgoing study of the recognition criteria for various tissues and organs
- Learning the methods used in differentiating similar structures
- Learning the methods used in differentiating normal from pathological structures
- Understanding structure-function relationships, following the principle according to which the morphological features of any structure are strictly dependent on its function

8. Learning outcomes

8.1 Knowledge:
• Describes the structural organization of tissues and organs at the microscopic level;
• Explains the relationships between the histological structure of a tissue or organ and its function in the organism;
• Identifies and lists different methods for processing and examining histological tissues (cytology, histochemistry, immunohistochemistry) in order to establish a positive or differential diagnosis.

8.2 Skills:
• Analyzes histological specimens under the optical microscope to identify different types of tissues and their specific structure;
• Uses international histological terminology (Terminologia Histologica) to describe the observed structures and to formulate a tissue/organ diagnosis;
• Selects and effectively organizes information and professional development resources received

8.3 Responsibility and autonomy:
• Demonstrates autonomy in the correct use of the optical microscope and in adjusting the microscopic image for independent study of histological slides;
• Adheres to ethical principles and safety regulations in the laboratory;
• Shows receptiveness to newly acquired knowledge and to collaboration with peers and teaching staff in the educational process.

9. Specific competencies acquired

9.1 professional competencies:
Knowledge of the normal structure, ultrastructure and function of various types of tissues and organs in order to establish positive and differential diagnosis
- Knowledge and understanding of structural relations between tissues and organs of the human body in order to assimilate fundamental concepts, theories and notions regarding diseases, signs and symptoms that are characteristic to each disease, useful in clinical diagnosis
- Assimilation of preliminary knowledge needed for applying various diagnostic protocols
- Knowledge of ancillary diagnostic methods and techniques (cytology, histochemistry, immunohistochemistry) useful in establishing positive and differential diagnosis and in assessing prognosis
- Using assimilated notions in scientific research. Starting, structuring and developing scientific research activities. Framing these activities within research projects - Developing and implementing new approaches to functional histology and molecular biology regarding diagnosis in
relation to scientific progress

9.2 transversal competencies:
- Familiarization with efficient use of information, communication and assisted professional development resources (internet portals, special software, databases, online courses)
- Developing a work/project, including identification of objectives, available resources, work conditions and stages, timelines and deadlines
- Preparing, editing and presenting a study concerning an up-to-date subject by using various information sources and instruments
- Awareness of the need for continuous professional education

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to histology. Epithelial tissues: General features. Classification. Covering epithelia. Glandular epithelia.	Oral, multimedia presentation and drawings	2	-	-
2	Connective tissues I: General features. Classification. Soft connective tissues: mesenchymal, loose, adipose and reticular connective tissues	Oral, multimedia presentation and drawings	2	-	-
3	Connective tissues II: Bone tissue – structure, ultrastructure. Immature and mature (fibrous, haversian) bone.	Oral, multimedia presentation and drawings	2	-	-
4	Lymphopoietic organs. Immunity: Cells of the immune system. Central lymph organs: thymus. Peripheral lymph organs: lymph node, MALT.	Oral, multimedia presentation and drawings	2	-	-
5	The oral cavity I: Oral mucosa: general structure. Masticatory mucosa: gums (anatomical classification, histological structure and functions), hard palate.	Oral, multimedia presentation and drawings	2	-	-
6	The oral cavity II: Oral mucosa. Lining mucosa: soft palate. Specialized mucosa: tongue, taste bud. Lips. Palatine tonsil.	Oral, multimedia presentation and drawings	2	-	-
7	The oral cavity III: Salivary glands: general structure, classification, minor salivary glands, major salivary glands (parotid, submandibular, sublingual).	Oral, multimedia presentation and drawings	2	-	-
8	The oral cavity IV: The tooth, general structure. Dental pulp: structure and regions, vascularization, innervation, functions, aging.	Oral, multimedia presentation and drawings	2	-	-
9	The oral cavity V: Dentin: microscopic structure, ultrastructure, chemical composition, function, types of dentin, low mineralization areas.	Oral, multimedia presentation and drawings	2	-	-
10	The oral cavity VI: Enamel: general features, structure, chemical composition, low mineralization areas, aging.	Oral, multimedia presentation and drawings	2	-	-
11	The oral cavity VII: Cementum: general features, chemical composition, function, microscopic structure, cementogenesis. Alveolar bone: anatomical and histological structure. Periodontal ligament: general features, structure, vascularization, innervation, functions.	Oral, multimedia presentation and drawings	2	-	-
12	The oral cavity VIII: Tooth development I: tooth bud phase, cap phase, dental follicle. Root formation.	Oral, multimedia presentation and drawings	2	-	-
13	The oral cavity IX: Tooth development II: Dentinogenesis: formation of dentin, odontoblasts (structure and ultrastructure). Amelogenesis: enamel formation, ameloblasts (structure and function), amelogenesis	Oral, multimedia presentation and drawings	2	-	-
14	Endocrine system: Pituitary gland, Thyroid, Parathyroid, Adrenal gland: structure, function.	Oral, multimedia presentation and drawings	2	-	-

Bibliography

Bibliography
1. Power-point presentations.
2. Laura Chinezu, Simona-Tunde Pataki, Adela Nechifor-Boilă, Adrian Năznean, Angela Borda (editor): “Histology of the tissues” Editura University Press Tîrgu-Mureş 2017, 191 pg, ISBN 978-973-169-505-1
3. Michael H. Ross - Histology: A Text and Atlas. With Correlated Cell and Molecular Biology, Ed: Wolters Kluwer/ Lipponcott Williams&Wilkins, Eight Edition, 2022.
4. Daniel J. Chiego: Oral Histology and Embryology- A clinical Approach, Ed 6, Elsevier, 2025

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Introduction, microscope, histology techniques.	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
2	Epithelia: simple columnar epithelia, stratified squamous non-keratinized epithelium, compound tubuloacinar gland.	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
3	Connective tissue: mesenchymal tissue, loose connective tissue, spongy bone.	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
4	Striated muscle, Cardiovascular system: capillary, Palatine tonsil.	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
5	Oral cavity I: Oral mucosa, Lip.	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
6	Oral cavity II: Tongue, general structure, lingual papillae, Taste bud	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
7	Oral cavity III: Salivary glands: sublingual gland, parotid gland	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
8	Oral cavity IV: Salivary glands: submaxillary (submandibular) gland	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
9	Oral cavity V: Tooth, dried and polished	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
10	Oral cavity VI: Tooth, decalcified	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
11	Oral cavity VII: Paradontium	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
12	Oral cavity VIII: Tooth development, Dental follicle, Dental Bud	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
13	Endocrine system: Thyroid, Adrenal gland.	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-
14	Slide revision. Evaluation of acquired knowledges.	Practical microscope demonstrations, study by e-learning and demonstrative drawings related to the normal structure of tissue and organs	2	-	-

Bibliography
Bibliography
1. Borda Angela, Emoke Fulop, Gliga Camelia, Loghin Andrada, Marcu Simona, Moldovan Cosmin. Histology Practical Works Guide, Editura University Press, Tîrgu Mureș, 2013
2. Power point presentations

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

- Assimilating basic notions of tissue and organ cytology and histology as a basis for subsequent understanding of their physiology and pathology - Assimilating notions regarding histology techniques and microscopic study of tissues and organs - Acquiring the ability to recognize a tissue, organ or histological stain, and to perform differential diagnosis between various tissues and organs

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-Recognition of various tissues and organs under the microscope.	-Assessment of acquired knowledges by examining histological slides	10
- lecture	-Knowledges about the normal structure Knowledges about the relation between structure, function and pathology	-Assessment of acquired knowledges	20
Final evaluation			
- practical final exam	Recognition of various tissues and organs under the microscope. Recognition of staining and ability to the describe the structures	Recognition of tissues and/or organs on histological slides by using optical microscope, description of general structure and of specific structure, differential diagnosis	20
- theoretical final exam	Knowledges about the normal structure Knowledges about the relation between structure, function and pathology	Examination – written examination consisting of multiple choice questions.	50
Minimal performance standards: A grade of minimum 5 both in theory and in practical examination. Basic knowledge of the structures that were studied is required.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Nechifor-Boila Adela-Corina	30 minutes after the lecture and practical activities

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Hygiene			
2.2 Course coordinator: Șef l dr Ferencz Jozsef-Loránd			
2.3 Practical activities coordinator(s): Șef l dr Ferencz Jozsef-Loránd			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 6		3.2 lecture: 2	3.3 practical activities: 4
3.4 Total hours in curriculum: 42		3.2 lectures: 14	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			10
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			10
- examinations			4
- other activities			8
3.8 Total hours of individual study			62
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -Room with screen for video projection, wireless network and interactive system
5.2 for practical activities: -According to the labor protection norms and the guide of good laboratory practices.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The learner's ability to autonomously and responsibly apply their knowledge and skills.

7. Objectives of the discipline

7.1 General objective:

-To understand the impact of environmental and behavioral factors on human health - To promote a preventative and patient centered medical thinking and practice - To develop a comprehensive vision of medicine by raising awareness regarding the environmental and populational aspects of health and disease (hygiene, environmental health, epidemiology, public health)
7.2 Specific objectives: -To apply standard methods for the detection, quantitative and qualitative assessment of environmental factors that influence human health - To conduct basic nutritional evaluation and quantitative and qualitative food assessments - To describe and apply the main strategies and measures for the prevention of diseases associated with environmental factors and food

8. Learning outcomes

8.1 Knowledge: -
8.2 Skills: -
8.3 Responsibility and autonomy: -

9. Specific competencies acquired

9.1 professional competencies: -To describe the basic concepts, theories specific to environmental and food hygiene - To assess the risks associated with environmental factors (water, air, habitat) and food - To describe the methods and measures to prevent the diseases associated with environmental hazards and unsafe food - To carry out projects and to demonstrate the ability to deliver health information and health education classes on different topics, to promote general wellbeing and healthy behaviors among the general population
9.2 transversal competencies: Abilities to obtain, critically evaluate and apply health-related information in various contexts - Skills regarding research methods and their application - Written and oral communication, public speaking, and presentation - Collaborative information seeking, evaluation, and decision making - Awareness and observance of professional deontological norms
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction in hygiene and environmental health – Importance, definition and objectives of hygiene and environmental health. The WHO definition of health. Health determinants. Environmental risk – Risk assessment, management and communication. Environmental toxicology and epidemiology basics.	Oral and multimedia presentation	2	-	Chronic bronchitis and emphysema, Skin cancer, Substance abuse, Depression, Respiratory tract infection, Skin infections/ infestations, Malaria, Malnutrition, Chronic lung disease, Thyroid disorders, Disorders of calcium and vitamin D metabolism
2	Air quality – Normal air composition. The sources and the effects of major air pollutants. Air quality standards and pollution prevention measures.	Oral and multimedia presentation	2	-	Dizziness, Headache, Tiredness, Chronic bronchitis and emphysema, Respiratory tract infection, Chronic lung disease
3	Water quality – Water intake and loss. Water sources and their characteristics. The water self-purification process. Sources of water pollution. Infectious and non-	Oral and multimedia presentation	2	-	Cyanosis, Loose stools, Abdominal pain, Vomiting, Electrolyte and water balance

	infectious water borne diseases. Drinking water standards. Drinking water treatment and public water supply systems. Wastewater.				
4	Urban and built environment – the health impact of housing and urban life. Environmental noise - sources, effects and control of noise pollution. Solid waste management.Exposure to radio-frequency electromagnetic fields (mobile phones)	Oral and multimedia presentation.	2	-	Dizziness, Headache, Pruritus, Hearing loss, Sleep disturbance, Skin cancer, Depression
5	Food quality – Food - health relationship. Macronutrients: proteins, fats, carbohydrates, dietary fibers. Micronutrients: Vitamins, minerals. Sources, daily requirements, deficiencies.	Oral and multimedia presentation	2	-	Weight gain, Weight loss, Constipation, Malnutrition, Thyroid disorders, Disorders of calcium and vitamin D metabolism, Oral disorders (incl. Caries), Disorders of uric acid metabolism, Disorders of lipid metabolism
6	Food quality – Food borne diseases. Physical, chemical and microbiological contamination of food.	Oral and multimedia presentation	2	-	Headache, Loose stools, Abdominal pain, Vomiting
7	Promoting healthy nutrition – Food guides. Food groups: meat, fish, and meat products; eggs, milk, dairy products, grains, grain products, fruits, vegetables, legumes, and nuts. Processed foods. Sugar products, alcoholic and non-alcoholic beverages. Sources and nutritional value.	Oral and multimedia presentation	2	-	Weight gain, Weight loss, Constipation, Malnutrition, Disorders of calcium and vitamin D metabolism, Oral disorders (incl. Caries)

Bibliography
Mandatory bibliography:
- Tarcea M.: Environmental Hygiene, Course for English students, under edition, 2012
- Năda̧șan V. Hygiene – Environmental Health for Medical Students. Editura University Press, 2022.
Support bibliography:
- Frumkin H, Ed. Environmental Health: From Global to Local. San Francisco: Jossey Bass, 2005.
Optional
- Friis RH. Essentials of Environmental Health. Jones & Bartlett Publishers 2011.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Physical properties of the air – standards and assessment methods	Oral, multimedia presentation, practical activities	2	-	Dizziness, Headache, Pruritus, Hearing loss, Sleep disturbance, Allergic disorders
2	Air pollution assessment: PM2.5, dusts and gases. Air quality monitoring.	Oral, multimedia presentation, practical activities	2	-	-Chronic bronchitis and emphysema, Chronic lung disease
3	Indoor air polution. Microbiological contamination of the air and surfaces.	Oral, multimedia presentation, practical activities. CBL1	2	-	Chronic bronchitis and emphysema, Respiratory tract infection, Chronic lung disease
4	Tobacco smoke as an indoor pollutant. The brief advice to quit smoking.	Oral, multimedia presentation, practical activities	2	-	Chronic bronchitis and emphysema, Respiratory tract infection, Chronic lung disease
5	Assessment of natural and artificial lighting conditions, and community noise.	Oral, multimedia presentation, practical activities	2	-	Tiredness, Headache, Hearing loss, Learning disorders
6	Drinking water quality: sensory characteristics, physical and chemical parameters.	Oral, multimedia presentation, practical activities.	2	-	Loose stools, Abdominal pain, Vomiting, Electrolyte and water balance, Acid based disturbance

7	Drinking water chemical quality standards: organic pollutants, nitrites, nitrates. Microbiological analysis of drinking water. Assessment of drinking water treatment efficiency.	Oral, multimedia presentation, practical activities. CBL2	2	-	Cyanosis, Loose stools, Abdominal pain, Vomiting, Electrolyte and water balance, Acid-based disturbance
8	Nutritional assessment: BMI, percentage of body fat. Assessment of caloric and nutrient intake.	Oral, multimedia presentation, practical activities	2	-	Weight gain, Weight loss, Constipation, Malnutrition, Thyroid disorders, Disorders of calcium and vitamin D metabolism, Oral disorders (incl. Caries), Disorders of uric acid metabolism, Disorders of lipid metabolism
9	Assessment of animal foods quality: meat, milk, eggs.	Oral, multimedia presentation, practical activities	2	-	Loose stools, Vomiting, Abdominal pain
10	Assessment of plant foods quality: fruits and vegetables. Assessment of canned food products, fatty foods, beverages.	Oral, multimedia presentation, practical activities	2	-	Loose stools, Vomiting, Abdominal pain
11	Parasitological and microbiological analysis of food. The HACCP system.	Oral, multimedia presentation, practical activities.	2	-	Loose stools, Vomiting, Abdominal pain
12	Nonionizing radiation – Sources, health effects and risks of exposure to UV radiation. Assessing the evidence regarding the effects of radio frequency radiation and microwaves.	Oral, multimedia presentation, practical activities	2	-	Visual impairment, Headache, Vomiting, Burns, Skin cancer
13	Ionizing radiation – Basic rules for radioprotection. Radiation monitoring. Estimating general and medical irradiation.	Oral, multimedia presentation, practical activities	2	-	Skin cancer, Bone malignancy, Childhood tumours, Immunodeficiency, Malformations of cardiovascular system, Malformations of lip/palate, Malformations of spine/CNS
14	Child and adolescent hygiene – Personal and school hygiene. Prevention of risk behaviors in children and adolescents: smoking, alcohol, drugs. Recovery	Oral, multimedia presentation, practical activities	2	-	Tiredness, Normal child development, Child abuse, Substance abuse, Learning disorders, Disorders of puberty, Sexually transmitted disease, Hair disorders, Infectious diseases of childhood

Bibliography

- Ábrám Z., Tarcea M., Finta H. et al – Hygiene Practical laboratory Guide, under edition, UMF Târgu Mureş, 2012
- Health risk assessment of air pollution – general principles. Copenhagen: WHO Regional Office for Europe; 2016.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

-To evaluate, analyze and interpret environmental (water, air, radiation, noise, soil, waste) and behavioral risk factors
- To develop individual and community programs for the prevention of diseases associated with environmental and behavioral factors
- To develop the skills needed to conduct health education activities and promote health at the individual and community level

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			

- practical activities	Assessment of knowledge and ability to apply it individually and in a team	CBL	20
- lecture	Assessment of knowledge and ability to apply it individually and in a team	Referat	10
Final evaluation			
- practical final exam	Assessment of knowledge gained during the practical activities	Multiple choice test	20
- theoretical final exam	Assessment of knowledge gained during the course	Multiple choice test	50

Minimal performance standards:
To describe the determinants of health and their influence on the human organism, the optimal parameters of air and water quality. To develop and implement strategies and measures to prevent air and waterborne diseases, radiation and noise associated illnesses. To describe and promote the principles of healthy nutrition and food safety. To describe the most important behavioral risk factors in children and adolescents and promote health-promoting behaviors.
- Minimum requirements for admission to the final theoretical exam: course attendance is mandatory. Students missing more than 20% of the course will not be admitted to the final exam. Students undertake a multiple choice test that evaluates knowledge taught during the course. A grade of 5 is required to pass the test.
- Minimum requirements for admission to the final practical exam: practical activities attendance is mandatory. Students missing more than 20% of the practical activities will not be admitted to the final exam. Students undertake a multiple choice test that evaluates knowledge taught during the practical activities. A grade of 5 is required to pass the test.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Ferencz Jozsef-Loránd	30 minutes after each class / practical activity

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Anatomy and embriology			
2.2 Course coordinator: Șef l dr Nechifor-Boila Ioan-Alin			
2.3 Practical activities coordinator(s): Șef l dr Nechifor-Boila Ioan-Alin			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 10	3.2 lecture: 4	3.3 practical activities: 6	
3.4 Total hours in curriculum: 70	3.2 lectures: 28	3.6 practical activities: 42	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			20
- supplemental documentation at the library, from specialized information portals and in the field			10
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			4
- tutorial activities			0
- examinations			0
- other activities			0
3.8 Total hours of individual study			34
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: N/A
4.2 competency: N/A

5. Conditions

5.1 for lectures: N/A
5.2 for practical activities: N/A

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

N/A

7. Objectives of the discipline

7.1 General objective:

knowledge of the anatomy of the head, neck and nervous system
7.2 Specific objectives: knowledge of the anatomy of the head, neck and nervous system

8. Learning outcomes

8.1 Knowledge: knowledge of the anatomy of the head, neck and nervous system
8.2 Skills: dissection of the structures of the head and neck
8.3 Responsibility and autonomy: none

9. Specific competencies acquired

9.1 professional competencies: knowledge of the anatomy of the head, neck and nervous system
9.2 transversal competencies: knowledge of the anatomy of the head, neck and nervous system
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	General neuroanatomy. The functional anatomy of the spinal cord.	oral presentation	2	-	Malformations ov the cardiovascular system. Malformations of the lip and palate. Malformations of the neuraxis. CCT. Degenerative disorders of the neuraxis HIC
2	The organization of the ascending systems.The thalamus. The organization of the efferent descending systems. The basal nuclei. The cerebellum	oral presentation	2	-	Malformations of the cardiovascularsystem. Malformations of the lip and palate. Malformations of the neuraxis. CCT. Degenerative disorders of the neuraxis HIC
3	The cranial nerves and their nuclei. The anatomy of the trigeminal system.	oral presentation	2	-	Disorders of the cranial nerves
4	The organization of sensorial systems. The metathalamus	oral presentation	2	-	Impaired vision. Blindness.Deafness
5	The cerebral cortex and cortical fields. The limbic system	oral presentation	2	-	Agression.Violence. Psychosexual disorders Depression. Cerebrovascular pathologies. HIC
6	The organization of the autonomic nervous system. The hypothalamus	oral presentation	2	-	Sleep disorders. Psychosexual disorders
7	Application of the knowledge on clinical cases	colloquium	2	-	-
8	The functional anatomy of the pharynx and larynx	oral presentation	2	-	Disfagia. Feeding disorders. Cardiac arrest
9	The anatomy of the nose, paranasal cavities. Development of the skull base	oral presentation	2	-	Infection of the airways
10	The orbital region and its content. The lacrimal apparatus Development of the skull vault and its anomalies	oral presentation	2	-	Visual impairment. Blindness. Red eye. HIC. Degenerative disorders of the neuraxis. Diabetes

11	The anatomy of the temporal bone. Thetympanic cavity	oral presentation	2	-	Deafness
12	The descriptive anatomy of the TMJ. Theinfratemporal and ptreygopalatine regions	oral presentation	2	-	Degenerative disorders of the neuraxis
13	Cephalo-cervical and cervico-thoracal vasculo-nervous passageways	oral presentation	2	-	Trauma of the NS
14	Application of the knowledge on clinical cases	colloquium	2	-	-

Bibliography
1. Ioan Alin Nechifor-Boila, Zoltan Lorinczi, Klara Branzaniuc - Neuroanatomy.
2. Denes Lorand, Papp Zsuzsanna, Topographical Anatomy of the Head and Neck.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The spinal cord, the brainstem, the fourth ventricle. The cerebellum and the diencephalon.	lab	3	-	-
2	The basal nuclei and the third ventricle. The the lobes and the surface of the cerebral cortex	lab	3	-	-
3	The interhemispheric matter and the lateral ventricles. The sectional anatomy of the brain	lab	3	-	-
4	SEMINAR: The central nervous system practicals: The muscles of the neck. The suboccipital region	seminar	3	-	-
5	The arteries of the neck. The veins and lymphatics of the neck. The omotracheal region. The cervical plexus. The sterno-cleido-mastoid region	lab	3	-	-
6	The III., IV. and VI. cranial nerves. The lateral cervical region. The V. cranial nerve. The region of the carotic triangle. The VII., VIII. and IX. cranial nerves. The prevertebral region and the lesser supraclavicular fossa. The X., XI. and XII. cranial nerves. The submental region.	lab	3	-	-
7	Application of the knowledge on clinical cases	colloquium	3	-	-
8	Descriptive anatomy of the pharynx, larynx and and cervical esophagus. The tongue. SEMINAR: test on the cranial nerves	lab	3	-	-
9	Muscles of the head, arteries, veins and lymphatics of the head. The submandibular region. The oral and the mental regions	lab	3	-	-
10	The nasal, the palpebral and zygomatic regions. The retrocapsular compartment of the orbit. The vascular supply of the brain. The epicranial regions. The meningeal sheats	lab	3	-	-
11	The region of the inner skull base. The sublingual region. The inner ear.	lab	3	-	-
12	The topographic anatomy of the TMJ. Masticatory muscles and their relations to the TMJ. The motions of the mandible	lab	3	-	-

13	The relations of the maxillary nerve within the pterygopalatine region. . The relations of the mandibular nerve within the infratemporal region. The peripharyngeal spaces	lab	3	-	-
14	Application of the knowledge on clinical cases overview	colloquium	3	-	-
Bibliography 1.Ioan Alin Nechifor-Boila, Zoltan Lorinczi, Klara Branzaniuc - Neuroanatomy. 2.Denes Lorand, Papp Zsuzsanna, Topographical Anatomy of the Head and Neck.					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

knowledge of the anatomy of the head, neck and nervous system

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	seminar SNC	seminar	15
- lecture	seminar de nervi cranieni	seminar	15
Final evaluation			
- practical final exam	ex practic	ex practic	20
- theoretical final exam	ex UNIX	test grila	50
Minimal performance standards: NA			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Sef I dr Nechifor-Boila Ioan-Alin	15 minutes after each lecture

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Biochemistry of oral cavity			
2.2 Course coordinator: Prof dr Tero-Vescan Amelia			
2.3 Practical activities coordinator(s): asist Ingrid Nadasan, asist. Nicoleta Arnaut			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4	3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28	3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		15
- supplemental documentation at the library, from specialized information portals and in the field		5
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		2
- tutorial activities		1
- examinations		1
- other activities		0
3.8 Total hours of individual study		24
3.9 Total hours		52
3.10 Credits		2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

sunt corelate cu recomandarile ESCO

7. Objectives of the discipline

7.1 General objective:

Obiectivul disciplinei este formarea unei culturi generale medicale a studenţilor. De asemenea se urmareşte prezentarea principalelor căi metabolice din celule vii, cu specificări legate de metabolismul celulelor şi ţesuturilor dentare şi peridentare. Un alt obiectiv general al acestui curs este prezentarea metabolismului bacterian în stânsă legătură cu procesul carios.
7.2 Specific objectives: Cunoașterea particularităților metabolismului biochimic la nivelul cavității orale. Cunoașterea proceselor degradative în timpul formării cariilor dentare

8. Learning outcomes

8.1 Knowledge: înțeleagă procesele biochimice fundamentale din organism, cu accent pe cavitatea orală cunoască metabolismul și structura biochimică a țesuturilor orale (dinți, salivă, biofilm) explice mecanismele biochimice implicate în patologii orale (carie, parodontopatii) înțeleagă relația dintre patologia orală și bolile sistemice
8.2 Skills: aplică și interpretează metode biochimice și analize de laborator utilizează corect aparatura și tehnicile de laborator corelează rezultatele experimentale cu procesele biologice analizează modificările biochimice din cavitatea orală în condiții fiziologice și patologice
8.3 Responsibility and autonomy: Studentul demonstrează autonomie în învățare și în activitatea practică, asumându-și în mod responsabil deciziile profesionale, respectând normele de etică, biosecuritate și lucru în laborator, utilizând critic informațiile științifice și colaborând eficient în echipă.

9. Specific competencies acquired

9.1 professional competencies: Corelarea stării de boală cu procesele biochimice la nivel molecular implicate în dezechilibrele care pot afecta sănătatea țesuturilor dentare Conduita terapeutică conservativă a structurilor odontalo-parodontale în concordanță cu aspectele biochimice care pot influența structurile sus numite Diagnosticul și terapia interceptivă a anomaliilor aparatului dentomaxilar ținând cont de eventualele deficite enzimatice și vitaminice în dezvoltarea aparatului dento-maxilar. Restaurarea protetică a arcadelor dentare folosind materialele dentare cele mai potrivite in corelație cu particularitățile biochimice individuale ale fiecărui pacient
9.2 transversal competencies: Identificarea obiectivelor de realizat, a resurselor disponibile, condițiilor de finalizare a acestora, etapelor de lucru, timpilor de lucru, termenelor de realizare aferente și riscurilor aferente Identificarea rolurilor și responsabilităților într-o echipă pluridisciplinară în care cunoștințele legate de metabolismul biochimic pot da informații cruciale asupra tratamentului și tehnicilor aplicate și aplicarea de tehnici de relaționare și munca eficientă în cadrul echipei și în relație cu pacientul Utilizarea eficienta a surselor informationale si a resurselor de comunicare si formare profesionala asistata
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Carbohydrates: monosaccharides: isomerism, derivatives. Disaccharides. Polysaccharides and storage forms. Carbohydrate digestion. Glycoproteins, glycosaminoglycans, proteoglycans. Glycolysis and gluconeogenesis. Metabolism of fructose and galactose	oral presentation	2	-	-
2	Other glucose metabolism pathways: the pentose phosphate cycle, the glucuronic acid pathway. Glycogen metabolism. Glycogenosis.	oral presentation	2	-	-
3	Lipid metabolism: representatives. Beta-oxidation of fatty acids: mechanism, energy balance. De novo biosynthesis of fatty acids. Elongation of the chain. Metabolism of eicosanoids.	oral presentation	2	-	-
4	Triglyceride metabolism. Phospholipid metabolism. Metabolism of sphingolipids. Digestion and transport of lipids in the body.	oral presentation	2	-	-
5	Metabolism of ketone bodies Cholesterol metabolism. Cholesterol transformation pathways in the body.	oral presentation	2	-	-
6	Nucleotide metabolism: regulation, role, pathology. Heme metabolism. Amino acid metabolism and the ureogenetic cycle	oral presentation	2	-	-
7	Metabolism of nucleic acids: replication, transcription and translation. The formation of dental caries. Dental plaque. Saliva composition	oral presentation	2	-	-

Bibliography

David L Nelson, Michael M Cox - Lehninger Principles of Biochemistry, 8th Edition
Jeremy M. Berg, Lubert Stryer, John Tymoczko, Gregory Gatto - Biochemistry 9th Edition
Thomas M. Devlin - Textbook of Biochemistry with Clinical Correlations, 6th Edition
Tero-Vescan A, Ősz BE, Imre S – Principii de Biochimie Medicală, Ed University Press Tîrgu Mureş, 2018

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The influence of substrate concentration on the speed of the enzymatic reaction. The influence of pH, temperature and some ions on the speed of the enzymatic reaction	practical determination	2	-	-
2	Determination of amylase activity	practical determination	2	-	-
3	Determination of transaminase activity	practical determination	2	-	-
4	Determination of serum triglyceride. Determination of beta-lipopriteins	practical determination	2	-	-
5	Determination of total and HDL cholesterol	practical determination	2	-	-
6	Determination of creatinine by Jaffe method. Determination of serum ureea	practical determination	2	-	-
7	Determination of uric acid	practical determination	2	-	-

Bibliography

Oşan A, Nagy E, Tero-Vescan A - Biochimie practică, Ed University Press Tîrgu Mureş, 2008

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Cunoașterea aspectelor generale privind structura biomoleculelor în relație cu rolul lor biologic. Cunoașterea căilor metabolice si rolul lor în dezvoltarea unor patologii

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	quzzes and lab reports	MCQ	20
- lecture	TBL	MCQ	10
Final evaluation			

- practical final exam	-	-	0
- theoretical final exam	multiple choice quiz	test	70
Minimal performance standards: Knowledge of the structures of carbohydrates, lipids and amino acids and the main metabolic pathways			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Tero-Vescan Amelia	luni 16-18

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Teeth and dental arches morphology			
2.2 Course coordinator: Prof dr Székely Melinda-Gyöngyi			
2.3 Practical activities coordinator(s): Șef lucrări dr Borș Andreea			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 2	3.3 practical activities: 6
3.4 Total hours in curriculum: 112		3.2 lectures: 28	3.6 practical activities: 84
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			10
- supplemental documentation at the library, from specialized information portals and in the field			0
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			4
- tutorial activities			1
- examinations			2
- other activities			1
3.8 Total hours of individual study			18
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Curricular reform
4.2 competency: English language examination certificate (B2 or C1)

5. Conditions

5.1 for lectures: Multimedia equipment
5.2 for practical activities: Laboratory for dental technicians, specific tables for practical work, instruments for model plaster and wax carving, dental materials (model plaster, dental stone, wax, acrylic models) for on-site practical work. Multimedia equipment for online practical work.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

'Teeth and dental arches morphology' contributes to the training and development of professional skills specific to the field of dentistry, in accordance with ESCO standards in the biomedical area, as well as transversal skills

through theoretical and practical teaching activities adapted to the particularities of this discipline. Teeth morphology knowledge is a core component of dental practice, encompassing anatomical knowledge, diagnostic ability, and restorative application. Teeth morphology is considered a foundational skill under biomedical and clinical sciences. This skill ensure that dentists can accurately diagnose, plan, and execute treatments that align with both natural teeth morphology and the required functional and aesthetic outcomes.

7. Objectives of the discipline

7.1 General objective:
To know the morphology (anatomy) of teeth and dental arches which will be applied in conservative dental restorations (C2) prosthetic restorations (C4) and are necessary in diagnostics and treatments of dental anomalies (C3).

7.2 Specific objectives:
- To learn the human tooth morphology, the functional connection between the teeth and dental arches in masticatory function.
- To know the shape and function of all components of the stomatognathic system as an interrelation between form and function.
- To reproduce each tooth morphology accurately through model plaster and wax modeling.

8. Learning outcomes

8.1 Knowledge:
Use the correct terms to describe the morphology of human primary and permanent dentition.

8.2 Skills:
Recognize and differentiate human primary and permanent dentition.

8.3 Responsibility and autonomy:
Further clinical activity will be based on the terminology learned throughout this praeclinical discipline.

9. Specific competencies acquired

9.1 professional competencies:
- Understanding the terms used to describe the morphology of human primary and permanent dentition.
- The discipline provides dental students with basic knowledge required when answering dental anatomy questions on the examinations.
- Practical work by the plaster and wax modeling of teeth have the value of developing skills to accurately visualize and reproduce the subtle outline of each tooth.

9.2 transversal competencies:
- Aquisition of skills and abilities necessary for dental practice.
- This discipline provides and introduction in dentistry through the knowledge regarding the functional morphology of teeth and dental arches, and with respect to masticatory function.
- All clinical disciplines in dental medicine are based on the terminology learned throughout this praeclinical discipline.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The dentition. Terminology used for describing tooth morphology: crowns and roots.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
2	Primary functional morphology of permanent anterior teeth, class traits (common morphological features). Individual morphological characteristics of the maxillary first incisor.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
3	Individual morphological characteristics of the upper lateral incisor and the lower incisors.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
4	Tooth identification (numbering) systems.	Test + multimedia	2	Evaluation (5% of final grade)	-

5	Individual morphological characteristics of the upper and lower canines. Traits to distinguish maxillary from mandibular permanent anterior teeth.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
6	Primary functional morphology of permanent posterior teeth, class traits.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
7	Individual morphological characteristics of the upper and lower premolars.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
8	Individual morphological characteristics of the upper molars.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
9	Individual morphological characteristics of the lower molars.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
10	Traits to compare and to distinguish all permanent teeth: maxillary and mandibular teeth; anterior and posterior teeth.	Test + multimedia	2	Evaluation (5% of final grade)	-
11	Morphology of primary (deciduous) teeth. Class and type traits (common and different) of primary teeth compared to permanent teeth.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
12	Dental arches: form, dimension, axial position, inter arch relationship of teeth (basic terms).	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
13	The teeth role in mastication: correlations between primary functional tooth morphology and chewing (basic terms).	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-
14	Secondary functional morphology of teeth and dental arches (basic terms). Recapitulation.	Oral and power point presentation, multimedia.	2	Course of 2 hours in English language.	-

Bibliography
Bibliography
References (compulsory):
1. 'Morphology of teeth and dental arches' on BlackBoard and E-learning Platform, Website of the UMFST G.E. Palade of Tg.Mures
2. Scheid R. C., Weiss Gabriela: Woelfel's Dental Anatomy. 8th edition. Lippincott Williams&Wilkins, Philadelphia, 2012.
3. Székely M., Borș A.: Morphology of Teeth and Dental Arches – Course for Students. University Press, UMFST Tg.Mureş, 2019.
References (facultative):
1. Bereșescu G.: Dinţii umani permanenţi. Editura University Press, Tîrgu-Mureş, 2011.
4. Székely M.: A fogak és fogívek funkcionális morfológiája – ediţia a doua. Editura University Press, Tîrgu-Mureş, 2009.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Presentation of the discipline and the dental laboratories. Inner rules of the discipline and also rules of the workplace safety are presented.	Oral presentation and printed documents.	6	English language used, students sign to confirm that they were informed.	-
2	Morphology of anterior teeth: individual modeling of the upper first incisor from model plaster on a scale of 1/2.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-

3	Morphology of anterior teeth: individual modeling of the upper second incisor from model plaster on a scale of 1/2.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
4	Morphology of anterior teeth: individual modeling of the lower first incisor from model plaster on a scale of 1/2.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
5	Morphology of anterior teeth: individual modeling of the upper canine from model plaster on a scale of 1/2. Knowledge assessment.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
6	Morphology of posterior teeth: individual modeling of the upper first premolar from model plaster on a scale of 1/2.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
7	Morphology of posterior teeth: individual modeling of the lower second premolar from model plaster on a scale of 1/2.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
8	Morphology of posterior teeth: individual modeling of the upper first molar from model plaster on a scale of 1/2.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
9	Morphology of posterior teeth: individual modeling of the lower first molar from model plaster on a scale of 1/2. Knowledge assessment.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
10	Morphology of anterior teeth: individual modeling from wax.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
11	Morphology of posterior teeth: individual modeling of premolar teeth from wax.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-

12	Morphology of posterior teeth: individual modeling of upper molar teeth from wax.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
13	Morphology of posterior teeth: individual modeling of lower molar teeth from wax.	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-
14	Modeling a tooth for a higher grade or recovery of an absence. Recapitulation	Practical demonstration performed by the dental technicians, presentation of intermediary phases and models.	6	Students work under the supervision of university staff and dental technicians. Students present their notes and schematic drawing of the tooth and receive grade for the performed individual modeling, Laboratory Report.	-

Bibliography
Bibliography
Bratu D., Leretter M.A., Colojoară Carmen, Romînu M.: Dinţii umani permanenţi – morfologie, desen şi modelaj. Editura Signata, Timişoara, 1991.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

1. This discipline is primarily intended as a guide for dental students to master the details of tooth morphology which will be useful in the dental office in conservative and prosthodontic treatments.
2. The future activity of the dentist is based on the theoretical and practical knowledge and skills acquired in this discipline.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Practical knowledge related to theoretical knowledge.	Laboratory Report (grades for practical works, and also for the complete laboratory report and presence) and tests through summative evaluation.	20
- lecture	Test based theoretical knowledge.	Grade obtained on test individually.	10
Final evaluation			
- practical final exam	Practical knowledge and skills joint with theory.	Practical exam including response to a question.	30
- theoretical final exam	Theoretical knowledge in the domain of courses.	Theoretical exam by test: multiple choice + short redactional questions.	40

Minimal performance standards:
Minimal performance standards:
- Necessary knowledge for achieving the passing grade 5 (five) for every evaluation criteria. The presence for the practical exam is conditioned by the minimum participation at 80% of the laboratory sessions and the achievement of the schedule of practical activities during the semester and also notes and schematic drawing of teeth are required.
- Attendance on practical work is compulsory, absence must be recuperated. No more than 20% of absence from practical work and courses are accepted. Attendance on Test courses is compulsory.
- Knowledge required for achieving the minimum grade 5 for the practical exam is that the student performs model plaster or wax modeling respecting all morphological details at a minimal level. Knowledge required for achieving the minimum grade 5 for the theoretical exam: the student has to mark half of all the correct answers on the multiple choice test.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Székely Melinda-Gyöngyi	30 minutes or one hour after every course according to the time table.

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Ethics and academic integrity. Research ethics			
2.2 Course coordinator: Conf dr Sălcudean Andreea			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			2
- tutorial activities			2
- examinations			2
- other activities			2
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: lecture theatre, projector, blackboard, chalk, internet connection
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The course ‘Ethics and Academic Integrity’ contributes to the development of the competences defined within the ESCO framework for occupations relevant to the study programme, by developing the knowledge, skills and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective: To develop, at an individual level, knowledge relating to academic ethics and integrity Fostering a critical attitude towards various
7.2 Specific objectives: - to present the fundamental concepts specific to the field of academic ethics and integrity; - to acquire knowledge and understanding of academic responsibilities and rights - promoting ethical behavior and discouraging practices lacking integrity among students - identifying forms of academic dishonesty - raising awareness of the consequences and sanctions for plagiarism or other forms of academic dishonesty - awareness of the social effects of academic dishonesty

8. Learning outcomes

8.1 Knowledge: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.
8.2 Skills: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.
8.3 Responsibility and autonomy: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.

9. Specific competencies acquired

9.1 professional competencies: - The skills acquired by graduates relate to: - familiarising students with the theoretical and practical aspects specific to academic ethics and integrity - developing the ability to analyse and synthesise issues relating to academic ethics and integrity, using specific terms – publication, principal authors, plagiarism, fraud
9.2 transversal competencies: The graduate will be able to: - recognise the importance of academic ethics and integrity - identify forms of academic dishonesty - understand the consequences and sanctions of plagiarism or other forms of academic dishonesty - identify the potential social effects of a lack of academic integrity
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to Ethics and Academic Integrity — Conceptual Foundations and Historical Perspectives	conversation, discussion, explanation, demonstration, case study	2	-	nu
2	The Fundamental Values of Academic Integrity	conversation, discussion, explanation, demonstration, case study	2	-	nu
3	The Philosophical Framework of Academic Ethics	conversation, discussion, explanation, demonstration, case study	2	-	nu
4	Teaching Ethics and Teachers' Responsibilities. Curriculum and Assessment Design in the Spirit of Integrity	conversation, discussion, explanation, demonstration, case study	2	TBL	nu
5	Student Integrity: Authentic Learning and Responsibility. Proactive vs. Reactive Approaches to Promoting Academic Integrity	conversation, discussion, explanation, demonstration, case study	2	-	nu

6	Teacher-Student Relationship: Ethics, Mentoring and Professional Boundaries. Ethics in Peer Relationships: Collegiality, Collaboration and Competition	conversation, discussion, explanation, demonstration, case study	2	-	nu
7	University Governance and Academic Management Ethics	conversation, discussion, explanation, demonstration, case study	2	-	nu

Bibliography

1. Socaciu, Emanuel, Vică, Constantin, Mihailov, Emilian, Gibea, Toni, Mureșan, Valentin, Constantinescu, Mihaela. Ethics and Academic Integrity, University of Bucharest Press, 2018.
2. Gabos Grecu Marieta: Bioethics, Ed University Press, Tg Mureș, 2015
3. Romanian Parliament. Higher Education Act No. 199/2023. Official Gazette.
4. UMFST “G.E. Palade”. Code of Academic Ethics and Professional Conduct. Available online at umfst.ro.
5. International Centre for Academic Integrity (ICAI). (2021). The Fundamental Values of Academic Integrity. (3rd ed.).

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical specialisation.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	- Depending on the nature of the subject.	- TBL sessions.	30
Final evaluation			
- practical final exam	- Depending on the nature of the subject.	Case study presentation	10
- theoretical final exam	- Depending on the nature of the subject.	Written test on the topics covered in the course	60

Minimal performance standards:
- to develop an ethical academic discourse, and to master the concepts and theories involved in the ethical/moral formation of the individual and the profession
- to be familiar with the principles of academic ethics and integrity
- to apply the specific elements of academic ethics in their work
- to respect the rights and obligations regarding human integrity in research

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Sălcudean Andreea	15 minutes after each lecture / practical session

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: SL1 - Humanities
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Romanian language			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Asist dr Rațiu Bogdan			
2.4 Year of study: I	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2	3.2 lecture:	3.3 practical activities: 2
3.4 Total hours in curriculum: 28	3.2 lectures: 0	3.6 practical activities: 28
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		
- supplemental documentation at the library, from specialized information portals and in the field		
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		
- tutorial activities		
- examinations		
- other activities		
3.8 Total hours of individual study		24
3.9 Total hours		52
3.10 Credits		2

4. Prerequisites (where applicable)

4.1 curricular:
4.2 competency:

5. Conditions

5.1 for lectures: -
5.2 for practical activities:

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective:
7.2 Specific objectives:

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies:
9.2 transversal competencies:
9.3 related to the study program:

10.1 Content of seminar, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities			0
- lecture	-	-	0
Final evaluation			
- practical final exam			0
- theoretical final exam			0
Minimal performance standards:			

13. Appointment timetable (for students)

Asist dr Rațiu Bogdan	

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M3
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Allergology. Imunology and clinical immunology			
2.2 Course coordinator: Șef l dr Ureche Corina			
2.3 Practical activities coordinator(s): Șef l dr.Mănescu Bogdan			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: NA
4.2 competency: NA

5. Conditions

5.1 for lectures: Lecture hall with appropriate capacity and video projection equipment
5.2 for practical activities: Laboratory equipment and materials. Access to medical data base and laboratory test reports.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The 'Allergology. Imunology and clinical immunology' discipline contributes to the development of skills defined within ESCO for the relevant occupations of the 'Dental medicine' study program, by enhancing knowledge, skills, and professional autonomy specific to the dental health. It focuses on the student and the development of critical thinking necessary for interpreting patients data, as well as applying acquired knowledge to solve technological

problems and adopt a holistic approach to the patient.

7. Objectives of the discipline

7.1 General objective:
Familiarization with the basic elements of normal and pathological immunology, specifically concerning allergic pathology.

7.2 Specific objectives:
Application of the notions of general immunology and specifically of allergology to the specifics of dental pathology.

8. Learning outcomes

8.1 Knowledge:
Recognize key concepts, principles, and terminology related to allergology and immunology as they apply to oral health and dental practice.
Identify and list common allergenic agents, immune responses, and diagnostic methods relevant to allergic reactions and immunological disorders affecting the oral cavity.
Describe in their own words the pathophysiology of allergic reactions and immune system dysfunctions with implications for dental treatment.
Explain the main mechanisms involved in allergy development and immune responses, illustrating with examples relevant to dentistry.
Classify different types of hypersensitivity reactions and immune disorders based on their mechanisms and their impact on oral tissues.
Summarize key diagnostic procedures used in allergology and immunology that are important for diagnosing allergic conditions in dental patients.
Compare various treatment options and management strategies for allergies and immune conditions as they relate to dental care.
Answer questions regarding diagnosis, treatment, and management of allergic and immunologic conditions in the context of dental practice.
Distinguish between different allergy types and immune disorders based on clinical oral signs, symptoms, and laboratory findings.
Recognize signs and symptoms of allergic reactions and immune dysfunctions in dental patients, ensuring safe and effective treatment planning.
These outcomes are designed to be observable and measurable, guiding students to demonstrate their understanding and skills in allergology and immunology with a focus on dental medicine.

8.2 Skills:
Apply knowledge to identify and evaluate allergic reactions and immune-related issues in dental patients.
Develop diagnostic and management plans for patients with allergies, hypersensitivity, or immune system disorders affecting dental treatment.
Utilize appropriate laboratory tests and clinical assessment tools to diagnose allergies relevant to dental care.
Interpret laboratory and clinical data to establish accurate diagnoses of allergic or immunological conditions impacting oral health.
Propose suitable preventive, therapeutic, and management strategies tailored to patients with allergies or immune dysfunctions in a dental setting.
Construct detailed case reports and clinical documentation on allergy-related oral health issues.
Compare different treatment options, including allergy management in dental practice, with evidence-based reasoning.
Adapt dental treatment plans according to patient-specific allergy profiles or immune conditions.
Integrate allergology and immunology knowledge into dental procedures to minimize risk of adverse reactions.
Evaluate the outcomes of implemented interventions, ensuring safe and effective dental care for patients with immunological sensitivities.

8.3 Responsibility and autonomy:
Demonstrate responsibility in monitoring and managing allergies and immunopathologies within the context of dental treatment, in accordance with applicable laws and ethical standards.
Show autonomy in planning, organizing, and conducting clinical assessments and diagnoses of patients with allergic reactions and immunological conditions.
Justify decisions regarding treatment and management of patients with allergies, based on clinical criteria and safety considerations.
Prioritize prevention, diagnosis, and treatment measures according to the severity and impact of allergic reactions on the patient's oral and overall health.
Establish and apply ethical principles in caring for and monitoring patients with immunological disorders, ensuring social and professional responsibility.
Verify the accuracy of clinical information and diagnostic parameters to avoid errors and ensure patient safety.
Understand the impact of their decisions on the patient’s health, ensuring that interventions adhere to professional and ethical standards.
Continuously adapt to new research findings and regulations in the field of allergology and clinical immunology as

applied to dentistry.

9. Specific competencies acquired

9.1 professional competencies:
- Description of the basic concepts of normal and pathological immunity of the human body and identification of allergic conditions.
- Integration of basic concepts into situations applicable to the human body in order to explain signs and symptoms.
- Description of fundamental concepts, theories, and notions of pathophysiology, by systems and mechanisms of action.
- Establishment of care techniques required by the presence of signs and symptoms of disease.
- Establishment of therapeutic principles that modify pathophysiological mechanisms in order to alleviate disease symptoms.
- Utilization of the concepts acquired within the discipline for further scientific research.

9.2 transversal competencies:
Creating a paper/report/clinical case with the identification of objectives to be achieved, available resources, conditions for their completion, work stages, work times, deadlines for completion, and risks associated with various pathophysiological mechanisms.
- Identification of roles and responsibilities within a multidisciplinary team and application of relationship and efficient work techniques within the team and in relation to the patient.
- Efficient use of information sources and communication and assisted professional training resources (Internet portals, specialized software applications, PUBMED databases, online courses, etc.) both in Romanian and in an international language.
- Development of medical thinking and use of scientific information in the context of interdisciplinarity.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction: Non-specific and specific defense, cellular and humoral: Cellular elements of the non-specific immune system. Phagocytosis. The complement system.	Lecture+PPT presentation	2	NA	Immunisation.Immunodeficiency
2	Concepts of antigen and antibody: Physical, chemical, and biological properties of antigens. Antigens. Immunoglobulins: structure, properties, nomenclature, biosynthesis. Major histocompatibility systems. Immune cells and the lymphoid system.	Lecture+PPT presentation	2	NA	Immunisation.Immunodeficiency
3	Specific immune response – overview: Recognition and processing of antigens. Pathological immune reactions, hypersensitivity.	Lecture+PPT presentation	2	NA	Immunisation.Immunodeficiency
4	Allergy. Allergens. Diagnosis of allergic diseases.	Lecture+PPT presentation	2	NA	Allergic disorders
5	Respiratory and skin allergic diseases.	Lecture+PPT presentation	2	NA	Allergic disorders.Asthma
6	Digestive and systemic allergic diseases (foods, medications). Anaphylaxis. First aid principles in allergies.	Lecture+PPT presentation	2	NA	Allergic disorders
7	Normal and pathological immunity in oro-dental pathology. Inherited and acquired immunodeficiencies.	Lecture+PPT presentation	2	NA	Immunodeficiency.Oral disorders

Bibliography

1. Abbas A.-Basic Immunology: Functions and Disorders of the Immune System, Sixth Edition, Elsevier 2020.
2.Gavin Spickett-Oxford Handbook of Clinical Immunology and Allergy,third Edition,Oxford University Press,2013

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Influence of the pre-analytical phase on the immunological test results. Blood and body fluids collection	Practical demonstrations, case studies	2	The major risk in laboratory work and the laboratory safety precautions will be presented. The safety precaution acknowlegement will be signed by the students. The students will be introduced to the correct blood sampling techniques and The major risk in laboratory work and the laboratory safety precautions will be presented. The safety precaution acknowlegement will be signed by the students. The students will be introduced to the correct blood sampling techniques and presented the pre-analitical conditions that can interfere with the immunological assays	Anemia, thromboembolic disease, Coagulation disorders
2	Assessment of the non-specific humoral immunity in clinical practice – CRP, hsCRP, procalcitonin, IL-6, complement factors (C3, C4, C1 INH).	Practical demonstrations, case studies	2	Current techniques for investigation in the modern laboratory will be presented.	Immunization, Immunodeficiency
3	Assessment of the adaptive humoral immunity: Classification of the immune tehhniques based on the antigen-antibody reaction. Assessment of immunoglobulins in biological fluids in different pathologies (TORCH screening, HIV infection, Syphylis infection, chronic and acute HBV infection)	Practical demonstrations, case studies	2	Current techniques for investigation in the modern laboratory will be presented	Immunization, Immunodeficiency, HIV
4	Assessment of the innate cellular immune response – Complete blood count, the peripheral smear - quantitative and qualitative assessment of peripheral blood cells; phagocytosis tests, evaluation of the chemotactic and oxidative burst activity of monocytes and granulocytes.	Practical demonstrations, case studies, CBL test.	2	Current techniques for investigation in the modern laboratory will be presented	Immunization, Immunodeficiency
5	Assessment of the adaptive cellular immunity. Flow cytometry.	Practical demonstrations, case studies.	2	Current techniques for investigation in the modern laboratory will be presented	Immunization, Immunodeficiency, HIV
6	Laboratory testing in allergies. Total IgE and specific IgE testing. Laboratory diagnosis of food allergies, food intolerance and celiac disease	Practical demonstrations, case studies	2	Current techniques for investigation in the modern laboratory will be presented	Drug reactions, Allergic disorders, Asthma, Shock

7	Recovery activities	Essays, discussions	2	The same topics of laboratory testing methods will be discussed.	Immunization, Immunodeficiency

Bibliography
1. Dobreanu M. et al.- Practical Compendium of Clinical Biochemistry and Immunology, University Press, 2014
Dobreanu Minodora et al. Compendium of practical work. University Press 2014.
Support bibliography:
1. Mary L. Turgeon, Linne & Ringsrud's Clinical Laboratory Science - The basics and routine techniques, 5th Ed., MOSBY- ELSEVIER 2007
2. Christine Dorresteyn Stevens -Clinical Immunology and serology - a LABORATORY perspective, 2nd Ed., FA Davis, Philadelphia, 2003

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The discipline aims to prepare students to meet current industry standards by developing competencies necessary for diagnosing and managing allergic and immunological conditions in dental practice. The curriculum responds to the demand for safe, effective, and evidence-based interventions, ensuring that future dentists are equipped to address oral and systemic health issues related to allergies and immune disorders. This alignment promotes the integration of scientific knowledge with practical skills, facilitating the delivery of high-quality dental care, improving patient safety, and fostering public trust in the profession. Consequently, students become competent professionals capable of contributing to community health, meeting the evolving requirements of the dental industry, and adhering to ethical and regulatory standards.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Theoretical knowledge necessary for understanding the principles of the laboratory methods. Correlation of the knowledge acquired during the lecture with practical aspects	Practical evaluation throughout the semester + CBL (15% + 15%)	30
- lecture	--	-	0
Final evaluation			
- practical final exam	Knowledge necessary to understand the principles of laboratory methods. Correlation of the knowledge acquired during the practical activities with the practical aspects.	Multiple choice test	20
- theoretical final exam	Theoretical final exam	Multiple choice test	50

Minimal performance standards:
Minimal performance standards:
Minimal performance standards for passing the final theoretical evaluation
Minimum 50% attendance at lectures. A minimum score of 50% achieved on the written test.
Minimal performance standards for passing the final practical activity evaluation :
12.Antigen-antibody reaction. Assessment of immune complexes: classification of immune methods of analysis.
13. Immune techniques on solid phase: ELISA, chemiluminiscence, electrochemiluminescence, solid phase immunochromatography.
14. Complete blood count and differential –its components and their reference ranges
15. Principle, parameters and interpretation of the complete blood count. MGG peripheral blood smear.
Phagocytosis test - endocytosis and quantification of oxygen reactive species.
17. Assessment of CRP (latex agglutination, turbidimetry) and other acute phase reactants, quantification of C3, C4, C1, INH (turbidimetry, nephelometry).
18. Assessment of immunoglobulin concentration in different biological fluids - immunogram (turbidimetry, nephelometry).
19. Peripheral blood lymphogram. Peripheral lymphocyte immunophenotyping: T, B, NK – flow cytometry analysis

13. Must seen clinical situation list

NA

14. Clinical / practical abilities

NA

15. Appointment timetable (for students)

Șef l dr Ureche Corina	30 minute după fiecare curs

Head of departament	Course coordinator	Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Health promotion			
2.2 Course coordinator: Prof dr Voidăzan Toader-Septimiu			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2	3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14	3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		13
- supplemental documentation at the library, from specialized information portals and in the field		12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		12
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		38
3.9 Total hours		52
3.10 Credits		2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Room with projector/electronic display
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The Health Promotion discipline correlates with ESCO occupations such as dentist, dental hygienist, health promotion specialist and public health professional, contributing to the development of patient and community education skills, the promotion of healthy behaviors, the identification of risk factors and the implementation of programs for prevention and promotion of oral health.

7. Objectives of the discipline

7.1 General objective: - Acquisition of general notions regarding scientific methods of assessment of oral health in communities - Acquiring general notions regarding the dental treatment needs in order to establish targeted preventive and curative strategies
7.2 Specific objectives: - Designing and implementing a pilot program for the evaluation and research of the oral health conditions in the studied communities; - Developing the ability to establish the most effective methods of classification into risk groups for oral diseases; - Acquiring communication skills in oral health education - Developing the capacity to analyse the effectiveness of a programme to promote oral health.

8. Learning outcomes

8.1 Knowledge: -enumerate the factors that shape behaviors that impact health; -enumerate the main determinants of health and distinguish between modifiable risk factors and non-modifiable; -to define the fundamental components of the interpersonal communication process; -describe the essential elements of two theoretical models of behavior change; -enumerate and formulate the basic principles of health education in the main chronic diseases non-communicable (prevention of cardiovascular diseases, prevention of cancer diseases, prevention of nutrition and metabolism, smoking prevention, alcohol and drug use, stress control and violence prevention) -enumerate the stages of designing and implementing a health education program
8.2 Skills: -to define the state of health and disease, health education and culture; -to use in communication with patients and healthy people a language understandable to everyone; -apply effective communication skills in the relationship with healthy patients and people; -assess the quality of health and disease information using scientific quality criteria; -to evaluate the level of health culture in healthy patients and people; -to assess the accessibility of health education materials;
8.3 Responsibility and autonomy: -assist healthy patients and people in finding quality medical information; -apply micro-health counseling skills in the relationship with healthy patients and people; -to assist healthy patients and people to stop risk behaviors and adoption health-promoting behaviors; -to obtain health and disease information from scientifically valid sources; -to show a proactive attitude in the relationship with healthy patients and people in order to detect and remove early modifiable risk factors; -to identify potential partners in the local community and to involve them in the organization, implementation and evaluation of health education programmes; -to identify and describe at least three tools in the field of information and communication technology useful in education and promotion of health in the virtual space.

9. Specific competencies acquired

9.1 professional competencies: - to obtain a profile of the oral health of the studied community - to have the capacity to interpret the results of oral health promotion programmes carried out in different countries of the world - to create databases for indicators evaluated by epidemiological surveys - to statistically process clinical and sociological indicators - create and support oral health education lessons in different communities - to develop skills as coordinator of oral health programs
9.2 transversal competencies: - Identifying roles and responsibilities in a multidisciplinary team and applying techniques of networking and effective work within the team and in relation to the subjects of the community studied; - Efficient use of information sources and resources for communication and assisted training.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Health promotion. Introduction to education for health. Definitions and terminology, purpose and objectives, concepts, concepts features. Health culture.	Oral and multimedia presentation	2	-	Substance Abuse, Infant Feeding, Sexually Transmitted Diseases, Childhood Infectious Diseases, Skin Cancer, Diabetes Mellitus, Hypertension, Ischemic Heart Pathology, Cerebrovascular Pathology, Chronic Pulmonary Pathology
2	Oro-dental health of the population: general characteristics, orodentary morbidity; assessment of assistance needs dentistry of the population, criteria of appraisal. Factor assessment methodology health risk, including with major importance in dental pathology.	Oral and multimedia presentation	2	-	Substance Abuse, Infant Feeding, Sexually Transmitted Diseases, Childhood Infectious Diseases, Skin Cancer, Diabetes Mellitus, Hypertension, Ischemic Heart Pathology, Cerebrovascular Pathology, Chronic Pulmonary Pathology
3	Sanogen lifestyle and mode. Characteristics of the population's health depending on the level and quality of life. Behavior change. Theories, theories models, determinants, ethical requirements.	Oral and multimedia presentation	2	-	Substance Abuse, Infant Feeding, Sexually Transmitted Diseases, Childhood Infectious Diseases, Skin Cancer, Diabetes Mellitus, Hypertension, Ischemic Heart Pathology, Cerebrovascular Pathology, Chronic Pulmonary Pathology
4	Oral health education: purposes, stages, educational methods, tools, responsibilities, competencies	Oral and multimedia presentation	2	-	Substance Abuse, Infant Feeding, Sexually Transmitted Diseases, Childhood Infectious Diseases, Skin Cancer, Diabetes Mellitus, Hypertension, Ischemic Heart Pathology, Cerebrovascular Pathology, Chronic Pulmonary Pathology
5	Strategies for health promotion in community. Education programs and promotion of health. Types, design, implementation, evaluation.	Oral and multimedia presentation	2	-	Substance Abuse, Infant Feeding, Sexually Transmitted Diseases, Childhood Infectious Diseases, Skin Cancer, Diabetes Mellitus, Hypertension, Ischemic Heart Pathology, Cerebrovascular Pathology, Chronic Pulmonary Pathology
6	Communication in education and promotion oro-dental health. Principles and techniques of effective communication in education and health promotion. Forms and methods health promotion. use of sanogen message	Oral and multimedia presentation	2	-	Substance Abuse, Infant Feeding, Sexually Transmitted Diseases, Childhood Infectious Diseases, Skin Cancer, Diabetes Mellitus, Hypertension, Ischemic Heart Pathology, Cerebrovascular Pathology, Chronic Pulmonary Pathology
7	Education and health promotion in computerized society. The potential and social media risks as a means of information in the field of health.	Oral and multimedia presentation	2	-	Substance Abuse, Infant Feeding, Sexually Transmitted Diseases, Childhood Infectious Diseases, Skin Cancer, Diabetes Mellitus, Hypertension, Ischemic Heart Pathology, Cerebrovascular Pathology, Chronic Pulmonary Pathology

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1. Şcoala Naţională de Sănătate Publică şi Management Sanitar. Promovarea sănătăţii şi educaţie pentru sănătate. Bucureşti : Public H Press, 2006.
2. *** Education for Health - A manual on health education in primary care. World Health Organization, Geneva, 1988.

3. *** Health Education: Theoretical Concepts, Effective Strategies and Core Competencies. World Health Organization, 2012.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The knowledge, attitudes, and skills acquired within the discipline will have an important contribution in the training of doctors aware of their role as health educators both at the individual level, in the daily activity in dental health care institutions and at the group level, through their involvement in organizing health education and promotion programs for the benefit of the community.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	depending on the specifics of the discipline	project	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	depending on the specifics of the discipline	Multiple choice questions	70

Minimal performance standards:
• To state the definitions of health, health education, health promotion, health literacy;
• List the main determinants of health and explain the role of behaviors in maintaining health;
• List the basic principles of effective communication in the relationship with patients and healthy people;
• Enumeration and description of factors that influence behaviors with an impact on health;
• Enumeration and description of the content of the stages of design and implementation of a health education and promotion program;

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Voidăzan Toader-Septimiu	Marti, interval orar 14.00-16.00

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Healthcare informatics and biostatistics			
2.2 Course coordinator: Conf dr Olah Peter			
2.3 Practical activities coordinator(s): Asist. Univ. dr. Andrei Ioanovici, Asist. Univ. dr. Florin Stoica Buracinschi			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8	3.2 lecture: 4	3.3 practical activities: 4	
3.4 Total hours in curriculum: 56	3.2 lectures: 28	3.6 practical activities: 28	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			24
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			74
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Not applicable
4.2 competency: Not applicable

5. Conditions

5.1 for lectures: Not applicable
5.2 for practical activities: Not applicable

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Attitudes and values Ethics in the use of health information technologies Responsibility in handling medical and patient data Respect for privacy, confidentiality, and data protection in healthcare

Critical thinking in the evaluation of digital medical information
Evidence-based decision-making in clinical and biomedical contexts
Awareness of cybersecurity risks in healthcare environments
Openness to technological innovation in medicine
Responsible use of telemedicine and digital health tools
Interdisciplinary collaboration between healthcare and ICT professionals
Knowledge
Fundamentals of informatics
Evolution of computers and computing technologies
Computer hardware and software architecture
Operating systems
Programming languages and their role in medical applications
Computer networks, the Internet, and the World Wide Web
Health informatics and healthcare information systems
Health information technology adoption and implementation
Medical data privacy and security principles
Cybersecurity threats and protection tools in healthcare
Information retrieval from medical knowledge resources
Indexing, retrieval systems, and evaluation of medical information sources
Evidence-based medicine
Clinical practice guidelines
Medical imaging informatics
Picture Archiving and Communication Systems — PACS
Digital medical imaging technologies
Telemedicine, teleconsultation, and telemonitoring
Future trends in digital health and medical informatics
Language competences and knowledge
Medical informatics terminology
Health information technology terminology
Cybersecurity and data protection terminology
Medical imaging informatics terminology
Evidence-based medicine terminology
Telemedicine terminology
Scientific and technical communication
Medical English
ICT English for healthcare contexts
Skills
Use basic informatics concepts in medical and biomedical contexts
Identify the main components of computer hardware and software systems
Explain the role of operating systems, programming languages, and networks in healthcare technologies
Use digital tools for accessing and managing medical information
Retrieve medical information from electronic knowledge resources
Evaluate the reliability and relevance of medical information sources
Apply principles of evidence-based medicine in the use of digital medical resources
Interpret clinical practice guidelines in relation to digital medical information
Identify privacy and security risks in healthcare information systems
Apply basic principles of data protection and cybersecurity in healthcare contexts
Recognise common types of cyberattacks affecting medical information systems
Describe the workflow of PACS and digital medical imaging systems
Explain the role of telemedicine, teleconsultation, and telemonitoring in healthcare delivery
Identify barriers to the adoption of health information technologies
Communicate scientific and technical information related to medical informatics
Integrate digital health tools into biomedical learning, research, and clinical decision-making
Transversal skills
Critical analysis of digital information
Problem-solving in healthcare technology contexts
Digital literacy
Information literacy
Teamwork in interdisciplinary healthcare environments
Ethical reasoning
Communication with healthcare and ICT professionals
Adaptability to technological change
Lifelong learning in digital health and medical technologies

7. Objectives of the discipline

7.1 General objective:

The progress of modern medicine becomes increasingly dependent of the ways the computer assists the medical field. Therefore, the main goal of discipline is to familiarize students in the biomedical field with the specific skills requirements of the 'digital age' and with IT vocabulary with key technologies related to computer assisted practice and biomedical research.

7.2 Specific objectives:
-Demonstrate students ability to understand and use the main tools hardware (PC) and software used in computer science and medical informatics
-Learning important aspects of using the services of indexing and searching online information
-Acquisition of practical skills to use advanced solutions for editing office documents required format, manage and organize information exported from medical databases in spreadsheet programs, preparing electronic presentations

8. Learning outcomes

8.1 Knowledge:
Identifies the fundamental concepts and specialised terminology used in medical informatics.
Describes the evolution of computers and the role of informatics in modern healthcare.
Explains the basic components of computer hardware, software, operating systems, and programming languages.
Describes the principles of computer networks, the Internet, and the World Wide Web in relation to healthcare information systems.
Defines the main concepts related to health information technology, digital health, and healthcare information systems.
Identifies the main users of health information technologies and the barriers to their adoption in healthcare settings.
Describes basic principles of health information privacy, confidentiality, data protection, and cybersecurity.
Recognises common types of cybersecurity threats and attacks affecting healthcare information systems.
Explains the principles of information retrieval from medical knowledge resources, including content, indexing, retrieval systems, and evaluation.
Describes the role of evidence-based medicine and clinical practice guidelines in medical decision-making.
Explains the basic workflow of medical imaging informatics systems, including PACS and web-based image distribution.
Describes the principles, advantages, limitations, and future trends of telemedicine, teleconsultation, and telemonitoring.

8.2 Skills:
Uses fundamental concepts of informatics in medical and biomedical contexts.
Identifies the main components and functions of computer systems used in healthcare environments.
Explains the role of hardware, software, operating systems, programming languages, and networks in medical informatics applications.
Uses digital medical knowledge resources to retrieve relevant biomedical information.
Selects appropriate search strategies for accessing medical information from electronic resources.
Evaluates the relevance, reliability, and quality of medical information retrieved from digital sources.
Applies basic principles of evidence-based medicine in the interpretation and use of medical information.
Interprets clinical practice guidelines in relation to digital medical resources and clinical decision support.
Identifies potential privacy and security risks in the use of healthcare information technologies.
Applies basic measures for protecting medical data, patient confidentiality, and information security.
Describes the basic operation and workflow of PACS and digital medical imaging systems.
Analyses the role of telemedicine tools in teleconsultation, telemonitoring, and remote healthcare delivery.
Compares the advantages, limitations, and barriers of different health information technologies.
Communicates medical informatics concepts using appropriate scientific, technical, and medical terminology.
Integrates digital health tools into learning, biomedical documentation, and clinical decision-making processes.

8.3 Responsibility and autonomy:
Critically evaluates the use of digital technologies and health information systems in medical practice.
Assumes responsibility for the ethical use of medical data and healthcare information technologies.
Respects principles of privacy, confidentiality, data protection, and cybersecurity when handling medical information.
Demonstrates autonomy in retrieving, selecting, and evaluating medical information from electronic knowledge resources.
Uses digital medical information responsibly in accordance with evidence-based medicine principles.
Demonstrates critical thinking when interpreting information obtained from medical literature, clinical guidelines, and digital resources.
Recognises the limits of health information technologies, telemedicine, and medical imaging systems in clinical practice.
Shows responsibility in communicating digital medical information accurately and appropriately.
Adapts to technological developments and future trends in medical informatics and digital health.
Contributes to the safe, ethical, and effective use of medical informatics tools in healthcare, research, and education.

9. Specific competencies acquired

9.1 professional competencies: -The student must demonstrate the ability to understand and to acquire IT specific terms, respectively glossary of key terms used in medical informatics -The student must demonstrate the ability to understand and use themain hardware (PC) and software used in computer science and medical informatics -The student must know the main branches and areas of interest inthe field of medical informatics -The student must demonstrate the ability to use the latest onlinedocumentation tools by understanding the specific architecture of the current Internet, or Web services, and an adequate knowledge of different types of tools for indexing and retrieval on the Internet. - The student must be able to apply the knowledge gained in practice, regarding all stages of documentation (online), organization and retrieval of information in medical databases and / or spreadsheet programs, writing / editing and presentation of scientific papers format imposed in the biomedical field
9.2 transversal competencies: -Familiarity with specific technologies of the Information Society, therules of ethics and conduct online security risks associated with managing information in digital media -Familiarity with the use of e-learning platforms synchronous and asynchronous, respectively test solutions online 'adaptive Assesment server' used by most test centers internationally
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introductory Guide. Medical informatics objectives	Oral + multimedia presentation	2	n/a	n/a
2	Medical informatics fields	Oral + multimedia presentation	2	n/a	n/a
3	Data, Information, Knowledge	Oral + multimedia presentation	2	n/a	n/a
4	Architecture of a digital computer. The hardware architecture of a automated computer system	Oral + multimedia presentation	2	n/a	n/a
5	Architecture of a digital computer. The software architecture of a automated computer system	Oral + multimedia presentation	2	n/a	n/a
6	Computer Networks – introductory guide	Oral + multimedia presentation	2	n/a	n/a
7	The Internet – introductory guide	Oral + multimedia presentation	2	n/a	n/a
8	Online documentation. Searching for information on the Internet (I) - Introduction, types of tools and services for searching information on the Internet	Oral + multimedia presentation	2	n/a	n/a
9	Online documentation. Searching for information on the Internet (II) Ways to use search engines (Google) and directory services (Yahoo Directories) to search for information in the biomedical field. Automated medical documentation services (Medline)	Oral + multimedia presentation	2	n/a	n/a
10	Online documentation. Searching for information on the Internet (III) Evaluation of quality of information published on the Internet / World Wide Web.	Oral + multimedia presentation	2	n/a	n/a

11	Office applications in the biomedical field: Word processing software. Desktop Publishing (DTP). Advanced text editors.	Oral + multimedia presentation	2	n/a	n/a
12	Office applications in biomedical field: spreadsheet software (MS Excel, OO Calc). Software for electronic presentations. Software for organizing activity. Suite of office applications (MS Office, Lotus Smart Suite, OpenOffice).	Oral + multimedia presentation	2	n/a	n/a
13	Biomedical databases.	Oral + multimedia presentation	2	n/a	n/a
14	Biomedical simulation and modeling.	Oral + multimedia presentation	2	n/a	n/a

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1. Tigan S., Achimaş A., Drugan T.: Curs de Informatică şi Statistică Medicală, ed. SRIMA, Cluj-Napoca, 2001
2.Măruşteri M., Buraga S, Acostăchioaie D.: Primii paşi în Linux (carte + CD-ROM cu ROSLIMS LinuxLive CD), Ed. Polirom Iaşi, 2006, carte disponibila online https://www.slideshare.net/busaco/m-mruteri-s buraga-d-acostchioaie-primii-pai-n-linux
3.Măruşteri M.: Documentare online, manual disponibil online pe serverele UMFST Tg. Mures http://www.umftgm.ro/info/doconline_ROV2.pdf
4.Marius Măruşteri – Documentare online – prezent si perspective, disponibil online pe serverele UMFS Tg. Mures https://www.umfst.ro/info/english/doconline.pdf
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6.Blachman N. – Googleguide, disponibil online la http://www.googleguide.com/contents/
7.Gari D Clifford, Joaquin A Blaya, Rachel Hall-Clifford and Hamish SF Fraser: Medical informationsystems: A foundation for healthcare technologies in developing countries, Biomedical Engineering Online, 2008 https://biomedical-engineering-online.biomedcentral.com/articles/10.1186/1475-925X-7-18

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Basic knowledge of using computers	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
2	File Managers. (Windows Explorer): General Concepts. Files. Folders/ Directories	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
3	Utilization of Office software in biopharmaceutical field	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	Electronic Medical Records (EMR)	n/a
4	Advanced text editors. MS Word (I): General concepts. Page formatting; paper, fonts, text formatting, paragraph formatting	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
5	Advanced text editors. MS Word (II): characteristic elements of MS Word text editor: how to select text; operations with blocks, operations with files	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
6	Advanced text editors. MS Word (III): OLE technology (Object Linking and Embedding) – linking and embedding objects in a Word file. Mixing text and image in a Word file.	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
7	Advanced text editors. MS Word (IV) – creating and editing tables	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
8	Advanced text editors. MS Word (V) – the equation editor	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a

9	Spreadsheet software (MS Excel, OO Calc). MS Excel (I) – General concepts ; creating workbook; sheets and cells formatting and editing.	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	Electronic Medical Records (EMR)
10	Spreadsheet software MS Excel (II): using objects, editing formulas, using absolute and relative adresses.	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
11	Spreadsheet software MS Excel (III): using simple and complexe functions	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
12	Spreadsheet software MS Excel (IV): Diagrams /Charts	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
13	Electronic presentation software (MS Powerpoint, OO Impress). MS Powerpoint. General concepts. Creating and using slides. Using objects in slides. Animations and trasitions.	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	n/a
14	Online searching strategies. Tips on finding information on The Internet – introductory guide, tools and services for online searching; Online search services: Search engines (Google); Web Directories (Yahoo Directories);	Practical demostrations. Synchronous/ asynchronous e-learning methods.	2	n/a	Medical Online searching strategies

Bibliography

1. Tigan S., Achimaş A., Drugan T.: Curs de Informatică şi Statistică Medicală, ed. SRIMA, Cluj-Napoca, 2001
2.Măruşteri M., Buraga S, Acostăchioaie D.: Primii paşi în Linux (carte + CD-ROM cu ROSLIMS LinuxLive CD), Ed. Polirom Iaşi, 2006, carte disponibila online https://www.slideshare.net/busaco/m-mruteri-s buraga-d-acostchioaie-primii-pai-n-linux
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6.Blachman N. – Googleguide, disponibil online la http://www.googleguide.com/contents/

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Correlation between theoretical and practical notions Capacity of performing practical work in the field	Practical skills tests during the semester, to test student's ability to properly write an electronic document in a specific/imposed format	25
- lecture	Correlation between theoretical and practical notions Capacity of performing practical work in the field	Multiple choice test (TBL)	10
Final evaluation			
- practical final exam	Correlation between theoretical and practical notions. Capacity of performing practical work	Practical exam at the end of semester.	25

- theoretical final exam	Understanding and integration of all theoretical concepts. Knowledge of bibliographical references	Multiple choice test	40

Minimal performance standards:
Understanding basic glossary of specialized terms in information technology and medical informatics specific terms.
Ability to proper use the online documentation tools and solutions
Ability to properly use the advanced solutions to edit documents, using a pre-defined format
Basic understanding of biostatistical terms

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Olah Peter	30 de minute după fiecare curs / activitate practică

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Epidemiology			
2.2 Course coordinator: Șef l dr Golea Cristina			
2.3 Practical activities coordinator(s): Sef l dr. Golea Cristina			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: -Accumulation of the following knowledge: microbiology, biostatistics
4.2 competency: -Accumulation of the following knowledge: microbiology, biostatistics

5. Conditions

5.1 for lectures: Attendance at the course is at least 80%.
5.2 for practical activities: Attendance at the practical works is mandatory, a maximum of 15% of the total absences being accepted. - Recovery is allowed within the limit of 15% of the total number of absences in the regime with advance payment (with the exception of medical cases that will require individual Dean's approval).

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

- Comply with healthcare legislation - Ensure compliance with regional and national healthcare legislation that regulates relationships between providers, payers, healthcare vendors and patients, as well as the provision of

healthcare services
- Minimizes occupational risks in dental practice - Understands and implements procedures to minimize occupational risks in dentistry
- Manages infection control in the unit - Implements a set of infection prevention and control measures, formulating and establishing health and safety procedures and policies
- ensures the safety of healthcare users - Ensures that healthcare recipients are treated professionally, effectively and safely

7. Objectives of the discipline

7.1 General objective:
students will develop the ability to understand the role of epidemiology in the field of public health and also use epidemiological methods to understand and apply epidemiological methods.

7.2 Specific objectives:
Students will develop the ability to:
1.Understand and apply epidemiological criteria needed to establish causal relationships.
2 Describe, calculate use epidemiological measures to define and quantify health problems in and across defined populations.
3. Describe the range of epidemiologic study designs used to examine the health status of a population and be able to evaluate the strengths and limitations of each.
4. Understand and apply key ethical issues to the conduct of epidemiological and other scientific investigations.
5. Critically read and evaluate epidemiologic studies in the medical or public health literature.
6. Understand the concept of screening for health determinants and diseases.

8. Learning outcomes

8.1 Knowledge:
-Can list the most important stages that marked the development of the field of epidemiology
-Explains domain-specific notions
-Recognizes epidemiological concepts, describes epidemiological processes for communicable and non-communicable diseases
-Answers questions about intervention methods for communicable and non-communicable diseases
-Compares notions for the epidemiology of communicable and non-communicable diseases

8.2 Skills:
-Selects and groups relevant information in a given context.
-Develops a scientific text.
-Expresses points of view on scientific papers.
-Provides interpretations of causal relationships between exposure to risk factors and development of disease.
-Identifies solutions and proposes resolution plans and projects for disease control.
-Provides arguments for the identified solutions.
Formulates conclusions based on the conducted experiments.

8.3 Responsibility and autonomy:
-Selects appropriate bibliographic sources and analyzes them.
-Cites correctly used bibliographic sources.
-Respects ethical considerations.
-Demonstrates receptiveness to new learning contexts.
-Collaborates with other students and teaching staff.
-Develops autonomy in organizing learning plans, schedules and solving problems.
-Develops social responsibility and involvement in academic life.
-Promotes new solutions for improving health and life style.
-Assesses the impact of different solutions in community and on environment.
-Analyses personal and community development opportunities.

9. Specific competencies acquired

9.1 professional competencies:
Competencies acquired:
1.to identify determinants for disease that include individual, social/contextual, and structural determinants of morbidity and mortality trends within and across
populations.
2.Identify which chronic, infectious, and degenerative diseases contribute the most morbidity within and across populations.
3.Describe the trends in mortality due to the most common infectious, chronic and degenerative diseases within and across populations.
4.Identify the appropriate analytic methods for calculating key measures of morbidity (i.e. prevalence, incidence), mortality (e.g. mortality rates, etc) and measures of association (e.g. risk ratio, rate ratio, odds ratio, etc.).

9.2 transversal competencies:
Competencies acquired:
1. Develop and apply epidemiological reasoning and methods in addressing, analyzing and solving problems in public health, health care and biomedical, clinical and population-based research.
2.Understand the patterns of disease in human populations and apply to the control of health problems.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Epidemiology –preventive medicine science (objectives . study fields. historical data) Disease prevention and control (primordial, primary, secondary and tertiary prevention)	Oral and multimedia presentation	2	-	Paleative care, Transfusion of blood products, Pre-operative care, Post operative care, Fever, Drug reactions. Contraception
2	Clinical epidemiology (definitions, objectives. health and disease)	Oral and multimedia presentation	2	-	Paleative care, Transfusion of blood products, Pre-operative care, Post operative care, Fever, Drug reactions. Contraception
3	Causality	Oral and multimedia presentation	2	-	Paleative care, Transfusion of blood products, Pre-operative care, Post operative care, Fever, Drug reactions. Contraception
4	Epidemiological process for communicable and non-communicable diseases I: definition, structure, infectious process, epidemic site, site of infection, sources of pathogenic agents for communicable diseases/ risk factor sources for non-communicable diseases, ways and routes of transmission, receptivity/resistance, immunity, vulnerability to risk factors.	Oral and multimedia presentation	2	-	Infectious disease of childhood, Malaria, Drug reactions, cerebrovascular disease, Immunization, Immunodeficiency
5	Epidemiological process for communicable and non-communicable diseases II: favoring factors, populational manifestation for communicable and non-communicable diseases	Oral and multimedia presentation	2	-	Infectious disease of childhood, Malaria, Drug reactions, cerebrovascular disease, Immunization, Immunodeficiency
6	Epidemiology of oro-dental diseases	Oral and multimedia presentation	2	-	Paleative care, Pre-operative care, Post operative care,
7	Epidemiological surveillance in dental practice	Oral and multimedia presentation	2	-	Paleative care, Pre-operative care, Post operative care,

Bibliography
1. Gordis L. Epidemiology, 5th edition. 2014. ISBN 9781455742516. Available online:https://studentconsult.inkling.com/store/book/gordis-epidemiology-5th/
2. Bonita R, Beaglehole R, Kjellström T. Basic epidemiology, 2nd edition. World Health Organization, 2006. Available online:http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf
3. .Last J.M.: A Dictionary of Epidemiology, 4th ed., Oxford University Press, New York, 2000
4.Merrill R. M.: Principles of Epidemiology, Workbook, Jones&Bartlett Learning, Sudbury, 2011
5.Kumar and Clark's Clinical Medicine, Elsevier publishing house, 10th edition, July 2020
6.Ganti Latha, Lebowitz D, Rosario J, Vera A. Step-up to USMLE Step2 CK, 5th edition. 2020

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Epidemiological surveillance	Theoretical and practical presentations Practical exercise	2	-	Immunization, Tuberculosis, Sexually transmitted diseases Infectious disease of childhood
2	Epidemiological rates. Epidemiological investigation. Epidemiological analysis. Epidemiological assessment.	Theoretical and practical presentations Practical exercise	2	-	HIV Sexually transmitted diseases Infectious disease of childhood
3	.Epidemiological studies. Sampling	Theoretical and practical presentations Practical exercise	2	-	Carcinoma of the cervix/uterus/ovary, Malformations of cardiovascular system Drug effect on fetus
4	Standard precautions. Hand hygiene	Theoretical and practical presentations Practical exercise	2	-	Immunization, Pre-operative care, post operative care,
5	Prevention and management of professional exposure of health-care workers	Theoretical and practical presentations Practical exercise	2	-	Immunization, Pre-operative care, post operative care,
6	Decontamination and sterilization (methods, procedures and products) part 1	Theoretical and practical presentations Practical exercise	2	-	Infectious disease of childhood Pre-operative care, post operative care, Transfusion of blood products
7	Decontamination and sterilization (methods, procedures and products) part 2	Theoretical and practical presentations Practical exercise	2	-	Infectious disease of childhood Pre-operative care, post operative care, Transfusion of blood products

Bibliography

1.Bonita R, Beaglehole R, Kjellström T. Basic epidemiology, 2nd edition. World Health Organization, 2006. Available online:http://apps.who.int/iris/bitstream/10665/43541/1/9241547073_eng.pdf
2.Gordis L. Epidemiology, 5th edition. 2014. ISBN 9781455742516. Available online:https://studentconsult.inkling.com/store/book/gordis-epidemiology-5th/
3.Last J.M.: A Dictionary of Epidemiology, 4th ed., Oxford University Press, New York, 2000
4.Merrill R. M.: Principles of Epidemiology, Workbook, Jones & Bartlett Learning, Sudbury, 2011

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Identifying roles and responsibilities in a multidisciplinary team and applying communication techniques and effective work within the team and in relation to the patient.
Effective use of information sources and communication resources and assisted professional training (Internet portals, specialized software applications, databases, online courses, etc.).

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	practical abilities	simple and multiple choice test	15
- lecture	theoretical concepts	simple and multiple choice test	15
Final evaluation			
- practical final exam	practical abilities	simple and multiple choice test	35
- theoretical final exam	theoretical concepts	UNIX exam - simple and multiple choice test	35

Minimal performance standards:
By the end of this course students will develop the ability to use epidemiological concepts and methods to examine and describe the health status of a population, to define and control health problems, gather, process, and present information to different audiences in-person, through information technologies, or through media channels.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Golea Cristina	Monday 18-20

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Genetics			
2.2 Course coordinator: Șef l dr Bogliș Alina			
2.3 Practical activities coordinator(s): Asist univ Crișan Adriana, Asist univ Balla Beata			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: N/A
4.2 competency: N/A

5. Conditions

5.1 for lectures: N/A
5.2 for practical activities: N/A

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline Genetics contributes to the development of competencies defined in ESCO for the medical profession (2211), by developing the ability to understand genetic mechanisms relevant to oral health and disease. It develops professional competencies related to the interpretation of genetic factors involved in dental and

craniofacial conditions, genotype–phenotype correlations, and the selection of appropriate diagnostic approaches. The course also supports transversal competencies such as analytical thinking, use of digital and scientific resources, and ethical handling of genetic information in clinical practice.

7. Objectives of the discipline

7.1 General objective:
Acquiring the concepts of medical genetics with applications in dentistry.

7.2 Specific objectives:
Understanding the role of genetic factors in the development of physiological traits and genetic diseases with involvement in the oro-maxilo-facial domain.
Management of the patient and family affected by a genetic disease – from diagnosis to therapy and prevention.

8. Learning outcomes

8.1 Knowledge:
Understand fundamental principles of human and medical genetics relevant to craniofacial and dental development.
Comprehend molecular mechanisms of genetic variability and their impact on genetic diseases and craniofacial phenotypes.
Recognize the inheritance patterns of genetic diseases, craniofacial syndromes and dental anomalies and correlate phenotypes with their genetic causes.
Describe craniofacial and dental phenotypes in patients with genetic disorders, perform comparisons, and carry out differential diagnosis.
Select appropriate genetic tests for dental and craniofacial investigations and understand the ethical, legal, and social implications of genetic testing.
Provide genetic counselling for patients with craniofacial or dental disorders.

8.2 Skills:
Interpret genetic test results related to oro-maxillo-facial conditions.
Identify genotype–phenotype correlations and apply algorithms to select the appropriate genetic tests for craniofacial and dental disorders.
Critically analyze genetic information using clinical data and current literature.
Apply basic bioinformatics for variant interpretation affecting craniofacial and dental development.
Use digital academic resources (ClinicalKey Student, genetic databases: OMIM, ClinVar, Decipher).

8.3 Responsibility and autonomy:
Select and analyze bibliographic sources ethically and seek expert guidance when needed.
Demonstrate receptiveness to new learning methods and collaborate effectively with peers and faculty, actively participating in academic and practical activities.
Respect the confidentiality of patient records.
Analyze preventive and multidisciplinary treatment options in dental and craniofacial care.
Show autonomy in organizing practical activities and interpreting laboratory results.

9. Specific competencies acquired

9.1 professional competencies:
Description of basic terms, mechanisms, concepts, and theories of genetics (DNA, RNA, gene, genome, chromosomes, gene expression, variability, recombination, mutations, inheritance patterns) involved in the production of physiological traits and disorders. Identification of a genetic disorder, approaches to diagnosis. Formulating hypotheses and the correct interpretation of clinical signs and symptoms. Understanding genetic counselling, the role of a medical family tree. Identification of the inheritance mechanism of genetic diseases and estimation of the recurrence risk in genetic diseases. Genetic counselling. Implementing new approaches to the process of diagnosis and management of genetic diseases in relation to knowledge and technical progress in the field of molecular biology. Initiation into scientific research activities in the field of genetics

9.2 transversal competencies:
Understanding the need for continuous training in the field of genetics and molecular biology in the era of genetization of medicine: efficient use of resources and learning techniques for personal and professional development, information sources and communication resources, up-to-date specialized publications in genetic, genetic database. Understanding and familiarization with the specific roles and activities in the domain of medical genetics in a team of different specialists.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction in genetics. Heredity and variation. Human genetics, medical genetics, clinical genetics. Molecular genetics, cytogenetics, classical genetics. The short history of genetics, genome projects. Genetic databases. The role of genetics in disease development. The role of genetics in disease development. Genomic medicine. Primary, secondary and tertiary structure of DNA.	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
2	Chromatin and chromosomes. Physical (UV absorbtion)and chemical characteristics of DNA (denatiration, renaturation, hybridisation).DNA replication	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
3	The human genome. Non-coding DNA. Repetitive sequences. Transposable elements.The genes: definition, structure, classification, characteristics, gene families	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
4	Gene expression: transcription, mRNA processing, translation. Genetic code.Regulation of gene expression.	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
5	Genetic variability. Recombination.DNA lesions. Repair mechanisms. Mutations.	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
6	Genetic inheritance mechanisms: Monogenic inheritance.Non-mendelian inheritance.	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Malformations of lip/palate, chromosomal disorders, Monogenic diseases
7	Multifactorial inheritance, Congenital anomalies. Dysmorphology and teratogenesis.Teeth anomalies and oral lesions- genetics	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Malformations of lip/palate, chromosomal disorders, Monogenic diseases

Bibliography

Mandatory bibliography:

Electronic course materials (course PowerPoint presentations)

1. Cohn Ronald Doron, Scherer Stephen W, Hamosh, Ada.Thompson & Thompson Genetics and Genomics in Medicine, 9th edition. Elsevier, 2023

2. Peter D Turnpenny & Sian Ellard. Emery's Elements of Medical Genetics and Genomics, Sixteenth Edition. Elsevier, 2022

3. Tom Strachan, Andrew Read. Human Molecular Genetics. CRC Press, 2019. ISBN: 9780815345893

Supplementary bibliography:

1. Csép K. Textbook of Genetics – Courses, University of Medicine and Pharmacy

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Human chromosomes. Morphology and classification of metaphase chromosomes.The genetic material in the cell cycle. Errors of distribution of the genetic material during cell division.	Oral presentation with PowerPoint presentation, systematic exposition, drawings, microscopic analysis.	2	microscopy	Chromosomal disorders
2	The human karyotype. Karyotype preparation.Indications of karyotyping.	Oral presentation with PowerPoint presentation, combined with demonstrative elements and heuristic conversation, individual karyotyping.	2	individual exercises, karyotyping	Chromosomal disorders
3	Mutation of the number of chromosomes (Down, Patau, Turner and Klinefelter syndrome. Structural chromosome mutations. Syndromes produced by structural chromosomal anomalies (Cri du chat, DiGeorge, Prader-Willi syndrome)	Oral presentation with PowerPoint presentation, combined with demonstrative elements and heuristic conversation.	2	Recognition of different karyotypes, presentation of clinical cases	Chromosomal disorders
4	The medical family tree. Symbols used for representing the medical family tree. Patterns of inheritance. Autosomal inheritance	Oral presentation with PowerPoint presentation, combined with demonstrative elements and heuristic conversation. Exercises.	2	Problem solving,representation of family tree. Calculation of recurrence risks in the offspring,	Monogenic diseases,
5	Patterns of inheritance. X-linked inheritance. Y linked inheritance.	Oral presentation with PowerPoint presentation, combined with demonstrative elements and heuristic conversation. Exercises.	2	Problem solving. Calculation of recurrence risks in the offspring	Monogenic diseases,
6	Molecular cytogenetics. Principles and methods of molecular analysis: PCR, RFLP, sequencing	Oral presentation with PowerPoint presentation, combined with demonstrative elements and heuristic conversation. Video demonstrations.	2	Interpretation of molecular test results	Chromosomal disorders, Monogenic diseases,
7	Genetic counselling in oral-maxilar-facial syndromes. Genetic databases.	Oral presentation with PowerPoint presentation, combined with demonstrative elements and heuristic conversation. Individual study.	2	Problem-solving, Calculation of recurrence risks in offspring. Exercises using databases. Individual study.	Chromosomal disorders, Monogenic diseases

Bibliography

Mandatory bibliography:

Electronic materials for Practical activities (PowerPoint presentations).
1. Csép K, Bogliş A, Balla B, Bănescu C, Todoran Butilă A, Tripon F. Medical genetics practical activities for students. University Press, Tg Mures. 2021
2. Cohn Ronald Doron, Scherer Stephen W, Hamosh, Ada.Thompson & Thompson Genetics and Genomics in Medicine, 9th edition. Elsevier, 2023

Supplementary bibliography:

1. Csép Katalin. Genetics Textbook – Practical sessions. University of Medicine and Pharmacy, 2010
2. Jones KL, Jones MC, del Campo M. Smith's Recognizable patterns of human malformations. Elsevier, 2013

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Recognizing the oro-maxillo-facial disorders produced by genetic factors. Identification of the inheritance mechanism of genetic diseases and estimation of the recurrence risk in genetic diseases. Management of the patient and family affected by a genetic disease – from diagnosis to therapy and prevention.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	According to the specifics of the domain, efficient use of medical genetics in clinical practice	Multiple-choice question tests, exercises, karyotyping, active participation.	30
- lecture	According to the specifics of the domain	-	0
Final evaluation			
- practical final exam	According to the specifics of the domain, efficient use of medical genetics in clinical practice	Written exam with open-ended questions	20
- theoretical final exam	According to the specifics of the domain, knowledge of the theoretical basis of human genetics	Summative evaluation with multiple-choice questions (MCQs) with single or multiple answers (UNIX Examination Center).	50
Minimal performance standards: - Basic human and medical genetics knowledge, five at both the theoretical and practical exams. - According to the university's regulations, the written theoretical exam consists of multiple-choice tests with one correct answer and two correct answers. - The correction of the tests is done according to the regulations. - The final practical exam is mandatory, with the minimum passing grade being 5. The practical exam consists of two open-ended questions from the practical activities. Their correction is done by assigning a score from 1 to 10 to each subject, with the practical exam grade equal to the average of the two scores.			

13. Must seen clinical situation list

Chromosomal disorders. Monogenic diseases.

14. Clinical / practical abilities

Understanding the concepts of medical genetics, their practical value, and relevance in medical practice.

15. Appointment timetable (for students)

Șef l dr Bogliș Alina	Weekly after the course, 15 minutes.

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Microbiology (bacteriology)			
2.2 Course coordinator: Prof dr Man Adrian			
2.3 Practical activities coordinator(s): drd. Hututui Georgiana			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 6		3.2 lecture: 2	3.3 practical activities: 4
3.4 Total hours in curriculum: 42		3.2 lectures: 14	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			29
- supplemental documentation at the library, from specialized information portals and in the field			29
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			29
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			88
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -projector
5.2 for practical activities: -microbiology laboratory

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline microbiology contributes to the development of competencies defined in the ESCO framework for the relevant occupations of the degree program, through the development of knowledge, skills, and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective:
Integration of the architecture of microbial structures, cellular metabolism and mechanisms of genetic variability in correlation with taxonomy, human microbiota ecology, virulence factors, and the theoretical foundations of microbial control via physical and chemical agents, including antimicrobials, for the scientific substantiation of antimicrobial resistance and etiological diagnosis within general and oral medicine.

7.2 Specific objectives:
Integration of the fundamental principles of bacterial cytology, physiology, and genetic variability of bacteria, with a focus on host-pathogen interactions and the role of immunological defense mechanisms.

The scope encompasses the theoretical foundation of etiological diagnosis, laboratory stewardship, and the pre-analytical factors influencing microbiological testing. It further addresses the antimicrobial resistance, alongside the principles of immunoprophylaxis.

Special emphasis is placed on the characterization of medically significantbacteria, their transmission, and the ecological role of the human and oral microbiota in distinguishing between colonization, contamination, and infection.

8. Learning outcomes

8.1 Knowledge:
Upon successful completion of the curriculum, students will be able to:
-Understand the basic sciences relevant to dentistry, including microbiology, and pathology, with a specific focus on the craniofacial complex and the oral cavity.
-Comprehend the etiology, pathogenesis, clinical manifestations, and principles of prevention for the most common oral and infectious diseases.
-Identify and manage microbiological emergencies that may arise in a dental setting.
-Differentiate the main groups of microorganisms (bacteria, viruses, fungi, parasites) based on their structure, metabolism, and methods of replication.
-Identify the key physiological characteristics and virulence factors of major oral pathogens (e.g., Streptococcus mutans, Porphyromonas gingivalis, Candida albicans).
-Describe the formation, composition, and clinical significance of dental plaque (biofilms) and their role in the etiology of dental caries and periodontal disease.
-Explain the principles of sterilization, disinfection, and asepsis and their crucial application in the dental setting to prevent cross-contamination.
-Understand the basic mechanisms of the host immune response to microbial infections, both local and systemic.
-Classify the main groups of antimicrobial agents (antibiotics, antivirals, antifungals) and describe their mechanisms of action and the concept of antimicrobial resistance.

8.2 Skills:
Upon successful completion of the curriculum, students will be able to:
-Apply standard laboratory techniques for the collection, handling, and initial analysis of microbiological samples from the oral cavity.
-Interpret the results of basic microbiological tests (e.g., Gram staining, culture results, antibiotic sensitivity testing) relevant to dental practice.
-Select and justify appropriate infection control measures (e.g., hand hygiene, barrier techniques, instrument processing) in clinical scenarios.
-Correlate specific oral signs and symptoms with the likely underlying microbial etiology.
-Evaluate the risk of systemic complications (e.g., infective endocarditis) arising from oral infections and the microbial basis for their prevention.

8.3 Responsibility and autonomy:
Upon successful completion of the curriculum, students will be able to:
-Integrate microbiological principles into the diagnosis and management of common oral infectious diseases.
-Apply the knowledge of microbial resistance to make responsible decisions regarding the prescription of prophylactic and therapeutic antibiotics.
-Promote public awareness about oral hygiene and the importance of microbial control in preventing dental diseases.
-Comply strictly with protocols and guidelines for infection control to ensure the safety of both patients and the dental team.

9. Specific competencies acquired

9.1 professional competencies:
1. Suspicion/recognition of etiology in bacterial infections
• Proper requesting of microbiological analyses required for diagnosis
• Understanding of bacteriological test results and their appropriate use in the patient’s treatment
• Understanding of correct habits on judicious use of antimicrobials,based on the antimicrobial resistance
• Knowledge of normal mouth bacterial flora

• Knowledge of cariogenic and periodontal-pathogenic bacteria • Knowledge of the mechanisms by which bacteria cause the disease in the oral cavity 2) Knowledge and understanding of the concepts, basic theories, and methods of the specific area of specialization. Designing and deepening basic knowledge in dental medicine, with general medical coverage • Knowledge of nature and metabolic activity of microorganisms that can contaminate surfaces and dental instruments in the dental cabinet • Paying particular attention to microbiological and hygienic-sanitary control in various stages of treatment in dental offices, to prevent microbial contamination, to comply with the microbiological standards • Defining the principles of human antibiotherapy and specific decontamination. Learning decontamination procedures (asepsis, disinfection, sterilization, and antisepsis) • Using the basic knowledge for explanation and interpretation of various types of concepts, situations, processes, projects, etc. associated with the microbiological field 3) The students will acquire skills regarding the applicability of decontamination methods, techniques for harvesting biological samples and pathological products, and diagnostic methods in bacteriology, parasitology, and virology. 4) The student will own theoretical knowledge related to infectious diseases, the causative agents of infectious diseases (structure, habitat, pathogenicity factors, etiology, etc.), the specific manifestations of maxilla-facial area, prevention, and treatment.
9.2 transversal competencies: - develop abilities for teamwork, efficient verbal and written communication skills - respect for professional values and ethics - solving clinical problems and choosing proper therapeutic decisions
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The object and purpose of medical microbiology. Bacterial morphology. The structure of the bacteria.	Oral presentations. PPT	2	-	structure of microorganisms
2	The growth and multiplication of bacteria. Activity of physical, chemical and biological agents on bacteria. Pathogenesis of bacterial infections. Host defense mechanisms. Prevention of infectious diseases.	Oral presentations. PPT	2	-	Structure of microorganisms Antimicrobial therapy immunization immunodeficiency infection
3	Gram-positive cocci(Staphylococcus, Streptococcus, Enterococcus). Gram-negative rods (enterobacteria, Pseudomonas aeruginosa).	Oral presentations. PPT	2	-	Bullous/vesicular skin eruption, Loose stools, Vaginal discharge, Cardiac valve disease, Chronic renal disease, Endocarditis, Gastroenteritis, Infectious disease of childhood, meningitis, Oral disorders (inlcl. Caries), Otitis media, Respiratory tract infection, Septicaemia, Skin infections/infestations, Urinary tract infection, Disorders of pregnancy and deliver, Sexually transmitted diseases, Pregnancy loss.
4	Gram-positive aerobic rods (Corynebacterium. Genus Bacillus). Spore-forming Gram-positive, anaerobic bacteria (Clostridium). Non-spore-forming anaerobic bacteria.	Oral presentations. PPT	2	-	Constipation, Dysphagia, Visual impairment, acne, Oral disorders (inlcl. Caries), Peripheral nerve disorders, peritonitis, septicemia

5	Fastidious bacteria: Neisseria, HACEK. Curved bacteria: Genus Campylobacter. Genus Helicobacter, Treponema pallidum. Borrelia burgdorferi. Bacteria that are not classified as Gram: Mycobacterium, Chlamydia.	Oral presentations. PPT	2	-	Loose stools, Vomiting, Acid based disturbance, Burns, Carcinoma of the stomach Cystic fibrosis, gastroenteritis, Peptic ulcer, peritonitis, Skin infections/ infestations meningitis, Respiratory tract infection, septicemia, Haemoptysis, meningitis, Peripheral nerve disorders, Sexually transmitted diseases, tuberculosis, Urinary tract infection
6	Normal flora of the human body. Normal flora of the oral cavity. Oral ecosystem. Characteristics of dental plaque biofilm.	Oral presentations. PPT	2	-	Normal flora
7	Microflora involved in periodontal disease. Etiology of dentoalveolar infections. Caries. Etiology of infections of the mouth and salivary glands.	Oral presentations. PPT	2	-	Oral disorders (inlcl. Caries)

Bibliography

- Winn W, Allen S, Janda W, Koneman E, Procop G, Schreckenberger P, Woods G: Koneman's Color Atlas and Textbook of Diagnostic Microbiology. Lippincott Williams & Wilkins, Philadelphia, 6th edition, 2006
- Philip D Marsh – Oral Microbiology
- Marsh and Martin’s Oral Microbiology
- Lakshman Samaranayake - Essential microbiology for dentistry
- Xuedong Zhou - Atlas of Oral Microbiology-From Healthy Microflora to Disease

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Labor safety in the laboratory. Decontamination. The bacteriological diagnostic scheme. The harvesting and transport of pathological samples	Practical activities, oral presentation	2	-	Decontamination, disinfection, antisepsis, asepsis, sterilisation
2	Study of the bacterial morphology. Wet mount. Smears. Simple and Gram staining. Ziehl-Neelsen staining.	Practical activities, oral presentation	2	-	Structure of microorganisms
3	The cultivation of microorganisms. Culture media. Culture methods. Macroscopic aspects of bacterial culture. Bacterial identification based on biochemical and metabolism characteristics.	Practical activities, oral presentation	2	-	Identification of microorganisms
4	Identification of the bacteria by their antigenic structure: agglutination, ELISA, IF. Detection of nucleic acids - hybridization, gene amplification. Bacterial typing.	Practical activities, oral presentation	2	-	Identification of microorganisms
5	Bacterial pathogenicity testing in vitro. Antibiotic susceptibility testing – Antibiogram	Practical activities, oral presentation	2	-	Pathogenicity, antibiogram
6	Laboratory diagnosis ofinfections caused by Staphylococcus, Streptococcus, Enterococcus, Neisseria.	Practical activities, oral presentation	2	-	Bullous/vesicular skin eruption, Loose stools, Vaginal discharge, Cardiac valve disease, Chronic renal disease, endocarditis, gastroenteritis, Infectious disease of childhood, meningitis, Oral disorders (inlcl. Caries), otita media, respiratory tract infection, septicemia, Skin

					infections/infestations, Urinary tract infection, Disorders of pregnancy and deliver, Sexually transmitted diseases, Skin infections/infestations, Pregnancy loss
7	Laboratory diagnosis of infections caused by enterobacteriaceae: Escherichia, Klebsiella, Proteus, Shigella, Salmonella, Yersinia.	Practical activities, oral presentation	2	-	gastroenteritis, Loose stools, peritonitis, Respiratory tract infection, Urinary tract infection, Skin infections/infestations
8	Laboratory diagnosis of infections caused by Pseudomonas, Treponema, Mycobacterium, Clostridium.	Practical activities, oral presentation	2	-	Constipation, Dysphagia, Visual impairment, acne, Oral disorders (inlcl.Caries), Peripheral nerve disorders, peritonitis, septicemia Haemoptysis, meningitis, Sexually transmitted diseases, tuberculosis, Urinary tractinfection, Respiratory tract infection, Skin infections/infestations
9	Laboratory diagnosis of infections caused by endogenous anaerobic bacteria.	Practical activities, oral presentation	2	-	Oral disorders (inlcl. Caries)
10	Normal flora of the oral cavity. Quantitative assessment of lactobacilli in the mouth.	Practical activities, oral presentation	2	-	Oral disorders (inlcl. Caries)
11	Antimicrobial activity of dental materials and toothpaste.	Practical activities, oral presentation	2	-	Oral disorders (inlcl. Caries)
12	Microbial flora in periodontitis. Microbiology of dental caries.	Practical activities, oral presentation	2	-	Oral disorders (inlcl. Caries)
13	Review	Practical activities, oral presentation	2	-	-
14	Practical exam	Practical activities, oral presentation	2	-	-

Bibliography

1. Adrian Man, Anca Mare, Felicia Toma. Atlas de bacteriologie. University Press. 2019;213 pag. ISBN: 978-973-169-612-6
2.https://microbiologie.umfst.ro

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

By studying microbiology, students from the Dental Medicine Faculty understand the basic information about infections, including the route of transmission of the most important pathogens and the involvement of microorganisms in human disease. This serves to better prophylactic measures in their future practice.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Knowledge on microbiology diagnostic principles and antimicrobial therapy	oral exam	30
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Knowledge about the presented pathogens	test	70
Minimal performance standards: To promote the final evaluation: grade 5 (both for theory and practical exams)			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Man Adrian	30 minutes after class

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Dental materials			
2.2 Course coordinator: Prof dr Székely Melinda-Gyöngyi			
2.3 Practical activities coordinator(s): Șef lucrări dr Borș Andreea			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12		3.2 lecture: 4	3.3 practical activities: 8
3.4 Total hours in curriculum: 84		3.2 lectures: 28	3.6 practical activities: 56
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: English language examination certificate (B2 or C1).

5. Conditions

5.1 for lectures: Lecture hall equipped with laptop and video projector, multimedia equipment.
5.2 for practical activities: Laboratory with work tables, instruments, equipment, etc. necessary for preparing different dental materials used in dental offices and laboratories, presented at the course.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

'Dental Materials' contributes to the training and development of professional skills specific to the field of dentistry, in accordance with ESCO standards in the biomedical area, as well as transversal skills - critical thinking, professional communication and continuous learning - through theoretical and practical teaching activities

adapted to the particularities of this discipline. These standards ensure that dentists possess the necessary knowledge and skills to select, handle, and evaluate biomaterials safely and effectively.

7. Objectives of the discipline

7.1 General objective:
To acquire the necessary knowledge for the proper and efficient use of materials in dental practice within prosthetic restorations (C4), conservative therapy (C2) and dental prophylaxis.

7.2 Specific objectives:
- To acquire the ability to understand different aspects of composition and properties of dental materials which have implications in dental practice.
- Application of theoretical knowledge in the use of dental materials in dental practice.
- Learning the techniques of preparation and handling of dental materials used in the dental office and the dental laboratory.

8. Learning outcomes

8.1 Knowledge:
Students will know the properties of dental materials and possibilities of their resistance over time, the changes that they can produce, and the effects on the human body.

8.2 Skills:
Correctly handle the dental materials and prepare them in the dental practice.

8.3 Responsibility and autonomy:
Students will be able to select the material that best suits to the given clinical situation, which meets the requirements of the patient, but that would be durable and cost effective.

9. Specific competencies acquired

9.1 professional competencies:
- The student, in addition to acquiring dental materials handling technique, will know their composition, physical, mechanical, chemical properties in order to understand the impact of dental materials that come in contact with oral tissues and will have the necessary knowledge for a proper and effective use of these materials in practice.
-The student will know the possibilities for time resistance, good storage and keeping mode of the dental materials, the risks of inhaling chemicals used to manufacture prosthetic restorations, the biocompatibility of dental materials.
-The future dentist should provide technical and material supplies in dental offices, sometimes of the dental laboratory too, so he or she has to know how to choose the right material from different dental materials on the market, he or she has to know which is the best and most suitable material and he or she has to identify especially the material that matches the requirements and demands of the patient, ensuring the optimum conditions to comply with the international norms.

9.2 transversal competencies:
-Cooperation and teamwork is today a complex element, requiring a permanent academic training. The student realizes that the professional activity he or she will perform it is a team work, the human factor being represented by: dentist, dental assistant and dental technician who must ensure the health and safety at work and the usage of modern technologies.
-Teamwork, passion for performance and commitment to helping patients equally bounds students to become increasingly efficient dental professionals in dental practice.
-The marketing and management of dental offices and dental laboratories through the knowledge of the current dental materials and the knowledge of equipping modern dental laboratories.
-Didactic activity in practical instruction or administration in the field of dental materials used in various fields of dentistry.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Classification, properties and requirements of dental materials. Generalities. Basic terminology.	Oral+multimedia presentation	2	Course of 2 hours in English language	-

2	General and basic information about dental materials. Rigid and semi-rigid impression materials. Thermoplastic and buccoplastic impression materials.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
3	Elastic impression materials: reversible and irreversible hydrocolloids.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
4	Elastic impression materials: elastomeres. Disinfection of impressions. Optical impression.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
5	Non-metallic dental restorative materials.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
6	Materials used for pulp- and dentine protection and cavityl base materials. Dental adhesive systems.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
7	Dental luting cements. Temporary restauration materials.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
8	Dental materials for direct restorations. Dental amalgams.	Test. Oral+multimedia presentation	2	Evaluation (5% of final grade).	-
9	Laboratory dental materials: generalities, terminology. Dental materials for models and dies.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
10	Materials used to construct patterns.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
11	Materials for dental prosthetics: metals and alloys.	Test. Oral+multimedia presentation	2	Evaluation (5% of final grade).	-
12	Materials for dental prosthetics: synthetic polymers, acrylic resin.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
13	Materials for dental prosthetics: dental ceramic materials and zirconia.	Oral+multimedia presentation	2	Course of 2 hours in English language	-
14	Materials used to construct moulds: investment materials. Biocompatibility of dental materials.	Oral+multimedia presentation	2	Course of 2 hours in English language	-

Bibliography
Bibliography
References (compulsory):
1. 'Dental Materials' on BlackBoard and E-learning Platform, Website of the UMFST G.E. Palade of Tg.Mures
2. Schmalz G., Arenholt-Bindslev D.: Biocompatibility of Dental Materials. Springer-Verlag Berlin, Heidelberg, 2009.
3. Székely M., Borș A., Molnar-Varlam Cristina: Dental Materials – Course for Students. University Press, UMFST Tg.Mureş, 2019.
References (facultative):
1. McCabe J.F., Walls A.W.G.: Applied Dental Materials. Editura Blackwell Science, Oxford, 1998.
2. Von Fraunhofer J.A.: Dental Materials at a Glance. Wiley-Blackwell Publishing, Oxford, 2010.

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Presentation of the department, inner rules and evaluation methods. Rules of the workplace safety are presented, too.	Orally and written.	4	Students sign to confirm that they were informed.	-
2	Preparation techniques of rigid and semi-rigid impression materials. Impression trays.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-

3	Preparation techniques of thermoplastic and buccoplastic impression materials.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
4	Preparation techniques of elastic impression materials: reversible and irreversible hydrocolloids. Hydroalginic impression.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
5	Preparation techniques of elastic impression materials. Combined impression techniques.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
6	Preparation techniques of classical dental cements. Practical knowledge assessment by test.	Practical demonstration and individual preparation. Test	4	4 hours, Laboratory Report + grade	-
7	Preparation techniques of modern dental cements.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
8	Preparation techniques of polymerizable materials: acrylates, composites.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
9	Preparation of Ag and Cu containing dental amalgams. Practical knowledge assessment by test.	Practical demonstration and individual preparation. Test	4	4 hours, Laboratory Report + grade	-
10	Preparation and handling of dental cast materials.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
11	Handling techniques of materials used for patterns, investments and casting.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
12	Handling techniques of materials used for dental prostethics: polymers.	Practical demonstration and individual preparation.	4	4 hours, Laboratory Report	-
13	Handling techniques of materials used for dental prostethics: dental ceramics and alloys.	Multimedia presentation.	4	4 hours, Laboratory Report	-
14	Recapitulation. Knowledge assessment by seminar.	Oral+multimedia+seminar	4	4 hours, Laboratory Report + grade	-

Bibliography
Reference:
1. Molnar-Varlam C.: Ghid practic de utilizare a materialelor dentare. Editura University Press, Târgu-Mureș, 2011.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

- Dental materials science has been recorded an explosion of news that gave rise to new technologies that have to be known and applied by dental health professionals. Critical applying of dental materials in practice appeared after the dynamic development of modern techniques constantly changing and developing which represents a leading European requirement.
-The dentists must correctly handle the materials they work with, must know the properties and possibilities of their resistance over time, the changes that they can produce, and the effects on the human body.
-The dentist should be able to select the material that best suits to the given clinical situation, which meets the requirements of the patient, but that would be durable and cost effective.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Practical knowledge related to theoretical knowledge.	Laboratory Report (grades for practical works, and also for the complete laboratory report and presence) and tests through summative evaluation.	20
- lecture	Test based theoretical knowledge. Attendance to lectures according to the Regulations of the Discipline.	Grade obtained on test individually.	10
Final evaluation			

- practical final exam	Practical knowledge and skills joint with theory.	Practical exam including response to a question.	30
- theoretical final exam	Theoretical knowledge in the domain of courses.	Exam test – multiple choice.	40
Minimal performance standards: Getting minimum mark of 5 (five) for each component of evaluation: to know the basics of dental materials, to have no more than 20% unjustified or unrecovered absences from practical work and lectures, to prepare and manipulate the most representative materials used in the dental office and dental laboratory, respectively.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Székely Melinda-Gyöngyi	30 minutes or one hour after every course according to the time table.

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: SL1 - Humanities
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Romanian language			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Asist dr Ciortea Eduard-Titus			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Asist dr Rațiu Bogdan			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2	3.2 lecture:	3.3 practical activities: 2	
3.4 Total hours in curriculum: 28	3.2 lectures: 0	3.6 practical activities: 28	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: Not applicable
4.2 competency: Not applicable

5. Conditions

5.1 for lectures: -
5.2 for practical activities: Not applicable

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: The progress of modern medicine becomes increasingly dependent of the ways the computer assists the medical field. Therefore, the main goal of discipline is to familiarize students in the biomedical field with the specific skills requirements of the 'digital age' and with IT vocabulary with key technologies related to computer assisted practice and biomedical research.
7.2 Specific objectives: Demonstrate student's ability to understand and use the main hardware (PC) and software tools used in computer science and medical informatics Learning important aspects of using the services of indexing and searching online information Acquisition of practical skills to use advanced solutions for editing office documents required format, manage and organize information exported from medical databases in spreadsheet programs, preparing electronic presentations

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: Studentul va prezenta, la nivel începător-intermediar (A2), următoarele abilităţi: -citirea corectă şi fluentă, precum şi înţelegerea conţinutului şi ideilor generale ale unui text simplu -înţelegerea mesajelor receptate pe cale auditivă -vorbirea cu respectarea regulilor gramaticale şi de pronunţie -cunoaşterea şi utilizarea corectă a unui vocabular de bază și semi-specializat
9.2 transversal competencies: Utilizarea limbii române ca mijloc de comunicare cu alţi vorbitori ai acelei limbi, în situaţii generale și specifice
9.3 related to the study program:

10.1 Content of seminar, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Alfabetul, particularitati ale scrierii in limba romana	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
2	Casa, încăperi, mobilier, activități	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
3	Activități pentru timpul liber	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
4	Mâncăruri și băuturi	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
5	La cumpărături	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
6	Vacanțe	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-
7	O zi din viața mea	Comunicare și relaționare interpersonală, conversație, explicații; PBL; TBL	4	-	-

Bibliography

Bibliography

1. Bălănescu,Olga, Limba română pentru străini,Editura Ariadna, Bucureşti,2006
2. Dafinoiu, C.V., Pascale, L.E., Limba română - manual pentru studenţii străini, Ed. Univ. București, 2015
Hedeşan,Otilia(coordonator),Jebelean,Elena, Leucutia Florentina, Musat, Nicoleta, Percec,Dana, Popa,Corina Bun venit in România!Manual de limba română şi de orientare culturală ,Imprimeria MIRTON,Timişoara, ,2008
3. Kohn,Daniela, Puls.Manual de limba română pentru străini .Curs A1-A2,Polirom,Iaşi,2009
4. Geană,Ionuţ, Limba română pentru străini,Editura Univers, Bucureşti ,2014
5. Mandelbrojt-Sweeney, M., Limba engleză pentru medici şi asistente, Polirom, Bucureşti, 2006
6. Platon,Elena ,Sonea,Ioana ,Vilcu,Dina Manual de limba română ca limbă străină(RLS),Casa Cărţii de Ştiinţă,2012

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The knowledge acquired from the above-mentioned curricular content will provide the students with the proper

understanding of the basic glossary of the field of Medical Informatics. The students will be familiar with a wide variety of terms, concepts and technologies, as well as with the trends that can be foreseen at the time of teaching as to how these concepts and technologies will evolve in the future. The curricula also develops a set of basic ITC practical skills needed in their future careers.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Correlation between theoretical and practical notions Capacity of performing practical work in the field	Practical skills tests during the semester, to test student's ability to properly write an electronic document in a specific/imposed format	20
- lecture	-	-	0
Final evaluation			
- practical final exam	Correlation between theoretical and practical notions Capacity of performing practical work	Practical exam at the end of semester.	30
- theoretical final exam	Understanding and integration of all theoretical concepts Knowledge of bibliographical references	Multiple choice test	45
Minimal performance standards: Understanding of the basic glossary of specialized terms in the field of Information Technology, respectively the terms specific to medical informatics. Ability to effectively use online tools and documentation services. Ability to effectively use advanced office solutions for writing / editing electronic documents in a required format.			

13. Appointment timetable (for students)

Asist dr Ciortea Eduard-Titus	
Asist dr Rațiu Bogdan	

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M3
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Tobaccology			
2.2 Course coordinator: Șef l dr Germán-Salló Márta			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: mod de organizare frontal sau în condiții epidemiologice nefavorabile online
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: Correct diagnosis and treatment of the tobacco dependence disease
7.2 Specific objectives: Recognition and measurement of nicotine dependence Motivation for smoking cessation Delivering the brief anti smoking advice Knowledge of non-pharmacological and pharmacological methods for the treatment of nicotine dependence Realizing the role of the physician in anti-smoking efforts

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: Awareness of the fact that smoking is a chronic disease for which there are effective methods of treatment. Assessment/diagnosis of tobacco consumption and tobacco dependence Organizing the documentation of the smoking status in the medical records Delivering the minimal intervention counseling of persons assisted smoker Proper use of the available resources in anti-smoking counseling (specialized anti-smoking centers, quitline)
9.2 transversal competencies: Awareness of the role of the physician in smoking prevention and in the prevention for smoking related diseases Organizing a smoking prevention programs Acquiring knowledge about the psychology of lifestyle change Awareness of bio-psycho-social consequences of a widespread disease
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	History of tobacco use. Information on smoking prevalence and trends of consumption indicators worldwide, at European and national levels. Psychosocial causes of smoking. The economical aspects of smoking.	prezentare multimedia	2	-	-
2	Informations on the health consequences of tobacco smoking. Chemical composition of tobacco smoke. Causal role of smoking in respiratory diseases, cardiovascular diseases, tumors, hematological, gynecological diseases. Effects of smoking in pregnancy. Environmental effects of smoking . Social and economic impact of smoking	prezentare multimedia	2	-	durere în piept, dispnee, patologie cardiacă ischemică
3	Recognition of tobacco use and dependence in general practice. Tobacco addiction industrial spread disease. The mechanism of of tobacco dependence. The natural history of tobacco dependence Fagerstrom Test for the evaluation of dependence level. Clinical diagnosis of tobacco dependence (carbon monoxide, cotinine, using biomarkers)	prezentare multimedia	2	-	-
4	Smoking cessation. Therapeutic education. Behaviouralsupport. Smoking cessation motivation. Brief advice on stopping tobacco use. Prevention of relapse.	prezentare multimedia	2	-	-

5	The role of the physician in tobacco control Cognitive - behavioral treatment of tobacco dependence. Nicotine replacement therapy (mechanism of action, clinical evidence of efficacy, indications, prescribing instructions, contraindications, adverse effects) treatment with bupropion, varenicline, Nonpharmacological interventions for smoking cessation	prezentare multimedia	2	-	-
6	Treatments recommended in special circumstances. Treatments recommended for pregnant women, under 18 years, Recommendations for smokers with respiratory and cardiovascular diseases, cancer or other comorbidities Recommendations for the prevention and management of weight gain following smoking cessation. Recommendations for preventing relapse. Group counseling for quitting smoking	prezentare multimedia	2	-	-
7	Smoking prevention at the population level. National tobacco control legislation. MPOWER strategy for global tobacco control. Governmental and non governmental institutions specialized in tobacco control	prezentare multimedia	2	-	-

Bibliography

2018 European Network for Smoking and Tobacco Prevention (ENSP) European Smoking cessation guidelines 2016
http://elearning-ensp.eu/assets/English%20version.pdf ENSP
Allen Carr's Easy Way To Stop Smoking

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Curricula disciplinei este alcătuită conform Standardelor europene de acreditare a serviciilor și programelor de formare profesională publicate în Ghidul European pentru renunțare la fumat redactat de ENSP European Network for Smoking and Tobacco Prevention
Course curriculum is designed according to the recommendations drafted in the European Standards for accreditation of training programs and services published European Guidelines for smoking cessation ENSP(European Network for Smoking and Tobacco Prevention)

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Însuşirea cunoştinţelor de bază şi capacitatea de a corela conceptele teoretice însuşite	test grilă, multiple choice	100

Minimal performance standards:
Nota minimă de trecere 5 minima grade
Tobacco epidemic in Europe and the world;
Factors that lead to tobacco use;
Pharmacological basis of tobacco dependence;
Health dangers of tobacco;
Other consequences(economic, environmental ..)of tobacco smoking;
Approaches to tobacco control;
The role of the physician in tobacco control;
Delivering the brief anti smoking intervention
Assessment of smoking status
Analysis of previous attempts a patient smoking cessation
Motivating smoking cessation in a clinical context
Knowledge of support services for smokers functional in Romania
Knowledge of the indications and contraindications for the treatment of smoking addiction medications
Knowledge of global strategies to control smoking
Tobacco control legislation

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Germán-Salló Márta

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: SL1 - Humanities
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Applied linguistics and communication skills in Romanian language			
2.2 Course coordinator: Lect dr Năznean Adrian			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: II	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: sală dotată cu echipamente multimedia
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Disciplina Lingvistică aplicată și competențe de comunicare în limba română contribuie la dezvoltarea competențelor definite în cadrul ESCO pentru ocupațiile relevante programului de studii, prin dezvoltarea cunoștințelor, abilităților și autonomiei profesionale specifice domeniului [K- cunoștințe: limbi străine pentru cariere la nivel internațional; L - competențe și cunoștințe lingvistice: înțelege limba română scrisă, înțelege limba română

vorbită, interacționează verbal în limba română, scrie în limba română; S - aptitudini: S1.4.0 - prezintă informații, S1.8 - lucrează cu alții, S1.9 - soluționează probleme, S1.12.2 - elaborează materiale instructive sau promoționale, S2.1.0 - efectuează studii, anchete și analize]

7. Objectives of the discipline

7.1 General objective:
Cunoaşterea limbii române la nivel avansat.

7.2 Specific objectives:
Dezvoltarea celor patru abilităţi de bază: citirea, înţelegerea mesajelor receptate pe cale auditivă, comunicarea verbală, comunicarea scrisă precum şi familiarizarea cu vocabularul din domeniul de specialitate.

8. Learning outcomes

8.1 Knowledge:
Recunoaște terminologia fundamentală a limbii române utilizată în situații academice și profesionale.
Identifică structuri gramaticale și lexicale esențiale în texte scurte.
Răspunde la întrebări simple și de dificultate medie pe baza unor texte sau situații date.
edă informații factuale din dialoguri, descrieri sau materiale audio-vizuale în limba română.

8.2 Skills:
Aplică vocabularul și structurile gramaticale în conversații scurte cu pacienți sau colegi.
Ajustează formulările lingvistice în funcție de interlocutor (pacient, coleg, profesor) și de contextul comunicării.

8.3 Responsibility and autonomy:
Identifică tipuri de situații clinice în care este necesară adaptarea limbajului pentru pacienți cu niveluri variate de înțelegere.
Distinge între informația esențială și cea secundară dintr-un text de specialitate, în vederea unei comunicări eficiente cu pacienții și colegii.
Estimează impactul utilizării unei comunicări clare și profesioniste asupra relației medic-pacient.

9. Specific competencies acquired

9.1 professional competencies:
La sfarsitul cursurilor, studentul va putea sa:
-folosească functiile specifice limbajului de specialitate (sa adreseze intrebari, formuleze opinii, sfaturi, sa convinga,
sa explice, sa descrie situatii concrete specifice domeniului medicina dentara)
-citeasca fluent si corect si sa inteleaga continutul unor texte de specialitate de dificultate medie/ avansata
-sa inteleaga mesaje receptate pe cale auditiva legate de sfera profesionala
-sa vorbeasca fluent si corect, folosind un vocabular variat si adecvat unor situatii specifice domeniului
-sa scrie corect, conform regulilor gramaticale, folosind un stil si un vocabular adecvat continutului de idei
-sa utilizeze un vocabular variat de termeni din domeniul de specialitate.

9.2 transversal competencies:
Studentul va putea să:
-utilizeze limba română ca mijloc de comunicare cu alți vorbitori ai aceleiași limbi în situații din domeniul medicinei dentare;
- facă prezentări orale;
- se documenteze și să structureze informații, să sintetizeze date obținute prin chestionare administrate unui grup țintă pentru pregătirea și elaborarea de lucrări în domeniu, participarea la stagii;
- se familiarizeze cu utilizarea unor platforme de comunicare virtuală și munca în grup.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introducere în terminologia medicinei generale 1. Comunicare și vocabular	Expunerea, prezentarea multimedia, conversaţia (descrierea unor imagini, discutarea unor cazuri, compararea unor itemi, brain-storming etc.) rezolvarea de exerciţii, rezolvarea unor sarcini în grup, interpretarea de roluri (ex. medic-pacient), rezolvarea unor sarcini pe baza unor mesaje scrise ori receptate pe cale auditivă (cu ajutorul mijloacelor tehnice	2	-	nu este cazul

		corespunzătoare), elaborarea unor lucrări scrise, autoevaluarea			
2	Introducere în terminologia medicinei generale 2. Comunicare și vocabular	Expunerea, prezentarea multimedia, conversaţia (descrierea unor imagini, discutarea unor cazuri, compararea unor itemi, brain-storming etc.) rezolvarea de exerciţii, rezolvarea unor sarcini în grup, interpretarea de roluri (ex. medic-pacient), rezolvarea unor sarcini pe baza unor mesaje scrise ori receptate pe cale auditivă (cu ajutorul mijloacelor tehnice corespunzătoare), elaborarea unor lucrări scrise, autoevaluarea	2	-	nu este cazul
3	Introducere în terminologia medicinei dentare 1. Comunicare și vocabular	Expunerea, prezentarea multimedia, conversaţia (descrierea unor imagini, discutarea unor cazuri, compararea unor itemi, brain-storming etc.) rezolvarea de exerciţii, rezolvarea unor sarcini în grup, interpretarea de roluri (ex. medic-pacient), rezolvarea unor sarcini pe baza unor mesaje scrise ori receptate pe cale auditivă (cu ajutorul mijloacelor tehnice corespunzătoare), elaborarea unor lucrări scrise, autoevaluarea	2	-	nu este cazul
4	Introducere în terminologia medicinei dentare 2. Comunicare și vocabular	Expunerea, prezentarea multimedia, conversaţia (descrierea unor imagini, discutarea unor cazuri, compararea unor itemi, brain-storming etc.) rezolvarea de exerciţii, rezolvarea unor sarcini în grup, interpretarea de roluri (ex. medic-pacient), rezolvarea unor sarcini pe baza unor mesaje scrise ori receptate pe cale auditivă (cu ajutorul mijloacelor tehnice corespunzătoare), elaborarea unor lucrări scrise, autoevaluarea	2	-	nu este cazul
5	Profesia de medic dentist. Provocări și oportunități. Scrisoarea de intenție și interviul 1. Comunicare și vocabular	Expunerea, prezentarea multimedia, conversaţia (descrierea unor imagini, discutarea unor cazuri, compararea unor itemi, brain-storming etc.) rezolvarea de exerciţii, rezolvarea unor sarcini în grup, interpretarea de roluri (ex. medic-pacient), rezolvarea unor sarcini pe baza unor mesaje scrise ori receptate pe cale auditivă (cu ajutorul mijloacelor tehnice corespunzătoare), elaborarea unor lucrări scrise, autoevaluarea	2	-	nu este cazul
6	Profesia de medic dentist. Provocări și oportunități. Scrisoarea de intenție și interviul 2. Comunicare și vocabular	Expunerea, prezentarea multimedia, conversaţia (descrierea unor imagini, discutarea unor cazuri, compararea unor itemi, brain-storming etc.) rezolvarea de exerciţii, rezolvarea unor sarcini în grup, interpretarea de roluri (ex. medic-pacient), rezolvarea unor sarcini pe baza unor mesaje scrise ori receptate pe cale auditivă (cu ajutorul mijloacelor tehnice corespunzătoare), elaborarea unor lucrări scrise, autoevaluarea	2	-	nu este cazul
7	Bolile dinților. Boli parodontale. Comunicare și vocabular	Expunerea, prezentarea multimedia, conversaţia (descrierea unor imagini, discutarea unor cazuri, compararea unor itemi, brain-storming etc.) rezolvarea de exerciţii, rezolvarea unor sarcini în grup, interpretarea de roluri (ex. medic-pacient), rezolvarea unor sarcini pe baza unor mesaje scrise ori receptate pe cale auditivă (cu ajutorul mijloacelor tehnice corespunzătoare), elaborarea unor lucrări scrise, autoevaluarea	2	-	nu este cazul

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Melnic V., 2003 , Mijloace de formare a terminologiei clinice medicale in limba romana, Revista Limba română, Nr. 2-3, anul XIII
Rusu, Valeriu, 1983 Mic dicţionar medical, vol. I, II, Iaşi
Ursa A., Marcean, N., 2018, Limba română medicală. Româna pentru obiective specifice, Limes

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Necesitatea dezvoltării competențelor de comunicare în limba română pentru studenții străini reprezintă o cerință majoră, întrucât interacțiunea directă cu pacienții români este esențială în stagiile clinice și în practica medicală

ulterioară. Medicii dentiști care pot comunica eficient în limba țării în care profesează au o capacitate de integrare profesională superioară.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Corectitudinea structurilor folosite - Complexitatea limbajului - Adecvarea la registru, nivel de formalitate specifice situatiei	Întrebări cu complement multiplu, formare de cuvinte, potrivire de cuvinte, completare de spații	100
Minimal performance standards: Să poată interacționa cu pacientul în conducerea interviului medical, să știe să adreseze întrebări referitoare la anamneză, să poată oferi explicații, recomandări simple; să citească și să înţeleagă ideile principale ale unui text sau mesaj audio, să poată răspunde la întrebări pe baza lor fără greşeli mari la nivelul organizării discursului, să cunoască un număr satisfăcător de termeni specifici domeniului.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Lect dr Năznean Adrian	Marți 12-14, sala 37, Clădirea centrală

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Physiopathology			
2.2 Course coordinator: Șef l dr Gliga Florina-Ioana			
2.3 Practical activities coordinator(s): Șef l dr Gliga Florina-Ioana			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			7
- supplemental documentation at the library, from specialized information portals and in the field			7
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			22
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Developing professional attitudes, both individually and as part of a team Acquiring the knowledge necessary to apply these attitudes in practice Developing an interest in specific specialties related to the core profession in order to pursue further specialization in that field

7. Objectives of the discipline

7.1 General objective:
Presentation of the mechanisms of diseases which are important for the dental doctors in direct relation with theirspecific activity.
Establishing the relationship between the general pathology and that related to the oro-maxillofacial sphere:common elements, interactive particularities (generalization of a dental pathological process, localization of ageneral pathology at the oral -dental area)

7.2 Specific objectives:
Presentation of the etiopathology and pathophysiological mechanisms in general and special pathophysiology ofthe body systems.
Explaining the mechanisms of action of pharmacological substances from the pathophysiological point of view.
Theoretical and practical skills for positive and differential diagnosis in clinical conditions.

8. Learning outcomes

8.1 Knowledge:
The student will be able to:

Identify and list the main pathophysiological mechanisms involved in cardiovascular, renal, respiratory, endocrine, and immune system diseases.

Recognize and describe pathophysiological processes relevant to dental practice (e.g., the impact of hypoxia, inflammation, or electrolyte imbalances on dental treatment).

Explain in their own words concepts such as systemic inflammation, immune response, fluid-electrolyte balance, acid-base balance, and compensatory mechanisms.

Compare and classify different types of renal failure, cardiac arrhythmias, metabolic or endocrine disorders, highlighting clinically relevant features.

Summarize and interpret cause-effect relationships between various pathophysiological imbalances and clinical manifestations.

8.2 Skills:
The student will be able to:

Apply theoretical knowledge in analyzing simulated clinical cases or case studies related to dentistry and general diseases.

Identify solutions and propose action plans for observed pathophysiological imbalances (e.g., selecting safe dental procedures for patients with hypertension or diabetes).

Interpret clinical and laboratory data (e.g., electrolyte levels, blood glucose, inflammatory markers) and anticipate pathophysiological consequences.

Formulate conclusions and viewpoints based on experiments or case studies presented during the course.

Select and organize relevant information from scientific sources to support clinical decisions or prepare a scientific summary/report.

8.3 Responsibility and autonomy:
The student will be able to:

Analyze and compare bibliographic sources, evaluating their accuracy and relevance for dental practice.

Demonstrate autonomy in organizing their learning process and in solving applied pathophysiological problems.

Follow academic ethics principles, correctly citing sources and applying professional deontology in case analyses.

Identify and prioritize pathophysiological risks in the context of dental practice and propose preventive or corrective solutions.

Actively collaborate with peers and instructors during learning activities and problem-solving tasks.

Demonstrate social and professional responsibility by understanding the impact of pathophysiology on patients' general health and clinical decision-making.

9. Specific competencies acquired

9.1 professional competencies: Identification in terms of efficiency and effectiveness of general health care needs, and treatment. • Description of functioning of human body and the general mechanisms of disease production. • Getting Integrating concepts / situations that apply to the human body in order to explain signs and symptoms. • Establishing treatment needs imposed by the existence of signs and symptoms of disease. • The practical importance of pathophysiology for understanding the of medical disciplines. • Using the acquired notions in scientific research. • Achieving a work / essay / case presentation - identifying targets.
9.2 transversal competencies: • Identify objectives to be achieved, the resources available, their closing conditions, work flow, working time, deadlines and related risks. • Identifying roles and responsibilities in a multidisciplinary team and applying effective techniques and working relationships within the team and the relationship with the patient. • Effective use of information sources and communication resources and training to assist (Internet portals, specialized software, databases, online courses, etc.)
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction in pathophysiology. The concept of normal and disease. Tissue injury.	Oral presentation and multimedia	2	-	Aggression.Oral disorders (inlcl. Caries)
2	Pathophysiology of body's defense systems. Inflammatory syndrome. Leukocyte series. Particularities of the oral cavity	Oral presentation and multimedia	2	-	Immunodeficiency.Infectious disease.Lymphadenopathy
3	Acute and chronic infection. Particularities of the oral cavity.	Oral presentation and multimedia	2	-	Infectious disease.Lymphadenopathy
4	Pathophysiology of fever. Particularities of the oral cavity.	Oral presentation and multimedia	2	-	Migraine.Headache
5	Pathophysiology of blood. Erythrocyte series. Particularities of the oral cavity.	Oral presentation and multimedia	2	-	Anemia
6	Pathophysiology of blood. Hemostasis. Clotting disorders. Particularities of the oral cavity.	Oral presentation and multimedia	2	-	Coagulation disease
7	Pathophysiology of the cardiovascular system. Atherosclerosis. Hypertension.Applications in dental medicine.	Oral presentation and multimedia	2	-	Hypertension. Disorders of lipid metabolism.Cardiac conduction/rhythm disorder
8	Pathophysiology of the respiratory system. Applications in dental medicine.	Oral presentation and multimedia	2	-	Chronic bronchitis and emphysema.Respiratory tract infection. Asthma.

9	Pathophysiology of the digestive tract. Particularities of the oral cavity.	Oral presentation and multimedia	2	-	Dysphagia.Malabsorption.Peptic ulcer
10	Pathophysiology of nutrition and metabolic diseases. Particularities of the oral cavity.	Oral presentation and multimedia	2	-	Diabetes mellitus.Hypoglycaemia.Malnutrition
11	Pathophysiology of the endocrine system. Applications in dental medicine	Oral presentation and multimedia	2	-	Thyroid disorders.Pituitary disorders
12	Pathophysiology of the hydro-electrolytic balance. Calcium and fluoride balance. Vitamin D. Applications in dental medicine.	Oral presentation and multimedia	2	-	Electrolyte and water balance.Malabsorption.Osteoporosis.Disorders of calcium and vitamin D metabolism
13	Pathophysiology of the urinary system. Applications in dental medicine.	Oral presentation and multimedia	2	-	Chronic renal disease.Urinary tract infection.
14	Pathophysiology of pain. Applications in dental medicine.	Oral presentation and multimedia	2	-	PUO-pyrexia of unknown origin.Osteoarthrosis. Edema.Cranialnerve disorders

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2. Robbins, Cotran & Kumar Pathologic Basis of Disease, Elsevier LTD, June 2025
3. Goldman-Cecil Medicine, Twenty Sixth Edition,Elsevier , 2019
4. Professional guide to pathophysiology 2ed, Ed. Lippincott Williams and Wilkins, 2006
5. Bacârea Anca, Pathophysiology, Lecture guide, University Press Tîrgu Mureș, 2014
6. Gould's Pathophysiology for the Health Professions, Karin C. VanMeter, Robert J. Hubert, the seventh edition, june 2022

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Protection rules in the pathophysiology laboratory.	Lab practical activities,PPT presentation, discussions	2	-	-
2	Practical applications of the pathophysiology of inflammation in dental medicine. Investigation of the leukocyte series.	Lab practical applications, debates, CBL	2	-	Oral disorders (inlcl. Caries)
3	Practical applications of the pathophysiology of infection. Application in dental medicine.	Lab practical applications, debates, CBL	2	-	Immunodeficiency
4	Immunological investigations inthe physiopathology of febrile syndrome. Correlations with oral cavity pathology.	Lab practical applications, debates, CBL	2	-	Fever. PUO
5	Practical applications of the pathophysiology of erythrocyte series in dental medicine. Exploring anemic syndrome. Polycythemia	Lab practical applications, debates, CBL	2	-	Anemia
6	Practical applications of the pathophysiology of hemostasis in dental medicine.	Lab practical applications, debates, CBL	2	-	Coagulation disease
7	Practical applications of the pathophysiology of cardiovascular system in dental medicine. The blood pressure.The pulse. Vascular reactivity tests.	Lab practical applications, debates, CBL	2	-	Hypertension.Cardiac conduction/rhythm disorder

8	Practical applications of the pathophysiology of respiratory system in dental medicine	Lab practical applications, debates, CBL	2	-	Chronic bronchitis and emphysema.Respiratory tract infection.Asthma
9	Practical applications of the pathophysiology of digestive tract and metabolism in dental medicine	Lab practical applications, debates, CBL	2	-	Malabsorption.Peptic ulcer
10	Practical applications in dentistry of the pathophysiology of hyperglycemic and hypoglycaemic syndrome. Diabetes mellitus. Chronic and acute DM complications.	Lab practical applications, debates, CBL	2	-	Diabetes mellitus.Hypoglycaemia
11	Practical applications of the pathophysiology of endocrine pathology. Endocrine diseases involving the oral cavity. Practical applications in dental medicine.	Lab practical applications, debates, CBL	2	-	Thyroid disorders.Pituitary disorders
12	Electrolyte disturbances. Dental consequences of calcium and vitamin D disorders. Correlations between signs and lab tests based on pathophysiological mechanisms	Lab practical applications, debates, CBL	2	-	Electrolyte and water balance. Disorders of calcium and vitamin D metabolism
13	Practical applications of the pathophysiology of renal system in dental medicine.	Lab practical applications, debates, CBL	2	-	Urinary tract infection. Chronic renal disease
14	Interpretation of signs, symptoms and paraclinical data in pain of oforomaxillofacial origin.Applications in dentistry	Lab practical applications, debates, CBL	2	-	Osteoarthrosis. Edema.Cranial nerve disorders

Bibliography

1. Paulev Poul-Erik, Textbook in Medical Physiology and Pathophysiology, Copenhagen Medical Publishers, 2000
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3. Springhouse, Professional guide to pathophysiology 2ed, Ed. Lippincott Williams and Wilkins, 2006
4. General Practice Notebook http:// .www.gpnotebook.co.uk/homepage.cfm, 2010
5. Robbins & Cotran Pathologic Basis of Disease, Tenth Edition, 2020.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

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12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Written practical activity test Case report - oral and multimedia individualpresentation	Written test 10% Case presentation 10%	20
- lecture	TBL test	written test 10 %	10
Final evaluation			
- practical final exam	Final practical exam	Written - practical test	20
- theoretical final exam	Final theoretical exam	UNIX evaluation	50

Minimal performance standards:
The passing grade is the grade 5 for both theoretical and practical exam; the student is obliged to attend practical sessions, courses, recover all absences, to pass both theoretical and practical exams and to properly use the specialized terminology.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Gliga Florina-Ioana	30 minutes after every lecture or practical activity and/or Monday 13-14 and friday 13-14 depending on the schedule of the module

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: F2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Pharmacology			
2.2 Course coordinator: Șef l dr Jîtcă George			
2.3 Practical activities coordinator(s): Șef l dr Jîtcă George			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			7
- supplemental documentation at the library, from specialized information portals and in the field			7
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			22
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Amphitheater with projection system
5.2 for practical activities: Laboratories with specific equipment for practical activities Students will wear the appropriate equipment for practical activities. • The laboratory will be held in a room with specific equipment.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Engages in the conception or creation of new knowledge by formulating research questions, by investigating,

improving or developing concepts, theories, models, techniques, instruments, software or operational methods and by using scientific methods and techniques.
Analyzes experimental data and interprets results to write reports and summaries of findings.
Is proactive and takes the first step in an action without waiting to hear what others say or do.
Accepts responsibility and accountability for own professional decisions and actions or those delegated to others.
Thinks using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Works confidently within a group, each doing their part in service of the whole.

7. Objectives of the discipline

7.1 General objective:
Ensuring and acquiring the basic notions of pharmacology for the biomedical training of the students of the Faculty of Dental Medicine.

7.2 Specific objectives:
Providing the important notions of pharmacodynamics and pharmacotherapy, taking into account the skills of the dentist.

8. Learning outcomes

8.1 Knowledge:
Upon completion of the courses, the student will be able to:
• List the main classes of drugs.
• Recognize the indications, mechanisms and pharmacokinetic processes.
• Identify the role of drugs used according to the indication.
• Explain basic notions of pharmacodynamics and pharmacokinetics.
• Exemplify the use of drugs according to the indication.
• Classify drugs into classes.
• Summarize the main drugs with their mechanisms of action.
• Compare drug classes.
• Distinguish between the indications of one class versus another.
• Answer theoretical and practical questions regarding the application of the acquired notions.

8.2 Skills:
Upon completion of the courses, the student will be able to:
• Identify the class of drug solution according to the indication.
• Select and group relevant information for a pharmacological treatment.
• Interpret a prescription appropriately.
• Select and organize relevant information in a given context.
• Express individual points of view.
• Interpret causal relationships.
• Identify solutions and propose resolution plans/projects.
• Formulate points of view and conclusions to the experiments carried out. /Formulate conclusions based on the conducted experiments.
• Approaching the health/ill issues from the point of view of the characteristics of the community, in direct relation to the socio-economic and/or cultural conditions of the respective community.

8.3 Responsibility and autonomy:
Upon completion of the courses, the student will be able to:
• Argue the importance of knowing the fundamental notions of pharmacology.
• Prioritize work tasks and establish criteria for choosing the most appropriate
• treatment regimen.
• Interpret a treatment regimen depending on the indication, patient.
• Demonstrate autonomy in choosing a treatment.
• Collaborate responsibly with colleagues and teachers to achieve common objectives.
• Be aware of the value of personal contribution in solving treatment regimens.
• Compare, differentiate, formulate conclusions.
• Verifies correctness, identifies strengths/weaknesses, judges, argues, prioritizes, sets criteria, estimates, judges, validates, confronts, interprets
• Demonstrate openness and adaptability to new learning contexts.
• Collaborate effectively with colleagues and instructors in academic or project-based activities.
• Demonstrates autonomy in organizing the learning situation/context or the problem situation to be solved
• Collaborate effectively with colleagues and instructors in academic or project-based activities.
• Promotes/contributes through new solutions related to the specialized field to improve the quality of so-cial life.
• Using the information and communication resources efficiently, as well as those for assisted professional development (web portals, specialized software, application database, online courses, etc.).

9. Specific competencies acquired

9.1 professional competencies:

Definition and description of medicinal products from a pharmacokinetic, pharmacodynamic, and pharmaco-toxicological point of view.
9.2 transversal competencies: Responsible performance of professional duties, under conditions of limited autonomy and qualified assistance.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introductory lecture. Basic concepts of pharmacokinetics.	Oral presentation + interactive discussion	2	-	-
2	Basic concepts of pharmacodynamics and pharmacotoxicology.	Oral presentation + interactive discussion	2	-	-
3	Parasympathetic nervous system: parasympathomimetic and parasympatholytic drugs. Sympathetic nervous system: sympathomimetics and sympatholytics drugs.	Oral presentation + interactive discussion	2	-	-
4	Medication of the cardiovascular system. Medicines for high blood pressure.	Oral presentation + interactive discussion	2	-	-
5	Blood medication: hemostatics, antihemorrhagic agents, anticoagulants, antiplatelet medications.	Oral presentation + interactive discussion	2	-	-
6	Pain management (I) - introductory concepts, antipyretic analgesics, opioid analgesics.	Oral presentation + interactive discussion	2	-	-
7	Pain management (II) - non-steroidal anti-inflammatory drugs.	Oral presentation + interactive discussion	2	-	-
8	Pain management (III) - steroid anti-inflammatory drugs. Treatment of trigeminal neuralgia.	Oral presentation + interactive discussion	2	-	-
9	General anesthetics. Local anesthetics.	Oral presentation + interactive discussion	2	-	-
10	Gastrointestinal medication (treatment for peptic ulcer). Allergy medications.	Oral presentation + interactive discussion	2	-	-
11	Antibiotics and antimicrobial chemotherapy.	Oral presentation + interactive discussion	2	-	-
12	Corrective pharmacological measures of super infections with conditionally pathogenic germs. Antibiotic therapy in special groups of patients.	Oral presentation + interactive discussion	2	-	-
13	Hormonal medication (antidiabetic drugs, osteoporosis treatment, contraceptives, thyroid and antithyroid drugs).	Oral presentation + interactive discussion	2	-	-
14	Dental management in the case of some groups of patients at risk: patients on anticoagulant treatment or under treatment with bisphosphonates; pregnancy and breastfeeding.	Oral presentation + interactive discussion	2	-	-

Bibliography

1. Lippincott - Illustrated Reviews. Wolters Kluwer, 2019.
2. Lecture support – pdf format

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Objectives of practical pharmacology activities.	Seminar	2	-	-
2	Pharmacography.	Discussions on given topics (clinical cases, problems).	2	-	-
3	The study of some pharmacokinetic aspects.	Discussions on given topics (clinical cases, problems).	2	-	-
4	The study of some pharmacodynamic aspects.	Discussions on given topics (clinical cases, problems).	2	-	-
5	Study of vegetative nervous system medication.	Discussions on given topics (clinical cases, problems).	2	-	-
6	Medication of the blood and the cardiovascular system in a clinical context.	Discussions on given topics (clinical cases, problems).	2	-	-
7	Pain management.	Discussions on given topics (clinical cases, problems).	2	-	-
8	Local and general anesthetics in a clinical context.	Discussions on given topics (clinical cases, problems).	2	-	-
9	Antiulcer and antiallergic agents in clinical context.	Discussions on given topics (clinical cases, problems).	2	-	-
10	Antibiotics and antimicrobial chemotherapy in a clinical context.	Discussions on given topics (clinical cases, problems).	2	-	-
11	Antimycotic medication in a clinical context.	Discussions on given topics (clinical cases, problems).	2	-	-
12	Clinical cases	Discussions on given topics (clinical cases, problems).	2	-	-
13	Recovery PA	Discussions on given topics (clinical cases, problems).	2	-	-
14	Practical activity exam	Discussions on given topics (clinical cases, problems).	2	-	-

Bibliography
1. Lippincott - Illustrated Reviews. Wolters Kluwer, 2019.
2. Lecture support – pdf format

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Identifying the disease state and establishing the correct diagnosis of the dental condition(s).
Conservative therapy of odonto-periodontal structures.
Diagnosis and interceptive therapy of anomalies of the dento-maxillary apparatus.
Prosthetic restoration of dental arches.
Identification of diagnostic and evolutionary peculiarities and examination of the patient with surgical conditions in the oro-maxillofacial sphere.
Management of the theoretical and legislative bases of the operational health systems in Romania as well as the managerial ones regarding the dental practice.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	The ability to use/apply the concepts presented in the lectures in clinical practice.	MCQ/Essay test/ Oral assessment/Project	30
- lecture	--	-	0
Final evaluation			
- practical final exam	Knowledge of the practical applicability of the practical concepts presented in PA.	MCQ/Essay test	20
- theoretical final exam	Knowledge of all the concepts taught in the lectures.	Multiple choice/multiple choice question (MCQ) tests (UNIX Exam Center)	50

Minimal performance standards:
Knowledge of the mechanism of action of drugs, dosage and therapeutic indications.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Jîtcă George	30 minutes after each course/practical activity

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Morphopathology			
2.2 Course coordinator: Șef l dr Turdean Sabin-Gligore			
2.3 Practical activities coordinator(s): Turdean Sabin, Banias Laura			
2.4 Year of study: II	2.5 Semester: 1-2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per year of didactic activities)

3.1 Hours per week: 8/4	3.2 lecture: 4/2	3.3 practical activities: 4/2	
3.4 Total hours in curriculum: 84	3.2 lectures: 42	3.6 practical activities: 42	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			7
- supplemental documentation at the library, from specialized information portals and in the field			6
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			6
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			20
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: English language certificate - Profex level C1

5. Conditions

5.1 for lectures: Lecture theatre with video projection, touchscreens, blackboard
5.2 for practical activities: video projection

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

7. Objectives of the discipline

7.1 General objective: Understanding the basis of the pathological processes and adapting them to systemic and oral pathology.
7.2 Specific objectives: Knowing the basic morphological and clinical disorders. Understanding the morphological changes in different disorders (micro- and macroscopic aspects).

8. Learning outcomes

8.1 Knowledge: Understanding the basic pathological aspects of the main lesions of the human body.
8.2 Skills: The interactive collaboration of the student with the didactic staff.
8.3 Responsibility and autonomy: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.

9. Specific competencies acquired

9.1 professional competencies: Understanding the basic pathological aspects of the main lesions of the human body.
9.2 transversal competencies: The interactive collaboration of the student with the didactic staff.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1-2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
The first semester					
1	Disorders of circulation - part 1	PowerPoint presentation	2	-	Cerebrovascular disease, Pleural effusion, Peripheral vascular disease, Thromboembolic disease, Coagulation disease, Shock, Varicose veins, Oedema
2	Disorders of circulation - part 2	PowerPoint presentation	2	-	Cerebrovascular disease, Pleural effusion, Peripheral vascular disease, Thromboembolic disease, Coagulation disease, Shock, Varicose veins, Oedema
3	Disorders of cell and tissue metabolism, disorders of cellular proliferation and differentiation	PowerPoint presentation	2	-	Hypoglycaemia, Encephalopathy, Inborn errors of metabolism, Drug reactions, Electrolyte and water balance, Disorders of uric acid metabolism, Cystic fibrosis, Disorders of calcium and vitamin D metabolism, Disorders of lipid metabolism
4	Inflammation - part 1	PowerPoint presentation	2	-	asthma, allergic disorders, Immunisation, Tuberculosis, Immunodeficiency, HIV
5	Inflammation - part 2	PowerPoint presentation	2	-	asthma, allergic disorders, Immunisation, Tuberculosis, Immunodeficiency, HIV
6	Tumors - part 1	PowerPoint presentation	2	-	Bone malignancy, skin cancer, childhood tumors, Carcinoma of the colon and rectum, Lymphadenopathy, Carcinoma of the stomach, Brain tumor, Carcinoma of the kidney and bladder

7	Tumors - part 2	PowerPoint presentation	2	Test - multiple-choice questions	Bone malignancy, skin cancer, childhood tumors, Carcinoma of the colon and rectum, Lymphadenopathy, Carcinoma of the stomach, Brain tumor, Carcinoma of the kidney and bladder
8	Pathology of the cardiovascular system	PowerPoint presentation	2	-	Aortic aneurysm, Thromboembolic disease, Peripheral vascular disease, Varicose veins, Sexually transmitted diseases
9	Pathology of the cardiovascular system	PowerPoint presentation	2	-	Malformations of cardiovascular system, Cardiorespiratory arrest, Ischemic heart disease, Endocarditis, Chest pain
10	Pathology of the respiratory system	PowerPoint presentation	2	-	Otitis media, Pneumothorax, Chronic bronchitis and emphysema, Respiratory tract infection, Chronic lung disease, Carcinoma of the bronchus, Asthma
11	Pathology of the respiratory system	PowerPoint presentation	2	-	Chronic lung disease, Carcinoma of the bronchus, Asthma
12	Oral and maxillofacial pathology	PowerPoint presentation	2	-	Oral disorders (inlcl. Caries)
13	Oral and maxillofacial pathology	PowerPoint presentation	2	-	Otitis media
14	Oral and maxillofacial pathology	PowerPoint presentation	2	-	Malformations of lip/palate
The second semester					
15	Oral and maxillofacial pathology	PowerPoint presentation	2	-	Osteomyelitis
16	Oral and maxillofacial pathology	PowerPoint presentation	2	-	Carcinoma of head and neck
17	Pathology of the gastrointestinal tract	PowerPoint presentation	2	-	Carcinoma of the oesophagus, Peptic ulcer, Gastroenteritis, Carcinoma of the stomach, Inflammatory bowel disease, Appendicitis, Carcinoma of the colon and rectum, Intestinal obstruction, Peritonitis, Diverticular disease, Hernia
18	Pathology of the liver, gallbladder, and pancreas	PowerPoint presentation	2	-	Gall bladder disease, Disorders of pancreas, Carcinoma of the pancreas
19	Pathology of the kidney and urinary tract	PowerPoint presentation	2	-	Chronic renal disease, Carcinoma of the kidney and bladder
20	Pathology of the female genital system and pathology of the breast	PowerPoint presentation	2	-	Carcinoma of the cervix/uterus/ovary, Infertility, carcinoma of the breast
21	Pathology of the male genital system	PowerPoint presentation	2	-	Pathology of the male genital system

Bibliography

1. Powerpoint presentations.
2. Kumar V, Abbas AK, Aster JC. Robbins Basic Pathology. 10th ed. New York, Elsevier 2018.
3. Gurzu S, Jung I. Patologie specială pentru studenții Facultății de Asistență Medicală. University Press Tîrgu Mureș 2014. ISBN 978-973-169-312-5.
4. Gurzu S, Jung I. Patologie generală pentru studenții Facultății de Asistență Medicală. University Press Târgu Mureș 2013. ISBN 978-973-169-214-2.
5. Gurzu S, Jung I, Turdean S. Patologie stomatologică/Dental pathology - Ed. University Press 2018, ISBN: 78-973-169-520-4.
6. Banias L, Jung I, Gurzu S. PATOLOGIE GENERALĂ pentru studenții facultății de medicină dentară / GENERAL PATHOLOGY
for dental medicine students. University Press Tîrgu Mureș 2020. ISBN 978-973-169-668-3.

10.2 Content of laboratory, semester 1-2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
The first semester					

1	Disorders of circulation	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Oedema, Thromboembolic disease, Chronic liver disease, Shock, Cerebrovascular disease
2	Disorders of cell and tissue metabolism	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Gall bladder disease, Dysuria, Disorders of lipid metabolism, Chronic renal disease, Urinary tract obstruction, Disorders of prostate, Disorders of uric acid metabolism, Joint swelling
3	Inflammation	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Respiratory tract infection, Pericardial disease, Septicaemia, Meningitis
4	Inflammation	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Tuberculosis, Lymphadenopathy
5	Tumors	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Breast lump, Menstrual disorders, Drug reactions
6	Tumors	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Skin cancer, Skin ulcerations, Carcinoma of the bronchus, Breathlessness, Haemoptysis, Carcinoma of the colon and rectum, Lymphadenopathy, Carcinoma of the stomach, Brain tumor, Carcinoma of the kidney and bladder
7	Malformations	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Malformations of spine/CNS-central nervous system, Malformations of cardiovascular system
8	Pathology of the cardiovascular system	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Cardiorespiratory arrest, Ischemic heart disease, Endocarditis, Chest pain
9	Pathology of the cardiovascular system	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Aortic aneurysm, Thromboembolic disease, Peripheral vascular disease, Varicose veins, Sexually transmitted diseases
10	Pathology of the respiratory system	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Tuberculosis, Chronic bronchitis and emphysema, Chronic lung disease
11	Pathology of the respiratory system	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and	2	-	Carcinoma of the bronchus, Respiratory tract infection

		microscopic demonstrations (scanned slides).			
12	Pathology of the digestive system and oral cavity	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Carcinoma of head and neck, Malformations of lip/palate, Oral disorders (inlcl. Caries)
13	Pathology of the digestive system and oral cavity	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Inflammatory bowel disease, Carcinoma of the stomach
14	Pathology of the digestive system and oral cavity	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Gall bladder disease, Disorders of pancreas, Carcinoma of the pancreas
		The second semester			
15	Pathology of the kidney, urinary tract, and male genital system	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Chronic renal disease, Carcinoma of the kidney and bladder
16	Pathology of the kidney, urinary tract, and male genital system	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Disorders of prostate
17	Pathology of the female genital system and pathology of the breast	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Carcinoma of the cervix/uterus/ovary
18	Pathology of the female genital system and pathology of the breast	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	carcinoma of the breast, Breast lump
19	Pathology of the endocrine, nervous and locomotor systems	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Thyroid disorders
20	Pathology of the endocrine, nervous and locomotor systems	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Brain tumor, Bone malignancy
21	Revision	Power-point presentation, practical macroscopic (jars with organs immersed in formalin and pictures), and microscopic demonstrations (scanned slides).	2	-	Carcinoma of the cervix/uterus/ovary, Chronic renal disease, Carcinoma of the kidney and bladder, Gall bladder disease, Disorders of pancreas, Carcinoma of the pancreas, Thyroid disorders, Bone malignancy

Bibliography
1. Gurzu Simona, Jung Ioan. Introduction in histopathology. Ed - University Press, 2012.
2. Gurzu Simona, Jung Ioan, Sabin Turdean. Patologie stomatologică/Dental pathology - Ed. University Press 2018, ISBN: 78-973-169-520-4.
3. Powerpoint presentations.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Applicability of the lectures and practicals for obtaining abilities and competence specific for the speciality

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	To learn basic knowledges of presentations and materials from the given bibliography	Organ test on models	15
- lecture	To learn basic knowledges of presentations and materials from the given bibliography	MCQ test	25
Final evaluation			
- practical final exam	To learn basic knowledges of presentations and materials from the given bibliography	Practical evaluation on Anatomage table	20
- theoretical final exam	To learn basic knowledges of presentations and materials from the given bibliography	MCQ test	40
Minimal performance standards: Complex preparation of the students from the fundamentals of the structural and functional human anatomy, from the basic biomedical sciences in order to a full comprehension of the special medical sciences. A morphologic framework for performing clinical examinations and of basic clinical diagnoses, of surgical skills and imagery in establishing a positive and a differential diagnosis. For passing the Anatomy II, the students have to get at least five at every sumative practical and theoretical evaluation.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Turdean Sabin-Gligore	30 minutes after each lecture and practical activities, according to the announced schedule

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Microbiology (virusology, parasitology)			
2.2 Course coordinator: Prof dr Man Adrian			
2.3 Practical activities coordinator(s): Post vacant			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: FS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 6		3.2 lecture: 2	3.3 practical activities: 4
3.4 Total hours in curriculum: 42		3.2 lectures: 14	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			3
- supplemental documentation at the library, from specialized information portals and in the field			3
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			3
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			10
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -projector
5.2 for practical activities: -microbiology laboratory

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline microbiology contributes to the development of competencies defined in the ESCO framework for the relevant occupations of the degree program, through the development of knowledge, skills, and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective:
Integration of the architecture of microbial structures, cellular metabolism and mechanisms of genetic variability in correlation with taxonomy, human microbiota ecology, virulence factors, and the theoretical foundations of microbial control via physical and chemical agents.

7.2 Specific objectives:
Integration of the fundamental principles of microbial cytology, physiology, and genetic variability of viruses, fungi, and parasites, with a focus on host-pathogen interactions and the role of immunological defense mechanisms.

The scope encompasses the theoretical foundation of etiological diagnosis, laboratory stewardship, and the pre-analytical factors influencing microbiological testing.

Special emphasis is placed on the characterization of medically significant viruses, fungi and parasites, their transmission, and the ecological role of the human microbiota in distinguishing between colonization, contamination, and infection. The discipline concludes with the assessment of infectious risks in specific clinical contexts, including healthcare-associated infections in immunocompromised and hospitalized populations

8. Learning outcomes

8.1 Knowledge:
Upon successful completion of the course module, students will be able to:
-Identify the fundamental structure and replication cycles of major virus families (e.g., Herpesviridae, HIV, Hepatitis viruses) and the mechanisms by which they cause disease.
-Describe the clinical manifestations of common viral infections of the oral and maxillofacial region (e.g., Herpes Simplex Virus - HSV, Varicella-Zoster Virus - VZV, Human Papillomavirus - HPV).
-Explain the principles of viral pathogenesis, latency, reactivation, and transmission, especially in the context of the dental clinic (e.g., airborne, bloodborne).
-Classify medically important fungi, particularly those relevant to oral health (e.g., Candida species).
-Understand the predisposing factors, clinical presentation, and pathogenesis of oral fungal infections (e.g., candidiasis, angular cheilitis).
-Know the mechanisms of action and common classes of antifungal agents.
-Identify the lifecycle and main characteristics of parasites potentially causing systemic diseases with oral manifestations (e.g., Toxoplasmosis, Leishmaniasis, Amoebiasis).
-Describe the general principles of parasitic transmission and methods of prevention and control.

8.2 Skills:
Upon successful completion of the course module, students will be able to:
-Recognize and differentiate oral lesions caused by viral, fungal, and parasitic agents during clinical examination.
-Formulate appropriate differential diagnoses for patients presenting with non-bacterial oral infections.
-Select the necessary laboratory diagnostic tests (e.g., viral culture, serology, fungal smears) for confirming viral, fungal, or parasitic infections.
-Implement strict infection control protocols (e.g., standard precautions, appropriate PPE) to minimize the risk of transmission of viral and other non-bacterial pathogens in the dental office.

8.3 Responsibility and autonomy:
Upon successful completion of the course module, students will be able to:
-Manage patients with minor fungal or viral oral infections within their scope of practice and know when to refer cases to specialized medical care (e.g., HIV, Hepatitis B/C patients).
-Apply knowledge of virology to understand and advocate for vaccination as a key measure in preventing infectious diseases (e.g., HPV, Hepatitis B).
-Educate patients on the management of chronic or recurrent viral/fungal conditions and the importance of systemic health in controlling these infections.

9. Specific competencies acquired

9.1 professional competencies:
1) Suspicion and recognition of the etiology of viral, parasitic and fungal infections
• proper requesting of microbiological analyses required for diagnosis
• understanding of microbiological results and their appropriate use in the patient’s treatment
• acquiring a basic knowledge of prevention and treatment of viral infections
• knowledge of current issues regarding the re-emerging viral infections
2) Knowledge and understanding the concepts, basic theories and methods of the specific area of specialization. Designing and deepening of basic knowledge in dental medicine, with general medical coverage
• Knowledge of nature of microorganisms that can contaminate surfaces and dental instruments in the dental cabinet
• Paying particular attention to microbiological and hygienic-sanitary control in various stages of treatment in dental offices, to prevent microbial contamination, so to comply with the microbiological standards.
• Defining the principles of decontamination. Learning decontamination procedures (asepsis, disinfection, sterilization and antisepsis)

• Using the basic knowledge for explanation and interpretation of various types of concepts, situations, processes, projects, etc. associated to the microbiological field 3) The students will acquire skills regarding the applicability of decontamination methods, techniques for harvesting biological samples and pathological products, diagnostic methods in mycology, parasitology and virology. 4) The student will own theoretical knowledge related to infectious diseases, the causative agents of infectious diseases (structure, habitat, pathogenicity factors, etiology, etc.), the specific manifestations of maxillo-facial area, prevention, treatment.
9.2 transversal competencies: • Team work abilities • Oral and written communication skills • Development of professional and ethical values • Solving clinical situations and taking correct therapeutic decisions • Responsible and fair execution of professional duties
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	General characteristics of viruses. Architecture of virions. The chemical composition of the viruses.Replication of viruses. Viral genetics.	PPT presentation	2	-	Structure of microorganisms
2	Viroids, prions. Bacteriophage.Relations between virus and host cell. The pathology of viral infection.	PPT presentation	2	-	Structure of microorganisms, Infection, Antimicrobial therapy, Immunity, Immunodeficiency
3	DNA viruses: Adenoviridae, Herpesviridae, Paillomaviridae. RNA viruses: Orthomyxoviridae, Paramyxoviridae, Reoviridae	PPT presentation	2	-	Loose stools, gastroenteritis, Bullous/ vesicular skin eruption, Haematuria, Loose stools, Carcinoma of head and neck, Carcinoma of the cervix/uterus/ ovary, Infectious disease of childhood, Respiratory tract infection, Sexually transmitted diseases
4	Human immunodeficiency virus. Human hepatitis viruses.	PPT presentation	2	-	HIV, Hepatomegaly, Jaundice, Acute liver disease/failure, Chronic liver disease
5	Classification of parasites. Protozoology: Entamoeba, Trichomonas, Giardia, Toxoplasma. Flat worms: Taenia, Echinococcus.	PPT presentation	2	-	Loose stools, Vaginal discharge, Malabsorption, Pregnancy loss, Sexually transmitted diseases, Abdominal distension, Abdominal pain, Constipation, Hepatomegaly, Jaundice, Pruritus, Weight loss, Acute liver disease/failure, Allergic disorders, Anemia, Eating disorders, malaria, Skin ulcerations
6	Cylindrical worms: Ascaris lumbricoides, Enterobius vermicularis, Trichinella spiralis. Entomology.	PPT presentation	2	-	Loose stools, Vaginal discharge, Malabsorption, Pregnancy loss, Sexually transmitted diseases, Abdominal distension, Abdominal pain, Constipation, Hepatomegaly, Jaundice, Pruritus, Weight loss, Acute liver disease/failure, Allergic disorders
7	Mycology: generalities. Mycology: yeasts, filamentous fungi. Etiology of iatrogenic infections in relation to practice in dental offices	PPT presentation	2	-	Hair disorders, Skin infections/ infestations, Vaginal discharge, Candidiasis, meningitis, Respiratory tract infection, septicemia. Vaginal discharge, Candidiasis, meningitis, Respiratory tract infection, septicemia, Hair disorders, Skin

					infections/infestations. Decontamination, Infection control.

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1. Brooks G.F., Butel, J. S., Morse, S.A.: Jawetz, Melnick, Adelberg's Medical Microbiology, 23 rd edition. 2006
2. Koneman: Color Atlas and Textbook of Diagnostic Microbiology, Lippincott, 2006
3. Murray, P.R., Rosenthal, K.S., Kobayashi, G.S., Pfaller, M.A.: Medical Microbiology, Fourth Edition. Mosby 2002.
4. Samaranayake, L: Essential Microbiology for Dentistry. Churchill Livingstone, Elsevier, 2006
5. Marsh, P.D., Martin, M.V.: Oral Microbiology Fifth edition.Churchill Livingstone, Elsevier, 2009
6. Xuedong Zhou, Yuqing Li: Atlas of Oral Microbiology: From Healthy Microflora to Disease, 1st edition, Elsevier, 2015
7. https://microbiologie.umfst.ro

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Labor safety in the virology-mycology-parasitology laboratory. Decontamination. The diagnostic scheme in viral diseases. The harvesting and transport of pathological samples	Practical activity, oral speech	2	-	Decontamination, Pathological products
2	Morphology and cultivation of viruses (cell cultures, inoculation of embryonated chicken egg, inoculation of laboratory animals).	Practical activity, oral speech	2	-	Structure of microorganisms, Identification of microorganisms
3	Diagnostic techniques in microbiology. Microscopic examination. Antigen-antibody assays. Methods for nucleic acids detection.	Practical activity, oral speech	2	-	Identification of microorganisms
4	Laboratory diagnosis of oropharyngeal viral diseases. Herpetic gingivostomatitis - HSV I and II, VZV, EBV, CMV.	Practical activity, oral speech	2	-	Bullous/vesicular skin eruption, - Carcinoma of head and neck
5	Foot-mouth disease - Coxsackie. Oral manifestations in Morbillivirus infection. Laboratory diagnosis of infections caused by papillomaviruses.	Practical activity, oral speech	2	-	Carcinoma of the cervix/uterus/ovary, - Infectious disease of childhood, Respiratory tract infection, Sexually transmitted diseases,
6	Laboratory diagnosis of viral enteral diseases (rotavirus), respiratory diseases: Rhinovirus, Influenza virus and parainfluenza, respiratory syncytial virus, adenovirus, coronavirus.	Practical activity, oral speech	2	-	Gastroenteritis, Loose stools, Respiratory tract infection, Urinary tract infection
7	Laboratory diagnosis of viral hepatitis.	Practical activity, oral speech	2	-	Hepatomegaly, Jaundice, - Acute liver disease/failure, Chronic liver disease
8	Laboratory Diagnosis of HIV /AIDS	Practical activity, oral speech	2	-	HIV
9	Diagnostic scheme of parasitological infections. Diagnostic methods used in parasitology laboratory. Classification of parasites.	Practical activity, oral speech	2	-	Structure of microorganisms, Identification of microorganisms
10	Phylum Protozoa, Class Rhizopoda: Entamoeba spp., Trichomonas buccalis, Trichomonas vaginalis, Giardia lamblia, Toxoplasma gondii.	Practical activity, oral speech	2	-	Loose stools, Vaginal discharge, - Pregnancy loss, Sexually transmitted diseases
11	Phylum Helminthes – Nematodes: Ascaris, Enterobius, Trichinella spiralis. Phylum Helminthes – Cestodes: Echinococcus granulosus, Taenia saginata and Taenia solium	Practical activity, oral speech	2	-	Abdominal distension, Abdominal pain, Constipation, Hepatomegaly, Jaundice, Pruritus, Weight loss - Acute liver disease/failure, Allergic disorders, Anemia, Eating disorders

12	Mycology: Laboratory diagnosis of infections caused by yeasts and filamentous fungi	Practical activity, oral speech	2	-	Vaginal discharge, - Candidiasis, - meningitis, Respiratory tract infection, septicemia, Skin infections/ infestations,
13	Review. Recovery of missed classes.	Practical activity, oral speech	2	-	-
14	Exam	Practical exam	2	-	-
Bibliography e-learning					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Given the increasing number of patients with invasive and / or immunosuppressive interventions, which are vulnerable to bacterial infections, and the emergence or re-emergence of some bacteria, it is essential to prepare future doctors in the field of microbiology. This ensures the acquirement of good knowledge on the viruses, fungi, parasites responsible for infections, and on the principles of diagnosis, treatment and prophylaxis.
• Particular attention is paid to microbiological and hygienic-sanitary control during the treatments conducted in dental offices, in order to prevent microbial contamination and to comply to the microbiological standards.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Knowledge on microbiology diagnostic principles and antimicrobial therapy	exam	30
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Knowledge about the presented pathogens	Test	70
Minimal performance standards: - To promote the final evaluation: grade 5 (both for theory and practical exams)			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Man Adrian	30 minutes after class

Head of departament Course coordinator Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Oral-dental prevention (Preventive dentistry) (1)			
2.2 Course coordinator: Șef l dr Bechir Farah			
2.3 Practical activities coordinator(s): Șef l dr Bechir Farah			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 10	3.2 lecture: 4	3.3 practical activities: 6	
3.4 Total hours in curriculum: 70	3.2 lectures: 28	3.6 practical activities: 42	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			20
- supplemental documentation at the library, from specialized information portals and in the field			20
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			19
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			60
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Fundamental knowledge of dental anatomy and oral biology
4.2 competency: Basic knowledge of oral hygiene and use of instruments specific to practical activities

5. Conditions

5.1 for lectures: Lecture hall equipped with multimedia system (video projector, computer)
5.2 for practical activities: Dental training room equipped with dental units

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The course contributes to the development of competencies defined by the European Skills, Competences, Qualifications and Occupations (ESCO) classification in the field of dental medicine by developing knowledge and skills related to prevention of oro-dental diseases and maintenance of oral health.

It supports competencies in:
• Disease prevention and oral health promotion
• Oral hygiene status evaluation and dento-periodontal indices
• Application of plaque control measures
• Health education and professional communication with patients
It also develops transversal competencies such as critical thinking, professional communication, and autonomous learning.

7. Objectives of the discipline

7.1 General objective:
To establish the concepts and principles of preventive dentistry and integrate them into dental practice.

7.2 Specific objectives:
Presentation of bacterial plaque structure and role in oral pathology
• Identification of risk factors in dento-periodontal diseases
• Description of oral hygiene assessment methods and indices
• Presentation of mechanical and chemical plaque control methods
• Introduction to fluoride use in caries prevention
• Presentation of professional hygiene techniques and health education

8. Learning outcomes

8.1 Knowledge:
Describes mechanisms of bacterial plaque formation and organization
• Explains the role of plaque and risk factors in dental caries and periodontal disease
• Classifies plaque control methods and fluoride use principles

8.2 Skills:
Applies plaque disclosure techniques in practice
• Determines and interprets dento-periodontal indices
• Uses professional hygiene techniques and patient education methods

8.3 Responsibility and autonomy:
Demonstrates compliance with hygiene and biosafety standards
• Critically evaluates preventive methods
• Acts autonomously and ethically in preventive dentistry practice

9. Specific competencies acquired

9.1 professional competencies:
Ability to assess oral hygiene and dento-periodontal indices
• Ability to apply mechanical and chemical plaque control methods
• Ability to integrate preventive principles into clinical reasoning

9.2 transversal competencies:
• Effective communication regarding oral hygiene
• Teamwork in practical activities
• Use of critical thinking
• Self-management of the learning process

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	History and philosophy of preventive dentistry	Oral and multimedia presentation	2	-	-
2	Infection control in dental practice	Oral and multimedia presentation	2	-	-
3	Organization of clinical workflow in dental offices	Oral and multimedia presentation	2	-	-
4	Saliva and its role in oral health	Oral and multimedia presentation	2	-	-

5	Bacterial plaque: definition, composition, formation	Oral and multimedia presentation	2	-	-
6	Role of plaque in caries and periodontal disease	Oral and multimedia presentation	2	-	-
7	Plaque disclosure and oral health indices	Oral and multimedia presentation	2	-	-
8	Mechanical plaque control (main methods)	Oral and multimedia presentation	2	-	-
9	Complementary plaque control methods	Oral and multimedia presentation	2	-	-
10	Chemical plaque control	Oral and multimedia presentation	2	-	-
11	Professional oral hygiene techniques	Oral and multimedia presentation	2	-	-
12	Dietary hygiene	Oral and multimedia presentation	2	-	-
13	Fluoride: general aspects, metabolism, action	Oral and multimedia presentation	2	-	-
14	Fluoride: systemic and topical applications	Oral and multimedia presentation	2	-	-

Bibliography
Beresescu L., Petcu B., Esian D., Bud AM. Notiuni de Preventie Oro-Dentara, Ed. University Press 2023
Splieth, C. Innovation in Preventive Dentistry; Quintessence Publishing: Batavia, IL, USA, 2021

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Occupational safety training	Oral presentation	3	-	-
2	Internal regulations presentation	Oral presentation	3	-	-
3	Dental office overview	Oral presentation	3	-	-
4	Plaque staining techniques	Practical demonstration	3	-	-
5	Oral hygiene index assessment	Practical demonstration	3	-	-
6	Dento-periodontal indices assessment	Practical demonstration	3	-	-
7	Toothbrushing techniques (demonstration)	Practical demonstration	3	-	-
8	Practice of toothbrushing techniques	CBL session	3	-	-
9	Demonstration of complementary techniques	Practical demonstration	3	-	-
10	Practice of complementary techniques	Practical demonstration	3	-	-
11	Demonstration of professional hygiene techniques	Practical demonstration on patients and study models	3	-	-
12	Practice of professional hygiene techniques	Practical demonstration on patients and study models	3	-	-
13	Demonstration of topical fluoridation	Practical demonstration on patients and study models	3	-	-
14	Dietary hygiene practices	Practical demonstration	3	-	-

Bibliography
Beresescu L., Petcu B., Esian D., Bud AM. Notiuni de Preventie Oro-Dentara, Ed. University Press 2023

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The course meets expectations of professionals and employers by emphasizing:
• Plaque-related disease prevention
• Professional hygiene skills
• Health education
• Biosafety standards

12. Evaluation

Type of	Evaluation criteria	Evaluation methods	Percent

activity			of final grade
Evaluation during the semester			
- practical activities	Accuracy of performed procedures, compliance with working steps, and involvement in practical activities	Continuous assessment during practical sessions through direct observation and evaluation of performed activity	10
- lecture	Acquisition of theoretical knowledge	Multiple-choice (MCQ) testing	20
Final evaluation			
- practical final exam	Accuracy of performed procedures, compliance with working steps and hygiene and biosafety standards	Direct practical examination by performing discipline-specific procedures on patient / study model under supervision	10
- theoretical final exam	Accuracy and completeness of specialized knowledge	Written examination – multiple-choice test (MCQ), UNIX Examination Center	60
Minimal performance standards: Obtaining the minimum passing grade of 5			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

1 Professional brushing and 1 prophilaxis file

15. Appointment timetable (for students)

Șef l dr Bechir Farah	Monday 11-12

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: SL1 - Humanities
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Medical psychology			
2.2 Course coordinator: Lect dr Cojocaru Cristiana-Manuela			
2.3 Practical activities coordinator(s): Asist drd Bănceu Diana			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The course is aligned with the Skills & Competences pillar of ESCO for the professions of Medical Doctor and Dentist. The curriculum aims to develop essential transversal competences such as: - Communication with patients: Managing the doctor-patient relationship through active listening techniques and empathy.

- Holistic approach to health: Understanding the psychosocial factors that influence the state of illness.
- Treatment adherence: Applying behavioral change strategies to increase patient compliance.
- Professional ethics: Respecting human autonomy and dignity within the medical act.

7. Objectives of the discipline

7.1 General objective:
To provide students with a solid theoretical and practical foundation in medical psychology and behavioral sciences, enabling them to understand human behavior in health and illness and to apply effective, ethical, and patient-centered communication in diverse medical contexts.

7.2 Specific objectives:
• Define and explain the fundamental concepts, theories, and models of medical psychology that underpin human behavior and doctor–patient communication.
• Apply appropriate behavioral strategies and techniques in simulated and real professional interactions with patients, families, and healthcare teams.
• Analyze psychological, emotional, social, and contextual factors that influence behavior and the effectiveness of medical communication.
• Demonstrate professional attitudes and core behavioral competencies in order to improve patient outcomes and promote community health.

8. Learning outcomes

8.1 Knowledge:
1. List the key stages in the development of Medical Psychology.
2. Explain essential domain-specific concepts, theories, and models related to human behavior, health, and illness.
3. Recognize and classifies major psychological processes, behavioral phenomena, and functional structures relevant to clinical and healthcare contexts.
4. Compare and differentiates key concepts, models, and theoretical approaches used in Medical Psychology.

8.2 Skills:
1. Select and organize relevant information in a given medical, psychological, or behavioral context.
2. Apply specific principles for the purpose of achieving a defined objective in a behavioral intervention.
3. Create or develop a scientific text in the field of Medical Psychology, using appropriate academic structure and terminology.
4. Express individual points of view in a clear, coherent, and professionally appropriate manner regarding behavioral and psychological issues in healthcare.
5. Interpret relationships between psychological factors, behavior, health, and illness.
6. Identify solutions and propose resolution plans or projects for behavioral and communication-related problems in medical settings.

8.3 Responsibility and autonomy:
1. Select suitable bibliographic sources and analyze them.
2. Demonstrate openness and adaptability to new learning contexts.
3. Collaborate effectively with colleagues and instructors in academic or project-based activities.
4. Demonstrates autonomy in organizing the learning situation/context or the problem situation to be solved.
5. Collaborate effectively with colleagues and instructors in academic or project-based activities.
6. Promotes/contributes through new solutions related to the specialized field to improve the quality of social life.
7. Analyzes and interprets business/entrepreneurial development opportunities in the specialized field.
8. Demonstrates real-life situation management skills (time management, collaboration vs. conflict).

9. Specific competencies acquired

9.1 professional competencies:
- Advanced abilities for collecting information from patients, using the clinical intake interview;
- Practical knowledge related to the clinical psychological assessment used in different psychological and/or organic diseases;
- Basic psychotherapeutic (Cognitive-Behavioral Therapy) skills regarding the treatment of depression, anxiety disorders and personality disorder;
- General knowledge for applying mindfulness and relaxations techniques in medical settings.

9.2 transversal competencies:
- To identify and establish a correct psycho-diagnosis for psychological disorders;
- To develop an interdisciplinary approach for explaining the relations between psychological factors and different psychological and/or organic disorders/diseases.
- To acquire a dialectic perspective used for understanding the etiopathogenesis of many disorders, integrating causes related to psychological factors.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.

Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The importance of medical psychology in the general field of medicine	Oral presentation, PowerPoint presentation	2	-	-
2	The biopsychosocial model in medical psychology	Oral presentation, PowerPoint presentation	2	-	-
3	Psychological problems involved in mood disorders	Oral presentation, PowerPoint presentation	2	-	-
4	Anxiety sensitivity. The distress-vulnerability model	Oral presentation, PowerPoint presentation	2	-	-
5	Somatic and Somatoform psychological issues	Oral presentation, PowerPoint presentation	2	-	-
6	Psychological processes involved in personality disorders	Oral presentation, PowerPoint presentation	2	-	-
7	Cognitive-Behavioral strategies applied for patients with depression, anxiety, and personality disorders. The Beckian approach	Oral presentation, PowerPoint presentation	2	-	-

Bibliography
1. Popa, O.C., Lee, W., Rus, A.V. (2020) The new approaces and future orientation in medical psychology, Targu-Mures:University Press.
2. Barkan, S.E. (2017). Health, Illness, and Society: An Introduction to Medical Sociology, London: Rowman & Littlefield.
3. Barlow, D., (2014). Clinical Handbook of Psychological Disorders, Fifth Edition: A Step-by-Step Treatment Manual, New York: The Guilford Press.
4. Barlow, D., et al. (2018). Unified Protocol for Transdiagnostic Treatment of Emotional Disorders: Therapist Guide (Treatments That Work), 2nd Edition, Oxford: The Oxford University Press.
5. Beck, J., (2011) Cognitive-Behavior Therapy. Basic and Beyond, 2nd Edition, New York: The Guilford Press.
6. Beck, A.T., Brad, A., A., (2009). Depression: Causes and Treatment, 2nd Edition, Philadelphia: University of Pennsylvania Press.
7. Cockerham, W.C. (2017). Medical Sociology, 14th Edition, New York: Taylor and Francis.
8. Labott, S., (2019). Health Psychology Consultation in the Inpatient Medical Setting, 1st Edition, Washington: American Psychological Association.
9. Morgan, J.E., Ricker, J.H., (2018). Textbook of Clinical Neuropsychology, 2nd Edition, New York: Taylor and Francis.

10.2 Content of seminar, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Overview of main instruments used in medical psychology. The psychological clinical interview	Demonstration, working in small groups	2	-	-
2	Psychological clinical interview based on the biopsychosocial model	Demonstration, working in small groups	2	-	-
3	The clinical assessment of psychological mood disorders	Demonstration, video presentation, working in small groups	2	-	-
4	The clinical assessment of anxiety sensitivity and distress	Applications and demonstration with students, working in small groups	2	-	-

5	The clinical assessment of somatoform and somatic psychological issues	Applications and demonstration with students, working in small groups	2	-	-
6	The clinical assessment of personality disorders	Applications and demonstration with students, working in small groups	2	-	-
7	Cognitive-behavioral techniques used with patients with depression, anxiety and personality disorders. Applications.	Demonstration with students, working in pairs of two students	2	-	-

Bibliography
Popa, O.C., Lee, W., Rus, A.V. (2020) New approaches behavioral sciences, Tirgu-Mures:University Press.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

By acquiring the content of the Behavioral Sciences discipline, students develop fundamental knowledge and skills necessary for understanding human behavior in health and illness, psychological processes, and the behavioral mechanisms involved in patient adaptation, prevention and recovery.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Applications of medical psychology	Project	30
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	The acquisition of knowledge in the field of medical psychology	Multiple choice test/ final theoretical project	70

Minimal performance standards:
The minimum passing garde is 5 (five) for both the parctical and theoretical evaluations.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Lect dr Cojocaru Cristiana-Manuela	30 minutes after each lecture/ practical activity

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Ergonomy			
2.2 Course coordinator: Șef l dr Benedek Csilla			
2.3 Practical activities coordinator(s): Șef lucr dr Benedek Csilla, șef lucr Vlasa Alexandru, asist univ dr Buka Imola			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 6	3.2 lecture: 2	3.3 practical activities: 4
3.4 Total hours in curriculum: 42	3.2 lectures: 14	3.6 practical activities: 28
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		21
- supplemental documentation at the library, from specialized information portals and in the field		20
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		20
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		62
3.9 Total hours		104
3.10 Credits		4

4. Prerequisites (where applicable)

4.1 curricular: promovated preclinical disciplines: Tooth morphology and Anatomy, Preventive Dentistry
4.2 competency: Knowledge about tooth anatomy, preventive measures in Dental Medicine and workflow

5. Conditions

5.1 for lectures: Video projector, computer (PC), audio-video systems
5.2 for practical activities: Treatment rooms, dental units, negatoscope

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

General healthcare competences: -maintain patient records -apply infection control measures

-communicate with patients

Follow ethical and legal standards:
-transversal skills
-critical thinking
-teamwork in healthcare settings
-continuous professional development
General healthcare competences:
-maintain patient records
-apply infection control measures
-communicate with patients

Follow ethical and legal standards:
-transversal skills
-critical thinking
-teamwork in healthcare settings
-continuous professional development
ESCO Skill
Plan healthcare treatment
Educate patients on oral hygiene Advise on healthcare

7. Objectives of the discipline

7.1 General objective:
Application of ergonomics notions, carrying out the activity in the dental office and the knowledge of the possibilities of its optimization

7.2 Specific objectives:
The knowledge of the organization criteria from ergonomic point of view of a private practice and the application of these criteria in the organization of the activity.
The development of evaluation abilities of the design of: private practice, medical devices, dental medical instruments, from ergonomic point of view.
The knowledge of the method of ergonomic organization of the medical activity in the private practice, in a strong partnership with the other staff.
Identification of the role and responsibility of the doctor-assistant team based on ergonomics principles.
Organization of the private practice in accordance with the dental medical therapies, which must be performed, and with the particularity of each patient, case.
The possibility to perform some dental medical treatments (examination, impressions) as a solo doctor, and in 4 hands work-variant. The knowledge of the risks and consequences of a wrongly organized practical activity from ergonomic point of view.

8. Learning outcomes

8.1 Knowledge:
Knows the criteria for ergonomic organization of a dental office.
Knows the organization of the office in relation to the operations to be performed and the particularities of the patients.
Compares the possibility of performing some dental medical acts (examination, preliminary impression) as a single doctor and in the 4-hands working variant.
Knows the risks and consequences of a poorly organized practice from an ergonomic point of view.

8.2 Skills:
Possesses skills in ergonomic evaluation of office design, equipment and specific dental medical instruments.
Identifies roles and responsibilities in the doctor-nurse team based on ergonomic principles.

8.3 Responsibility and autonomy:
Demonstrates receptivity to new learning contexts.
Demonstrates collaboration with other colleagues and teachers in carrying out teaching activities.
Demonstrates autonomy in organizing the learning situation/context or the problem situation to be solved.

9. Specific competencies acquired

9.1 professional competencies:
Knowledge of the terminology used in dental medicine, the notions of ergonomics and their applicability in dental practice
Acquiring skills to evaluate the work environment, with identification
optimization possibilities by applying the notions of
ergonomics in dental practice
Identification of risk factors and possible undesired consequences in dental practice

9.2 transversal competencies:
Formation of correct work skills in the use of equipment and a
the instrumentation for different specific medical interventions
Developing teamwork skills
Optimum and creative utilization of own potential in collective activities
The need for individual study as the basis of personal autonomy and professional development

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	1. Ergonomics – definition, purpose, terminology, application directions	Oral presentation and multimedia	2	-	-
2	2. Ergonomic considerations in setting up a dental office	Oral presentation and multimedia	2	-	-
3	3. Ergonomic considerations regarding the endowments of the dental office – equipment, instruments	Oral presentation and multimedia	2	-	-
4	4. Positions and working positions recommended to the dentist and nursing. Patient positioning during dental treatments. Handling dental instruments.	Oral presentation and multimedia	2	-	-
5	5. Organization of the activity in dental medical practice from an ergonomic perspective	Oral presentation and multimedia	2	-	-
6	6. The dynamics of the activity in the doctor-nurse team based on ergonomic principles	Oral presentation and multimedia	2	-	-
7	7. Risk factors and professional effects in dental practice	Oral presentation and multimedia	2	-	-

Bibliography
Bibliography:
1. Stephen J. Stefanac, Samuel P. Nesbit: Diagnosis and treatment planning in dentistry, Third edition. St. Louis, Missouri : Elsevier, 2017
2. Bukhari Cs, Lazăr L, Buka IZ, Vlasa Al, Szabo I. Oral Diagnosis and Ergonomics notions. Editura University Press Tg. Mureş, 2019
Facultative bibliography:
1. Lazăr AP, Dako Timea, Lazăr L. Noțiuni de diagnostic în stomatologie. Editura University Press Tg. Mureş, 2022, 184p, ISBN 978-606-581-197-3, cod CNCSIS 210.
2. Anghel M. Noţiuni generale de ergonomie dentară. Timişoara: Editura Orizonturi Universitare,

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	1. Presentation of methods of organization of the dental office and the analysis from ergonomic point of view of its arrangement	Multimedia presentations, practical demonstrations	2	-	-
2	2. Presentation of the equipment in the dental office	CBL	2	The material is offered to the students ahead of time, they carry out individual study beforehand	-

3	3. The ergonomic position of the doctor in the dental office	Multimedia presentations, practical demonstrations	2	-	-
4	4. The ergonomic position of the patient in the dental office	Multimedia presentations, practical demonstrations	2	-	-
5	5. Examples and exercises of positioning of the doctor and a the patient in the conditions adopting an ergonomic position	Multimedia presentations, practical demonstrations	2	-	-
6	6. Incorrect positions encountered in dental work - examples and discussions regarding the possible consequences undesirable	Multimedia presentations, practical demonstrations	2	-	-
7	7. Presentation of the dental instruments	CBL	2	The material is offered to the students ahead of time, they carry out individual study beforehand	-
8	8. Examples and comparative analyzes regarding the design and handling of dental instruments	Multimedia presentations, practical demonstrations	2	-	-
9	9. Examples and exercises of positioning of the doctor and a assistance based on ergonomic principles	Multimedia presentations, practical demonstrations	2	-	-
10	10. Examples regarding the dynamics of the acts in dental medicine optimized in terms of ergonomics.	Multimedia presentations, practical demonstrations	2	-	-
11	11. Work exercises with 4 hands in the doctor-nurse team	Multimedia presentations, practical demonstrations	2	-	-
12	12. Work exercises with 4 hands in the doctor-nurse team	Multimedia presentations, practical demonstrations	2	-	-
13	13. Debates regarding the consequences of the unergonomic dental activity	Multimedia presentations, practical demonstrations	2	-	-
14	14. Exercises for prevention and recovery in the case of musculoskeletal conditions (eg carpal tunnel syndrome).	Multimedia presentations, practical demonstrations	2	-	-

Bibliography

BibliographyȘ

1.Stephen J. Stefanac, Samuel P. Nesbit: Diagnosis and treatment planning in dentistry, Third edition. St. Louis, Missouri : Elsevier, 2017

2.Bukhari Cs, Lazăr L, Buka IZ, Vlasa Al, Szabo I. Oral Diagnosis and Ergonomics notions. Editura University Press Tg. Mureş, 2019

Bibliografie facultativă:

1.Lazăr AP, Dako Timea, Lazăr L. Noțiuni de diagnostic în stomatologie. Editura University Press Tg. Mureş, 2022, 184p, ISBN 978-606-581-197-3, cod CNCSIS 210.

2.Anghel M. Noţiuni generale de ergonomie dentară. Timişoara: Editura Orizonturi Universitare, 2005

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Ergonomics offers information about the methods of private practices organization (positioning of the furniture, of the medical devices, of the circuit of the doctor-patient-assistant, circuit of the medical instruments.

Based on the knowledge acquired it can be modeled the work position of the doctor and assistant. Tus, the dynamics of the carrying out of the dental medical treatments- optimized from ergonomic point of vie- will increase the quality of the medical act and the quality of the life of the involved ones.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Attendance on PA, fulfilling of the minimum scale of activity, the grades obtained at CBL sessions	Arithmetic mean of the marks obtained at the assessment of the fulfillment of the evaluation criteria	20
- lecture	10 questions written test with one correct answer	Written test	10
Final evaluation			
- practical final exam	The capability of the student to put in practice of the acquired knowledge	Oral examination	20
- theoretical final exam	Acquirement of the knowledge of general aspects of carrying out the activity in the dental medical practice based on the application of the ergonomics notions.	Written test with Multiple Choice Questions (MCQ) at Unix Examination Center	50
Minimal performance standards: - The accumulation of more than 3 absences on PA and more than 3 absences on the Course, will have as consequence the non-acceptance of the student to the final exam. The motivated (reasoned) absences will be recovered after a schedule established at the level of the Discipline. - Evaluation during the module: 1. PA Fulfillment of the minimal scale of PA and the obtaining of a mark 5 at CBL sessions. - 2. Final evaluation The minimum mark of promotion is 5 at both practical exam and final exam.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Benedek Csilla	30 minutes after each course

Head of departament Course coordinator Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: -
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Physical education			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Lect dr Steff Zakarias			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Șef l dr Țurcanu Dana-Simona			
2.4 Year of study: II	2.5 Semester: 1-2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per year of didactic activities)

3.1 Hours per week: 4/3	3.2 lecture:	3.3 practical activities: 4/3
3.4 Total hours in curriculum: 49	3.2 lectures: 0	3.6 practical activities: 49
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		
- supplemental documentation at the library, from specialized information portals and in the field		
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		
- tutorial activities		
- examinations		
- other activities		
3.8 Total hours of individual study		0
3.9 Total hours		49
3.10 Credits		2

4. Prerequisites (where applicable)

4.1 curricular: 4.1 curricular: good health - harmonious physical development - adequate physical qualities
4.2 competency: 4.2 competency: Knowledge of techniques learned in high school to develop body strength and physical qualities. - practice of sports (competitive/leisure)

5. Conditions

5.1 for lectures: -
5.2 for practical activities: 5.2 for practical activities: Sport gym, fitness gym, tennis courts, outdoor, swimming pool, football court

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The Physical Education discipline contributes to the alignment with the European ESCO framework by developing transversal competences relevant to all occupational sectors, including teamwork, self-discipline, and interpersonal communication, facilitated through structured sports activities. Additionally, it supports the acquisition of competences related to health promotion and physical well-being management, which are essential for sustaining work performance, strengthening resilience to stress, and enhancing professional productivity. These outcomes ensure improved adaptability of graduates to the dynamics of the European labour market.

7. Objectives of the discipline

7.1 General objective:
7.1 General objective:
Systemic and organized practice of physical exercise and favored sports

7.2 Specific objectives:
7.2 Specific objectives:
1) Continuous improvement of healthy condition, physical and mental vigour and harmonious body development ;
2) Raising of the general motricity level and aquirement of basical sport skills;
3) Participating at interuniversity's competiotions

8. Learning outcomes

8.1 Knowledge:
Students/knowledge
-knows the general concepts of the phisycal education lesson , for own health.
-knows the role of conceptsin the generl formation of human motor skills
-knows specific concepts of phisycal education leson
-knows the particularites of developing motor skills through different types of exercises and can apply them for optimal physical maintenance

8.2 Skills:
Students/skills
-correctly perform fundamental motor exercises and simple exercise programs to maintain health and phisical fitness.
-Self-regulates the intensity of effort and applies protective measures during activity.
-uses tehnical executions and identifies mistakes in order to correct them.
-actively participate in team sports games , respecting the rules.

8.3 Responsibility and autonomy:
Students/
-shows responsability for their own health and constantly participates in phisical activities
-works effectively, both individualy or in a team demontrating fair-play and respect
-autonomously apply safety rules and appropriate behavior in motor activities.
-respect the principles of academic ethics .

9. Specific competencies acquired

9.1 professional competencies:
- Making use of the information, methods and means specific to physical education and sports in order to optimize health and harmonious physical development
- Building the skill of knowledge transmission referring to exercises to develop basic physical skills, qualities and muscle usage
- Application of specific methods to develop physical qualities

9.2 transversal competencies:
- Application of rule systems specific to the organization and practice of physical education and sports, as well as acquisition and application of adequate behavior in interpersonal relations and in groups
- Using body language to express and understand ideas, feelings, general and physical aethethics of the body
- Using electronic means to select information regarding elements that are characteristic to physical development
- Active integration into various groups

9.3 related to the study program:

10.1 Content of laboratory, semester 1-2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
The first semester					
1	Introductory lesson ; the requirements of a Physical Education class	explication, demonstration, repetition	4	-	-

2	Athletics – the school of running	explication, demonstration, repetition	4	-	-
3	Basketball – checking the initial level of acquiring the basic elements	explication, demonstration, repetition	4	-	-
4	Volleyball - checking the initial level of acquiring the basic elements	explication, demonstration, repetition	4	-	-
5	Basketball – repeating the elements of moving in the court	explication, demonstration, repetition	4	-	-
6	Basketball – repeating the elements of moving in the court	explication, demonstration, repetition	4	-	-
7	Basketball – repeating the elements of moving in the court	explication, demonstration, repetition	4	-	-
The second semester					
8	Athletics – developing leg strength with different jumping exercises	explication, demonstration, repetition	3	-	-
9	Athletics – developing leg strength with different jumping exercises	explication, demonstration, repetition	3	-	-
10	Athletics – developing leg strength with different jumping exercises	explication, demonstration, repetition	3	-	-
11	Athletics – developing leg strength with different jumping exercises	explication, demonstration, repetition	3	-	-
12	Athletics – developing leg strength with different jumping exercises	explication, demonstration, repetition	3	-	-
13	Athletics – developing leg strength with different jumping exercises	explication, demonstration, repetition	3	-	-
14	Testing the students who where absent at the tests	activity evaluation	3	-	-

Bibliography

1. Badau D., Tanase T. ¬ Volei, teorie si metodica, Ed. OMNIA, Brasov, 2006
2. Carstea G. ¬ Teoria si metodica educatiei fizice, Ed. An¬Da, Bucuresti, 2000
3. Hantiu I. ¬ Teoria educatiei fizice si sportilui, note de curs, Univ. Oradea, 2012
4. Macovei S. ¬ Stretching, Ed AFIS, Bucuresti, 2012
5. Neagu N ¬ Teoria si practica activitati motrice umane, Ed. University Press, Tg. Mures, 2010
6. Filipescu, D., Gherghişan, D., Bologa, M., ¬ Educaţie fizică în învăţământul superior medical, Editura UMF, 2001
7. Badau D. ¬ Metodica disciplinei sportive ¬ handbal, Ed. Universitatii Transilvania din Brasov, 2009
8. Badau A, Ungur R, Badau D. – Activitatile fizice acvatice indoor, Ed, Universitatii Transilvania Brasov, 2016

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

- Development of the capacity to choose healthy life-style, by practicing sports, combining physical exercise with intellectual efforts, motion and rest, work and leisure.
- Availability to practice physical exercise independently
- Constant interest in sports as a phenomenon

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	the attendance on the lessons - control test of the 1st semester - control test for 2nd semester	Total attendances for the both of semester -finish all the control tests -effectuate two essay one in each semester for the students those exempt from physical education	100
- lecture	-	-	0
Final evaluation			
- practical final exam	Minimal performance standards: 1. Assist for at least 70% of the lessons, that means 20 attendences/year (including the exempted students) 2. The final examination contains 2 motor tests, at the student choice, as follow: long jump from standing position,	Total attendances for the both of semester -finish all the control tests -effectuate two essay one in each semester for the students those exempt from	0

	testing the force of the abdominal strength (sit ups during 30 sec.), testing the back muscle strength (back extention during 30 sec.), speed running on 30m or the swimming test which means to swimm 25m pool length in one of the 4 main events of swimming. For the students who are exempted from effort, they need to realize a paperwork on the final of the semester, in domain of physical education, theme which is chosen by the own teacher. (they don't need to go to the physically tests.)	physical education	
- theoretical final exam	-	-	0
Minimal performance standards: 1. Assist for at least 70% of the lessons, that means 20 attendences/year (including the exempted students) 2. The final examination contains 2 motor tests, at the student choice, as follow: long jump from standing position, testing the force of the abdominal strength (sit ups during 30 sec.), testing the back muscle strength (back extention during 30 sec.), speed running on 30m or the swimming test which means to swimm 25m pool length in one of the 4 main events of swimming. For the students who are exempted from effort, they need to realize a paperwork on the final of the semester, in domain of physical education, theme which is chosen by the own teacher. (they don't need to go to the physically tests.)			

13. Appointment timetable (for students)

Lect dr Steff Zakarias	Luni 19-20
Șef l dr Țurcanu Dana-Simona	30 de minute dupa fiecare activitate practica

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: SL1 - Humanities
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Romanian language			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Asist dr Rațiu Bogdan			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture:	3.3 practical activities: 4
3.4 Total hours in curriculum: 28		3.2 lectures: 0	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular:
4.2 competency:

5. Conditions

5.1 for lectures: -
5.2 for practical activities:

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective:
7.2 Specific objectives:

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies:
9.2 transversal competencies:
9.3 related to the study program:

10.1 Content of seminar, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities			0
- lecture	-	-	0
Final evaluation			
- practical final exam			0
- theoretical final exam			0
Minimal performance standards:			

13. Appointment timetable (for students)

Asist dr Rațiu Bogdan	

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: How to read and publish statistical results in medical research			
2.2 Course coordinator: Conf dr Olah Peter			
2.3 Practical activities coordinator(s): Conf dr Olah Peter			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

1. Skills / Competences Attitudes and values Ethical use and reporting of biomedical data Responsibility in interpreting statistical results

Accuracy and transparency in scientific reporting
Critical thinking in reading medical literature
Respect for evidence-based medicine principles
Academic integrity in publishing research results
Knowledge
Biostatistics in medical research
Evidence-based medicine
Statistical protocols in biomedical studies
Graphical representation of biomedical data
Statistical results in scientific articles
Reporting in the Material and Method section
Reporting in the Results section
Statistical significance and clinical relevance
Common statistical reporting errors
Language competences and knowledge
Biostatistical terminology
Biomedical research terminology
Scientific writing terminology
Medical English
Academic English for research publication
Skills
Critically reads biomedical literature from a statistical perspective
Interprets tables, graphs, and statistical indicators
Represents numerical and non-numerical data graphically
Describes statistical protocols in scientific articles
Reports statistical results clearly and accurately
Formulates conclusions based on statistical findings
Identifies errors in statistical reporting
Uses appropriate scientific language for publication
Transversal skills
Critical thinking
Scientific communication
Academic writing
Data literacy
Analytical reasoning
Attention to detail
Evidence-based decision-making
2. Occupations / Relevant occupations
Physician
Medical researcher
Clinical researcher
Biostatistician
Epidemiologist
Public health specialist
Medical writer
Scientific editor in biomedical fields
Healthcare data analyst
3. Qualifications / Relevant qualifications
Bachelor’s degree in medicine
University studies in biomedical sciences
University studies in public health
University studies in biostatistics
Master’s degree in epidemiology
Master’s degree in public health
Master’s degree in clinical research
Postgraduate training in biostatistics
Training in scientific writing
Training in evidence-based medicine

7. Objectives of the discipline

7.1 General objective:
• In the current context of evidence-based medicine, Biostatistics has become one of the essential work tools for the practitioner or researcher in the biomedical field. The volume of specialized literature is constantly growing, and the selection of relevant information in this context is becoming more and more challenging. As such, the main objective of this discipline is to develop students' skills to critically read specialized literature and to eloquently publish the results of their own research, from the point of view of statistical protocols and statistical

results.
7.2 Specific objectives: • Developing students' ability to graphically represent numerical and non-numerical data, as well as to interpret such representations published in specialized literature • Developing students' ability to present the statistical protocol used in the Material and Method section of a scientific article • Developing students' ability to present the statistical results obtained in the Results section of a scientific article. • Developing the students' ability to present the conclusions reached based on the statistical results in a scientific article

8. Learning outcomes

8.1 Knowledge: Identifies statistical concepts and terminology used in biomedical research articles. Describes the role of biostatistics in evidence-based medicine. Recognises common statistical methods used in medical research. Explains principles for graphical representation of numerical and categorical data. Describes how statistical protocols are reported in the Material and Method section. Explains how statistical results are presented in the Results section of a scientific article. Identifies the relationship between statistical results, interpretation and conclusions. Recognises common errors and limitations in statistical reporting. Distinguishes between statistical significance and clinical relevance.
8.2 Skills: Critically reads scientific articles from the perspective of statistical methods and results. Interprets statistical tables, graphs and indicators published in biomedical literature. Graphically represents numerical and non-numerical biomedical data. Selects appropriate ways to present statistical results in a scientific article. Writes the statistical protocol for the Material and Method section. Reports statistical findings clearly and accurately in the Results section. Formulates conclusions supported by statistical evidence. Identifies inconsistencies, omissions or errors in published statistical results. Uses appropriate scientific and statistical terminology in academic writing.
8.3 Responsibility and autonomy: Evaluates independently the quality of statistical reporting in biomedical literature. Assumes responsibility for accurate and transparent reporting of statistical results. Applies ethical principles when interpreting and publishing research data. Demonstrates autonomy in preparing statistical content for scientific articles. Critically assesses the relevance and limitations of statistical findings. Avoids misleading interpretation of statistical significance. Respects standards of academic integrity and scientific publishing. Contributes to the correct use of statistical evidence in medical research.

9. Specific competencies acquired

9.1 professional competencies: • The student will need to demonstrate the ability to organize and graph numerical and non-numerical data in a scientific study or experiment. • Demonstrating the ability to understand and present the statistical protocol in the Material and Method section of a scientific article • Demonstrating the ability to present the statistical results in the Results section of a scientific article and to interpret these results in the Discussions, respectively Conclusions sections of the article
9.2 transversal competencies: • Ability to critically evaluate the presentation of the statistical protocol and of the results in biomedical scientific articles
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Introduction. Data types. Data organization. Primary data. Indexed data. Contingency tables.	Oral presentation, Powerpoint presentation, Video materials	2	-	Biological variability
2	Graphic representation of numerical and non-numerical data	Oral presentation, Powerpoint presentation, Video materials	2	-	-
3	Presentation of the statistical protocol in the Material and Method section of a scientific article	Oral presentation, Powerpoint presentation, Video materials	2	-	-
4	Presentation of statistical results in the Results section of a scientific article.	Oral presentation, Powerpoint presentation, Video materials	2	-	-
5	Presentation of conclusions based on statistical results in the card of a scientific article	Oral presentation, Powerpoint presentation, Video materials	2	-	Clinical trials
6	Correlations and regressions. The correlation coefficient. The coefficient of determination. Linear and non-linear regressions. Their importance in the biomedical field.	Oral presentation, Powerpoint presentation, Video materials	2	-	Clinical trials
7	VERIFICATION of accumulated theoretical knowledge	Grid test with Multiple Choice Questions	2	-	-

Bibliography

1. Bacârea Vladimir, Ghiga Dana, Măruşteri Marius, Oláh Péter, Petrişor Marius - A Primer in Research Methodology and Biostatistics, University Press Targu Mures, 2014
2. Motulsky Harvey, Intuitive Biostatistics: A Nonmathematical Guide to Statistical Thinking, Oxford University Press, 2013

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Organization of data for their statistical processing. Primary data. Indexed data. Table calculation. Contingency tables.	Practical demonstrations. Synchronous eLearning methods. Collaborative activities in independent small groups	2	-	Biological variability
2	Graphic representation of numerical and non-numerical data	Practical demonstrations. Synchronous eLearning methods. Collaborative activities in independent small groups	2	-	-
3	Presentation of the statistical protocol in the Material and Method section of a scientific article	Practical demonstrations. Synchronous eLearning methods. Collaborative activities in independent small groups	2	-	-
4	Presentation of statistical results in the Results section of a scientific article.	Practical demonstrations. Synchronous eLearning methods. Collaborative activities in independent small groups	2	-	-
5	Presentation of conclusions based on statistical results in the card of a scientific article	Practical demonstrations. Synchronous eLearning methods. Collaborative activities in independent small groups	2	-	Clinical trials
6	Correlations and regressions. The correlation coefficient. The coefficient of determination. Linear and non-linear regressions. Their importance in the biomedical field.	Practical demonstrations. Synchronous eLearning methods. Collaborative activities in independent small groups	2	-	Clinical trials

7	TESTING individual ability to manipulate and represent data using MS Office 365 – Excel	Students will individually perform a set of specific tasks using MS Office 365 Excel. The performance will be graded.	2	-	-

Bibliography

1. Oláh Péter, Avram Călin, Mărușteri Marius, INTRODUCTION TO BIOSTATISTICS - Practical Applications, University Press Targu-Mures, 2016

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Adequate acquisition of the mentioned curricular content provides the student with the theoretical and practical framework for the critical reading of scientific articles in the biomedical field, as well as basic skills to correctly and eloquently present the protocols and results obtained in their own studies and research.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	Understanding and integration of all theoretical concepts Knowledge of bibliographical references	Multiple choice test	100
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	-	-	0

Minimal performance standards:
• The ability to organize and represent relevant data according to the needs of a scientific study or experiment
• The ability to correctly present the statistical protocol and its results in a scientific article
• The ability to formulate correct and pertinent conclusions based on statistical results

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Olah Peter	30 de minute după fiecare curs / activitate practică

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department:
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: The evolution of drug discovery and clinical trials			
2.2 Course coordinator:			
2.3 Practical activities coordinator(s):			
2.4 Year of study: II	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular:
4.2 competency:

5. Conditions

5.1 for lectures:
5.2 for practical activities:

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective:
7.2 Specific objectives:

8. Learning outcomes

8.1 Knowledge:

8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies:
9.2 transversal competencies:
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities			0
- lecture			0
Final evaluation			
- practical final exam			0
- theoretical final exam			0
Minimal performance standards:			

15. Appointment timetable (for students)

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Anesthesia and sedation in dental medicine			
2.2 Course coordinator: Șef l dr Iacob Alina			
2.3 Practical activities coordinator(s): Sef Lucr Dr Iacob Alina, Sef lucr Dr. Bereczki-Temistocle Despina, Sef lucr, Cosarca Adina, Sef lucr Dr Golu Vlad, Sef lucr Dr Petrovan Cecilia,			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 10	3.2 lecture: 4	3.3 practical activities: 6	
3.4 Total hours in curriculum: 70	3.2 lectures: 28	3.6 practical activities: 42	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			20
- supplemental documentation at the library, from specialized information portals and in the field			20
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			19
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			60
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: Basic knowledge in oral anatomy, basic understanding and communication skills

5. Conditions

5.1 for lectures: Lecture room with internet connection and projector.
5.2 for practical activities: Room with dental chairs, anesthetic substances (xilocaine, articaine), disposable cartridges, syringes and needles, gloves, sterile environment for injections exercise, sterile sets of instruments for oral cavity examination, emergency kit

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline 'Anesthesia and Sedation in Dental Medicine' is correlated with the European classification ESCO

(European Skills, Competences, Qualifications and Occupations), contributing to the development of specific skills for the occupation 'dental practitioner' (ISCO-08: 2261), in the field of diagnosis and treatment of dental diseases.
Competencies acquired within the discipline correspond to the ESCO descriptors regarding:
Performing Local Anesthesia: The ability to inject local anesthetics safely during dental procedures.
Knowledge of Pharmacology: Understanding the types of anesthetics (e.g., lidocaine, articaine, mepivacaine), their potency, latency (onset time), and toxicity.
Patient Safety & Monitoring: Ensuring the safety of healthcare users by continually monitoring blood pressure, heart rate, and oxygenation levels during the procedure.
Clinical Audit & Documentation: Conducting clinical audits and ensuring proper documentation of anesthesia records and discharge criteria.
Communication: Effectively discussing dental treatment and anesthesia options with patients and their escorts.

7. Objectives of the discipline

7.1 General objective:
Acquisition for the students of various dental and oral anesthesia techniques, solving loco-regional post-anesthetic accidents and complications.

7.2 Specific objectives:
Assimilation by students of the basic rules of asepsia, antisepsia and sterilization. Students will well-know the tools and substances and techniques used in loco-regional anesthesia. Basic knowledges about the substances and techniques used in general anesthesia and sedation.

8. Learning outcomes

8.1 Knowledge:
Ability to choose and perform different oral anesthetic procedures according to dental treatment that is needed to be provide in every situation, to prevent and treat unexpected situations.

8.2 Skills:
Advanced knowledge of English language (communication skills and understanding medical terminology), gentle handling of instruments and syringes.

8.3 Responsibility and autonomy:
At the end of module students would be able to indicate and perform specific dental anesthesia to each dental procedure they are going to do. They are able to calculate the therapeutic dose, to prevent and deal accidents and complications related to dental anesthesia procedures.

9. Specific competencies acquired

9.1 professional competencies:
Acquiring knowledge about performing and indications for different techniques of dental/oral anesthesia, and management of accidents and complications in each situation

9.2 transversal competencies:
The ability to assess the indication of dental anesthesia for different treatment plans according to clinical findings and to integrate it with a multidisciplinary approach of a patient with specific condition.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Anesthesia - Definitions. History. Particularities of Anesthesia in Dentistry and OMF Surgery. Classification of anesthetic methods used in Dentistry and Oral and Maxillo-facial Surgery	Multimedia and oral presentation	2	discussions	NA
2	The purpose of local anesthesia techniques used in Dentistry. The nervous impulse transmission of pain. Properties of the ideal local anesthetic solution. The secondary actions of local anesthetics.	Multimedia and oral presentation	2	discussions	NA
3	Anatomy of the trigeminal nerve.	Multimedia and oral presentation	2	discussions	NA

4	Techniques of anesthesia in the upper jaw	Multimedia and oral presentation	2	discussions	NA
5	Techniques of anesthesia in the lower jaw	Multimedia and oral presentation	2	discussions	NA
6	Local anesthetic solutions – Classification. Pharmacology	Multimedia and oral presentation	2	discussions	NA
7	Additives (and vasoconstrictors) in local anesthetic solutions (Primary and secondary side effects)	Multimedia and oral presentation	2	discussions	NA
8	Local accidents of dental / oral anesthesia	Multimedia and oral presentation	2	discussions, case presentation	NA
9	Systemic complication of dental / oral anesthesia	Multimedia and oral presentation	2	discussions, case presentation	NA
10	Patients at risk	Multimedia and oral presentation	2	discussions	NA
11	Local anesthesia in children	Multimedia and oral presentation	2	discussions, case presentation	NA
12	General practical aspects	Multimedia and oral presentation	2	discussions	NA
13	General anesthesia – general aspects, particularities, indications in Dentistry and Oral and Maxillo-facial Surgery.	Multimedia and oral presentation	2	discussions	NA
14	Recap	Multimedia and oral presentation	2	discussions, case presentation	NA

Bibliography

1. JA Baart, HS Brand: Local Anaesthesia in Dentistry. Wiley-Blackwell - 2009
2. Iacob Alina and B. Bogozi, A. Coșarcă, A. Ormenișan, C. Petrovan, S. Comișel, D. Szava, R. Grigoraș: Practical Locoregional Anesthesia In Dentistry And Oral Surgery (Tehnici de anestezie loco-regională în Medicina Dentară și Chirurgia Orală) - Ed. University Press, Tg-Mureș, 2018
3. Iacob Alina, Petrovan Cecilia: Anestezia loco-regională în medicina dentară și chirurgia oromaxilo- facială. Indreptar de lucrări practice pentru studenţii anului III Medicină Dentară – Tg-Mureș, 2011
4. Petrovan Cecilia, Iacob Alina: Anestezie și sedare în medicina dentară și chirurgia oromaxilofacială. Curs litografiat pentru studenţii anului III Medicină Dentară – Tg-Mureș, 2011
5. Bucur A., Navarro C.V., Lowry J., Acero J.: Compendiu de chirurgie oro-maxilo-facială, vol. 1, 2025

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Anatomia nervului trigemen - arcada superioară și inferioară. Recapitulare	Presentare orală și multimedia	3	discuții	NA
2	Pregătirea instrumentarului și materialelor necesare efectuării diferitelor tehnici anestezice. Pregătirea pacientului	Presentare orală și multimedia	3	discuții, exemplificări	NA
3	Evaluarea noțiunilor de anatomie	CBL	3	discuții, exemplificări	NA
4	Tehnici anestezice - anestezia plexală la arcada superioară	Demonstrații practice	3	exerciții practice	NA
5	Tehnici anestezice - anestezia plexală la arcada inferioară	Demonstrații practice	3	exerciții practice	NA
6	Tehnici anestezice - anestezia nervului lingual, anestezia planșeului oral	Demonstrații practice	3	exerciții practice	NA
7	Tehnici anestezice - anestezia teritoriului palatinal	Demonstrații practice	3	exerciții practice	NA
8	Tehnici anestezice - anestezia nervului / teritoriului bucal	Demonstrații practice	3	exerciții practice	NA
9	Tehnici anestezice - anestezia nervului alveolar inferior (mandibular block)	Demonstrații practice	3	exerciții practice	NA

10	Exersarea diferitelor tehnici anestezice dentar / orale	CBL	3	exerciții	NA
11	Tehnici anestezice - anestezia la tuberozitate	Demonstrații practice	3	exerciții practice	NA
12	Tehnici anestezice - anestezia nervului infraorbitar	Demonstrații practice	3	exerciții practice	NA
13	Exersarea diferitelor tehnici anestezice dentare/ orale	Demonstrații practice	3	exerciții practice	NA
14	Recapitulare	Demonstrații practice	3	exerciții	NA

Bibliography

1. Hans Evers, Glenn Haegerstam. Introduction to Dental Local Anaesthesia
2. JA Baart,HS Brand: Local Anaesthesia in Dentistry. Wiley-Blackwell - 2009
3. Iacob Alina, Petrovan Cecilia: Anestezia loco-regională în medicina dentară și chirurgia oromaxilo- facială. Indreptar de lucrări practice pentru studenţii anului III Medicină Dentară – Tg-Mureș, 2011
4. Iacob Alina and B. Bogozi, A. Coșarcă, A. Ormenișan, C. Petrovan, S. Comișel, D. Szava, R.Grigoraș: Practical Locoregional Anesthesia In Dentistry And Oral Surgery (Tehnici de anestezie loco-regională în Medicina Dentară și Chirurgia Orală) - Ed. University Press, Tg-Mureș, 2018
5. Bucur A (sub redacția) - Compendiu de Chirurgie oro-maxilo-facială, vol 1, București, 2025

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

At the end of the module each student must know to perform basic techniques of local and loco-regional anesthesia in the oral cavity, in terms to respect the rules, to choose the appropriate dosage and indications, to solve local accidents and complications. Lack of knowledge of local anesthesia in dentistry, involves the inability of performing dental treatments which are necessary for all dental patients.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Correlation between theoretical and practical information Capacity of performing practical work	validation of the practical activities during the module The mean of the CBL - 20% Performing of local anesthesia procedures - 10% (performing a minimum 4 injections)	30
- lecture	--	-	0
Final evaluation			
- practical final exam	Correlation between theoretical and practical information Capacity of performing practical dental anesthesia techniques	Oral examination based on practical scenarious	20
- theoretical final exam	Understanding and integration of all theoretical concepts in daily activity Knowing of bibliographical references	Written (summative) test sustained at UNIX examination center - multiple choice questions	50

Minimal performance standards:
History taking, a complete and correct clinical examination as well as to establish an initial basic diagnosis.
Choosing an individualized therapeutic plan (choice of anesthetic solution depending on the general status of the patient) and performing basic therapies in case of some accidents.
Each student has to perform a minimum of 4 different anesthetic procedure:
The grade for written test – minimum 5; less than 5 = failed exam;
The grade for practical exam – minimum 5; less than 5 = failed exam;
Final grade – minimum 5; less than 5 = failed exam;
Attendance to practical activities of the discipline is mandatory. Important number of unexcused absences from classes and more than 2 absences/module for practical classes will not give the student the right to participate in the semester examination session.
The recuperation of any absence will be performed in pre-session depending of the teachers schedule.
Additional absences are permitted during student scientific events or other specified situations.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

ability to perform different techniques of oral anesthesia according to clinical situations. At least 6 different anesthetic procedures performed.

15. Appointment timetable (for students)

Șef l dr Iacob Alina	30 de minute după ora de curs

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Internal medicine			
2.2 Course coordinator: Prof dr Tilinca Mariana-Cornelia			
2.3 Practical activities coordinator(s): Asist univ Rezmuves Maria Gabriela			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8	3.2 lecture: 4	3.3 practical activities: 4	
3.4 Total hours in curriculum: 56	3.2 lectures: 28	3.6 practical activities: 28	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			24
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			74
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Video projector, PC computer
5.2 for practical activities: Video projector, PC computer, case presentation, laboratory results interpretation

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline Internal Medicine contributes to the development of the competencies defined within the ESCO framework for occupations relevant to the study program, by developing knowledge, skills and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective: Understanding the basic notions regarding the diagnosis and therapy of cardiovascular, hepatic, digestive, hematological and metabolic diseases
7.2 Specific objectives: Understanding the risk factors for different diseases, and the notions of their medical management control, the pharmacological and interventional methods of therapy for various medical conditions

8. Learning outcomes

8.1 Knowledge: Acquiring the basic learning concept regarding the diagnosis and treatment algorithm in internal medicine Developing a complex and individualized treatment plan based on clinical examination, case presentation, invasive and non-invasive paraclinical explorations.
8.2 Skills: Acquiring the basic learning concept regarding the clinical examination of the patient with cardiovascular, digestive, renal, pulmonary and haematological diseases
8.3 Responsibility and autonomy: Acquiring the basic learning concept of the communication with the patient and the norms of professional and medical ethics in the relationship physician-patient-family Preparing the patient for non-invasive and invasive investigations

9. Specific competencies acquired

9.1 professional competencies: Acquiring the basic learning concept regarding the diagnosis and treatment algorithm in internal medicine Developing a complex and individualized treatment plan based on clinical examination, case presentation, invasive and non-invasive paraclinical explorations; Acquiring the basic learning concept regarding the clinical examination of the patient with cardiovascular, digestive, renal, pulmonary and haematological diseases Acquiring the basic learning concept of the communication with the patient and the norms of professional and medical ethics in the relationship physician-patient-family Preparing the patient for non-invasive and invasive investigations
9.2 transversal competencies: Disease state identification and accurately diagnosing of patients with dental complains. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Acute Tracheobronchitis. COPD. Asthma. Pneumonia	oral, multimedia presentations	2	-	dyspnoea
2	Lung abscess. Pulmonary tuberculosis. Pleurisy and pleural effusion. Pneumothorax. Lung cancer	oral, multimedia presentations	2	-	dyspnoea
3	Mitral stenosis. Mitral valve regurgitation. Aortic stenosis. Aortic regurgitaion. Ischemic heart disease. Stable angina pectoris. Unstable angina. Acute myocardial infarction	oral, multimedia presentations	2	-	chest pain
4	Infective endocarditis. Pericarditis. Cardiac tamponade. Myocarditis. Cardiomyopathies. Hypertension. Conduction and rhythm disorders. Heart failure. Acute pulmonary oedema. Cardiogenic shock. Cardiorespiratory resuscitation	oral, multimedia presentations	2	-	chest pain

5	Diseases of Esophagus. Gastoduodenal Ulcer. Gastric cancer. Diseases of the operated stomach. Inflamatory bowel disease	oral, multimedia presentations	2	=	abdominal pain. abdominal distension
6	Coloreclal cancer. Chronic hepatitis. Liver cirrhosis. Cholecystitis. Acute and chronic pancreatitis. Cancer of the head of the pancreas	oral, multimedia presentations	2	-	abdominal pain. abdominal distension
7	Glomerulopathies. Acute nephritic syndrome. Nephrotic syndrome	oral, multimedia presentations	2	-	dysuria
8	Urinary tract infections. Acute and chronic renal failure	oral, multimedia presentations	2	-	dysuria
9	Anemia. Leukemia	oral, multimedia presentations	2	-	anemia
10	Polycythemia Vera. Primary Myelofibrosis	oral, multimedia presentations	2	-	anemia
11	Diabetus Mellitus	oral, multimedia presentations	2	-	acid-base imbalance
12	Complications of Diabetus Mellitus. Treatment of Diabetus Mellitus	oral, multimedia presentations	2	-	acid-base imbalance
13	Obesity	oral, multimedia presentations	2	-	Acid-base imbalance
14	Lipid Disorders. Hyperuricemia	oral, multimedia presentations	2	-	acid-base imbalance

Bibliography

1. Tilinca M.C., Mureșan S., Schmiedt R.A., Murariu E. Internal Medicine for dentistry students. Editura University Press Târgu Mureș, 2021, 125 pg, ISBN 978-973-169-703-1
2. Kumar and Clark's Clinical Medicine, 10th edition 2021, Elsevier
3. Crispian Scully - Scully's Medical Problems in Dentistry 2014, Elsevier

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Clinical case presentation - Diseases of the respiratory system	multimedia presentations, clinical cases	2	-	dyspnoea
2	Clinical case presentation - Diseases of the respiratory system	multimedia presentations, clinical cases	2	-	dyspnoea
3	Clinical case presentation - Diseases of the cardiovascular system	multimedia presentations, clinical cases	2	-	chest pain
4	Clinical case presentation- Diseases of the cardiovascular system	multimedia presentations, clinical cases	2	-	chest pain
5	Clinical case presentation - Diseases of the dygestive system	multimedia presentations, clinical cases	2	-	abdominal pain
6	Clinical case presentation - Diseases of the dygestive system	multimedia presentations, clinical cases	2	-	abdominal pain
7	Clinical case presentation - Diseases of the urinary system	multimedia presentations, clinical cases	2	-	dysuria
8	Clinical case presentation - Diseases of the urinary system	multimedia presentations, clinical cases	2	-	dysuria
9	Clinical case presentation - Blood diseases	multimedia presentations, clinical cases	2	-	anemia
10	Clinical case presentation - Blood diseases	multimedia presentations, clinical cases	2	-	anemia
11	Clinical case presentation - Methabolic diseases	multimedia presentations, clinical cases	2	-	metabolic disorders
12	Clinical case presentation - Methabolic diseases	multimedia presentations, clinical cases	2	-	metabolic disorders
13	Clinical case presentation - Metabolic diseases	multimedia presentations, clinical cases	2	-	metabolic disorders
14	Clinical case presentation - Metabolic diseases	multimedia presentations, clinical cases	2	-	metabolic disorders

Bibliography

1. Tilinca M.C., Mureșan S., Schmiedt R.A., Murariu E. Internal Medicine for dentistry students. Editura University Press Târgu Mureş, 2021, 125 pg, ISBN 978-973-169-703-1
2. Kumar and Clark's Clinical Medicine, 10th edition 2021, Elsevier
3. Crispian Scully - Scully's Medical Problems in Dentistry 2014, Elsevier
4. The material presented during the practical activities

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the subject is corroborated with the need to acquire the basic notions regarding the assessment of comorbidities of patients.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	clinical case	case presentation	30
- lecture	0	0	0
Final evaluation			
- practical final exam	case presentation	oral	20
- theoretical final exam	exam	evaluare pe platforma UNIX	50

Minimal performance standards:
Obtaining at least 50% of the multiple choice test
Performing the anamnesis of the complete clinical examination, as well as some basic diagnostic operations, the request of the appropriate complementary examinations, formulating a positive and differential diagnosis;
Performing an individualized therapeutic plan

13. Must seen clinical situation list

Nu e cazul

14. Clinical / practical abilities

Nu e cazul

15. Appointment timetable (for students)

Prof dr Tilinca Mariana-Cornelia	30 de minute după fiecare curs / activitate practică

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Technology of dental prostheses (1)			
2.2 Course coordinator: Șef l dr Borș Andrea-Izabella			
2.3 Practical activities coordinator(s): Bors Andrea Izabella			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12	3.2 lecture: 4	3.3 practical activities: 8	
3.4 Total hours in curriculum: 84	3.2 lectures: 28	3.6 practical activities: 56	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Lecture hall equipped with multimedia equipment.
5.2 for practical activities: Specific dental laboratory, working tables, instruments, equipment and various dental materials necessary for the working stages in manufacturing dental prostheses.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

1.

7. Objectives of the discipline

7.1 General objective:
The students will acquire the knowledge on specific technological procedures performed in dental laboratory to achieve dental prostheses in view of prosthetic restorations (C4).

7.2 Specific objectives:
Acquiring theoretical and practical knowledge on the procedures and sequencing for obtaining prosthetic works.
-Acquiring the ability to conceive indirect fixed restorations.
-Acquiring basic skills to perform or correct the laboratory phases in the manufacture of dental prostheses.

8. Learning outcomes

8.1 Knowledge:
La finalizarea disciplinei, studentul:

Enumeră etapele principale ale realizării protezelor dentare parțiale și totale.

Explică principiile biomecanice care stau la baza proiectării protezelor acrilice și scheletate.

Descrie materialele utilizate în tehnologia protezelor dentare și clasifică proprietățile lor fizice, chimice și tehnologice.

Recunoaște defecte tehnice ale protezelor în diferite stadii de lucru și distingue cauzele posibile.

Compară tehnicile convenționale cu cele digitale (CAD/CAM, printare 3D) în realizarea protezelor.

Sumarizează indicațiile și contraindicațiile diferitelor tipuri de proteze mobile.

8.2 Skills:
Aptitudini cognitive

Studentul, la finalul disciplinei:

Selectează și grupează informații relevante pentru proiectarea și realizarea unei proteze totale sau parțiale.

Identifică soluții pentru erorile apărute în diferite etape ale procesului tehnologic și propune planuri de rezolvare.

Aplică teoria biomecanică și materialele studiate în rezolvarea situațiilor tehnico-clinice specifice.

Interpretează relațiile de cauzalitate dintre erorile tehnice și manifestările clinice ale pacientului.

Formulează puncte de vedere argumentate în evaluarea unei proteze sau a unei proceduri tehnologice.

Anticipează etapele necesare realizării unei lucrări protetice adecvate și planifică procesul tehnologic.

Aptitudini practice

Studentul:

Aplică în mod corect tehnicile de amprentare, ambalare, polimerizare, ajustare și finisare, conform standardelor tehnologice.

Dezvoltă și realizează machete și prototipuri de proteze, utilizând instrumentar și materiale specifice.

Adaptează tehnicile tradiționale sau digitale la situații clinice diferite, optimizând rezultatul final.

Concepe și produce modele de lucru și machete protetice care respectă principiile funcționale și estetice.

Combină diferite metode și materiale pentru a obține o proteză funcțională, stabilă și estetică.

Evaluează critic rezultatele obținute și formulează concluzii asupra experimentelor sau etapelor tehnice realizate.

8.3 Responsibility and autonomy:
La finalul disciplinei, studentul:

Analizează și compară diferite tehnici și materiale utilizate în realizarea protezelor, argumentând alegerea soluției potrivite pentru o situație dată.

Identifică punctele forte și punctele slabe ale etapelor tehnologice realizate și formulează concluzii privind calitatea rezultatului final.

Verifică corectitudinea execuției fiecărei faze tehnologice și validează conformitatea cu standardele profesionale.

Prioritizează sarcinile tehnice în funcție de complexitatea lucrării și de resursele disponibile, demonstrând autonomie în organizarea procesului de lucru.

Aplică principii de etică și deontologie profesională, manifestând responsabilitate în manipularea materialelor, utilizarea echipamentelor și respectarea normelor de siguranță.

Interpretează și argumentează impactul tehnologic al soluțiilor adoptate asupra funcționalității și durabilității protezelor.

Demonstrează autonomie în gestionarea timpului de lucru și în rezolvarea situațiilor tehnico-practice neprevăzute.

Manifestă colaborare eficientă cu colegii și cadrele didactice în cadrul activităților practice, asumându-și responsabilitatea pentru rolul său în echipă.

Selectează și utilizează surse bibliografice relevante pentru îmbunătățirea performanței practice și pentru adaptarea la noi tehnologii din domeniu (inclusiv digitalizare CAD/CAM și printare 3D).

Demonstrează receptivitate la contexte noi de învățare și la implementarea tehnologiilor emergente în practica protetică.

Dacă vrei, pot integra Cunoștințele – Aptitudinile – Responsabilitatea și autonomia într-o formă co

9. Specific competencies acquired

9.1 professional competencies:
Acquiring theoretical and practical knowledge using their own experiences in the process of achieving the technologies used in current practice for manufacturing the fixed dental prostheses.
- Acquiring theoretical and practical knowledge regarding the achievement of dental prostheses through various technologies and the appropriate use of the dental materials in this process.
-Students, these future doctors, must know thoroughly and accurately all stages of manufacturing the partial, fixed dental prosthesis, both, the clinical and laboratory phases, therefore they will be able to conceive a correct design of these restorations.

9.2 transversal competencies:
The dentist's supporting team aids in providing oral health services: the students will understand the need for proper and orderly communication with both, dental technicians and dentist or teacher.
The complexity of prosthodontics as well as the scientific and technological progress, makes the field of technology of dental prostheses absolutely necessary to be studied separately, in order to remain an well-defined discipline.
Marketing and the dental laboratory management through the knowledge of equipping, techniques, classical and modern technologies it will help to achieve appropriate dental prosthesis.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Fixed partial dentures: definitions, basic concepts, classifications, manufacturing technologies.	Oral and multimedia presentation.	2	Two hours courses in english.	-
2	Dental crowns. The technology for manufacturing metallic crowns.	Oral and multimedia presentation.	2	Two hours courses in english.	-
3	Dental crowns. The technology for manufacturing polymer-based crowns.	Oral and multimedia presentation.	2	Two hours courses in english.	-
4	Dental crowns. The technology for manufacturing mixed metal-polymer crowns.	Oral and multimedia presentation.	2	Two hours courses in english.	-
5	Dental crowns. The technology for manufacturing porcelain-fused-to-metal dental crowns. (PFM's)	Oral and multimedia presentation.	2	Two hours courses in english.	-

6	Dental crowns. The technology for manufacturing full ceramic crowns.	Test	2	Written test.	-
7	Inlays, onlays manufacturing technologies.	Oral and multimedia presentation.	2	Two hours courses in english.	-
8	Partial crowns manufacturing technologies. Zirconia in technology of dental prosthesis. CAD/ CAM technologies.	Oral and multimedia presentation.	2	Two hours courses in english.	-
9	Dental posts and cores. Technological procedures.	Oral and multimedia presentation.	2	Two hours courses in english.	-
10	Dental bridges: classification, parts and procedure.	Test	2	Written test.	-
11	Manufacturing dental bridges depending on position of missing tooth replaced.	Oral and multimedia presentation.	2	Two hours courses in english.	-
12	Methods and materials for manufacturing pontics.	Oral and multimedia presentation.	2	Two hours courses in english.	-
13	Technological procedures for manufacturing temporary dental bridges.	Oral and multimedia presentation.	2	Two hours courses in english.	-
14	Particular dental bridges.	Oral and multimedia presentation.	2	Two hours courses in english.	-

Bibliography
Required bibliography:
1. Bors A, Szekely M, Molnar-Varlam C, Camarasan A. : Technolgy of single unit dental prosthesis, Editura University Press, Tîrgu-Mureș, 2022.
2.Arthur R. G. Cortes. : Digital Dentistry: A Step-by-Step Guide and Case Atlas, ISBN: 978-1-119-85199-8 May 2022, Wiley-Blackwel

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Presentation of discipline rules for students, evaluation methods and safety rules in the dental office and dental laboratory.	Oral and written presentation.	4	Students will sign the acknowledgment. They will fill in the laboratory report (LR).	-
2	The technology of single unit fixed dental prosthesis.	Practical demonstrations. Taking impressions, mixing plaster and cast pouring.	4	Students will take impressions on phantoms with teeth prepared for all types of single unit fixed dental prosthesis. They will be graded (LR).	-
3	Intracoronal and partial crowns: wax pattern, spruing, investing, casting, divesting, finishing, polishing.	Practical demonstrations.	4	Students will manufacture the wax pattern for inlays and onlays. They will be graded (LR).	-
4	The metallic crown.	Practical demonstration. Manufacturing wax pattern for metallic crown.	4	Individual waxing the pattern for metallic crown. Grading (LR).	-
5	The acrylic crown.	Practical demonstration. Manufacturing wax pattern for acrylic crown.	4	Individual waxing the pattern for acrylic crown. Grading (LR).	-
6	The mixed metal-polymer crowns.	Practical demonstration. Manufacturing wax pattern for acrylic veneered metallic crown.	4	Individual waxing the pattern for acrylic veneered metallic crown. Grading (LR).	-
7	The mixed metal-polymer crowns.	Practical demonstration. Manufacturing the C + B acrylic veneer, direct modeling and thermo-baro polymerization.	4	Individual manufacturing the C + B acrylic veneer, direct modeling and thermo-baro polymerization Grading (LR).	-

8	Post and cores and substitution crowns	Practical demonstration. Manufacturing wax pattern for post and core and substitution crown.	4	Individual waxing the pattern for post and core and substitution crown. Grading (LR).	-
9	The full ceramic and porcelain fused to metal crowns.	Multimedia presentation of technologies for manufacturing all-ceramic and porcelain fused to metal crowns.	4	Skills written in LR.	-
10	Technology of fixed dental prosthesis.	Practical demonstration.	4	Students will take impressions on partial edentulous maxillary and mandibular phantoms and will pour impressions. Grading (LR).	-
11	Dental bridges with different pontics for different oral topographic areas. The esthetic bridge.	Practical demonstration.	4	Waxing the pattern for an anterior maxillary bridge with modified ridge lap contact. Grading (LR).	-
12	Dental bridges with different pontics for different oral topographic areas. The acrylic veneered metallic bridge.	Practical demonstration.	4	Waxing the pattern for a lateral maxillary bridge with ovate contact. Grading (LR).	-
13	Dental bridges with different pontics for different oral topographic areas. The metallic bridge.	Dental bridges with different pontics for different oral topographic areas. The metallic bridge. Practical demonstration	4	Waxing the pattern for a lateral mandibular sanitary bridge. Grading (LR).	-
14	Revision.	Test	4	Seminar fixed dental prosthesis.	-

Bibliography

1. Bors A, Szekely M, Molnar-Varlam C, Camarasan A. : Technolgy of single unit dental prosthesis, Editura University Press, Tîrgu-Mureș, 2022.
2. Silas Duarte Jr. Quintessence of Dental Technology 2016, Quintessence Book, 2016.
3. Molnar-Varlam C., Grozescu V., Borș A. : Proteze dentare fixe - aspecte clinico-tehnice, Editura University Press, Tîrgu-Mureș, 2015.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Manufacturing one of the steps of realizing prosthetic works, acquired during the semester.	Activity performed in the form of test and exercises during the semester.	20
- lecture	Knowledge of the theoretical aspects through two tests.	Classification based on individual test.	10
Final evaluation			
- practical final exam	Manufacturing one of the steps of realizing prosthetic works, acquired during the semester and one question from the semester material.	Practical exam.	20
- theoretical final exam	Knowledge of the theoretical aspects of the course topics.	Written exam as a test at UNIX platform.	50

Minimal performance standards:
Obtaining the minimum mark of 5 (five) for each component of the assessment: to know the basics of technology of dental prostheses, not more than 20% unjustified absences and recovered from practical work, to realize the

phases of work of basic technical stages.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Borș Andrea-Izabella	Marti 11-12

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Oral-dental prevention (Preventive dentistry) (2)			
2.2 Course coordinator: Șef l dr Bechir Farah			
2.3 Practical activities coordinator(s): Sef l dr Bechir Farah			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12		3.2 lecture: 4	3.3 practical activities: 8
3.4 Total hours in curriculum: 84		3.2 lectures: 28	3.6 practical activities: 56
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: multimedia equipment
5.2 for practical activities: dental units, ultrasonic scalers, dental materials

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Develops competencies in scaling, prophylaxis, sealing, oral health assessment, patient communication.

7. Objectives of the discipline

7.1 General objective:

Evidence-based approach to oral disease prevention, instilling a holistic, patient-centered view of oral health.
7.2 Specific objectives: Manage and prevent oral and periodontal conditions, prioritise patient education and engage in community-based prevention programs.

8. Learning outcomes

8.1 Knowledge: Disease state identification and accurately diagnosing dental condition(s). Technical parameters knowledge of dental units and ultrasonic scaler devices, manual instruments.
8.2 Skills: Diagnosis,evolution and clinical examination of patients with calculus deposits and periodontal conditions. Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies.
8.3 Responsibility and autonomy: Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

9. Specific competencies acquired

9.1 professional competencies: The student must be able to know the different techniques of professional hygiene and supra- and subgingival scaling as well as the techniques of sealing pits and fissures.
9.2 transversal competencies: The student must know the rules of occupational safety, the risks of possible nosocomial infections and develop the ability to work in a team with colleagues, doctors and nurses.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Dental calculus: definition, classification, structure	Oral and multimedia presentation	2	-	-
2	Dental calculus: formation, attachment	Oral and multimedia presentation	2	-	-
3	Dental calculus: relationship with marginal periodontium, pathogenicity	Oral and multimedia presentation	2	-	-
4	Supragingival manual scaling: instruments, techniques	Oral and multimedia presentation	2	-	-
5	Subgingival manual scaling: instruments, techniques	Oral and multimedia presentation	2	-	-
6	Sonic and ultrasonic scaling: general principles, indications and contraindications	Oral and multimedia presentation	2	-	-
7	Ultrasonic scaling: technique, accidents and complications	TBL session	2	-	-
8	Materials for fissure and pit sealing	TBL session	2	-	-
9	Sealing techniques and evaluation of sealing effectiveness	Oral and multimedia presentation	2	-	-
10	Halitosis	Oral and multimedia presentation	2	-	-
11	Acid dental erosion	Oral and multimedia presentation	2	-	-
12	Prophylaxis of oral malignant conditions	Oral and multimedia presentation	2	-	-
13	Reversible carious lesions	Oral and multimedia presentation	2	-	-

14	Dentin hypersensitivity. Prevention and treatment	Oral and multimedia presentation	2	-	-

Bibliography
L. Bereșescu, B. Petcu, F. Bechir. Preventive dentistry notions,University Press,Târgu Mureş, 2019
Splieth, C. Innovation in Preventive Dentistry; Quintessence Publishing: Batavia, IL, USA, 2021

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Demonstration of supragingival manual scaling technique	Practical demonstrations	4	-	-
2	Demonstration of subgingival manual scaling technique	Practical demonstrations	4	-	-
3	Performing manual scaling on patients	Practical demonstrations	4	-	-
4	Performing manual scaling on patients	Practical demonstrations	4	-	-
5	Demonstration of ultrasonic scaling technique	Practical demonstrations	4	-	-
6	Performing ultrasonic scaling on patients	Practical demonstrations	4	-	-
7	Performing ultrasonic scaling on patients	Practical + assessment (CBL session)	4	-	-
8	Performing ultrasonic scaling on patients	Practical demonstrations	4	-	-
9	Performing ultrasonic scaling on patients	Practical demonstrations	4	-	-
10	Performing ultrasonic scaling on patients	Practical demonstrations	4	-	-
11	Demonstration of sealing techniques	Practical demonstrations	4	-	-
12	Performing dental sealants on patients	Practical demonstrations	4	-	-
13	Performing dental sealants on patients	Practical demonstrations	4	-	-
14	Performing a complete oral prophylaxis session on a patient	Practical demonstrations	4	-	-

Bibliography
L. Bereșescu, B. Petcu, F. Bechir. Preventive dentistry notions,University Press,Târgu Mureş, 2019
Splieth, C. Innovation in Preventive Dentistry; Quintessence Publishing: Batavia, IL, USA, 2021

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The curriculum aligns with community needs and employer expectations by training students in modern, evidence-based preventive practices that improve community oral health and clinical effectiveness of treatments.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Correct execution, workflow, involvement	Continuous observation	10
- lecture	Theoretical knowledge	Multiple-choice test	20
Final evaluation			
- practical final exam	Correct execution, hygiene & safety	Direct practical exam	10
- theoretical final exam	Knowledge accuracy & completeness	MCQ written exam	60

Minimal performance standards:
Minimum grade 5

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Bechir Farah	Monday 11-12

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Occlusology			
2.2 Course coordinator: Conf dr Biriș Carmen-Ioana			
2.3 Practical activities coordinator(s):			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			24
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			74
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: Identification and explanation of physical phenomena
7.2 Specific objectives: Usage of some practical methods and physical tools of medical investigation.

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: aplicarea cuostintelor acumulate in toate domeniile stomatologiei
9.2 transversal competencies: depistarea si diagnosticarea corecta, urmata de un plan de tratament corespunzator a afectiunilor sistemului oro-facial cu consecinte asupra intregului organism
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to the physiology of the stomatognatic system	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
2	The oro facial system(OFS), particularities and means of self-defense	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
3	Esentials functions of SOF	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
4	Anthropometric points and plans	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
5	Determinants of occlusion	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
6	The anterior determinant of occlusion(dental)	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
7	The posterior determinant of occlusion(articular). The temporo mandibular joint(TMJ)- components	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
8	The neuromuscular functional determinant. Masticatory muscles	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-

9	References positions of the mandible(Rest position, Maximum intercuspation, Centric Relation)	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
10	test	-	2	-	-
11	Mandibular Kinematic. Analysis of mandibular movements in sagittal,transversal,frontal planes. Functional occlusion	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
12	Occlusal concepts and theories. Gnathological aspects in prosthetic treatment	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
13	Principles and types of articulators and cast holders. Face bows and jaw registration	lecture, systematic and interactive display of information, conversation,power point presentation	2	-	-
14	test	-	2	-	-
Bibliography Occlusion in Prosthodontic; Carmen Ioana Biris, Diana Cerghizan, Janosi Kinga Maria					

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Presentation of the discipline, of the dental equipment. Training on occupational safety in the dental office. Introductory notions of patient examination.	Presentation	2	-	-
2	2 Impression of dental arches. Casting models.	Presentation	2	-	-
3	3 Impression of dental arches. Casting models.	Presentation	2	-	-
4	Static examination of the occlusion in the three planes. Occlusion curves.	CBL. Study model analysis	2	-	-
5	Static examination of the occlusion in the three planes. Occlusion curves.	Study model analysis	2	-	-
6	Clinical examination in occlusology. Case presentation.	Presentation and practical applications.	2	-	-
7	Clinical examination of the musculoskeletal system of the oro-facial system (OFS).	Practical application.	2	-	-
8	Clinical examination of the temporomandibular joint (TMJ)	Practical application.	2	-	-
9	Clinical examination of the fundamental positions of the mandible. Resting position, centric relationship (CR) and maximum intercuspation (MI). The landmarks of point-centric, long-centric and freedom in centric.	CBL. Practical application.	2	-	-
10	Clinical examination of mandibular kinematics in the three spatial planes (sagittal, transversal, horizontal). Recording of the intermaxillary relations with the help of the facial bow.	Practical application.	2	-	-
11	Clinical examination of mandibular kinematics in the three spatial planes (sagittal, transversal, horizontal). Recording of the intermaxillary relations with the help of the facial bow.	Practical application.	2	-	-
12	Mounting the models in the articulator.	Practical application.	2	-	-
13	Occlusal rebalancing therapy by selective grinding.	CBL. Practical application.	2	-	-
14	Occlusal rebalancing therapy by selective grinding.	Practical application.	2	-	-
Bibliography 1.Okeson JP: Management of Temporomandibular Disorders and Occlusion. 7th Edition, Mosby, 2012 2.PA notes 3 Carmen Ioana Biris, Diana Cerghizan, Janosi Kinga Maria: Occlusion Prosthodontic, University Press, Tg. Mures, 2020					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

-

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	Homework and home experiments	Grading of homeworks and home experiments reports.	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Understanding and integration of all theoretical concepts.	Written/Online examination	70
Minimal performance standards: The minimum passing grade for theoretical exam is 5/10 (five/ten)			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Biriș Carmen-Ioana	

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Methodology of scientific research			
2.2 Course coordinator: Asist dr Răchită Anca			
2.3 Practical activities coordinator(s): Asist. dr. Anca Rachita			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4	3.2 lecture: 2	3.3 practical activities: 2	
3.4 Total hours in curriculum: 28	3.2 lectures: 14	3.6 practical activities: 14	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Această disciplină dezvoltă competențe precum: formularea întrebărilor de cercetare („conduct scientific research", „apply research methodology", „analyse data"); alegerea metodelor (calitative / cantitative), colectarea și analiza datelor, interpretarea rezultatelor, redactarea lucrărilor științifice si etica în cercetare. Aceasta disciplina dezvolta, in concordanta cu ESCO, competente analiticve si critice: „think analytically",

„evaluate information”, „interpret scientific data; competente digitale I („use ICT tools for data analysis”); competente de comunicare stiintifica - „write scientific publications”
„present research findings” - vizate prin redactarea lucrărilor și prezentări. MSR este foarte bine aliniată cu ESCO, deoarece dezvoltă competențe-cheie transversale (analiză, cercetare, comunicare), considerate esențiale în majoritatea ocupațiilor moderne.

7. Objectives of the discipline

7.1 General objective:
Scientific research has a big influence in university area. Applying the scientific research principles in medical area is a necessity given the structure of such University – 6 years with the possibility of admission to a PhD program. The essence of this course is the elaboration of an undergraduate thesis at the end of the studies.

7.2 Specific objectives:
Introduce students to techniques of clinical and epidemiological studies.
Learning required protocols to follow in medical research.
Methodology of the medical research studies.
Presentation of results and conclusions in writing (article) and oral (presentation rules).

8. Learning outcomes

8.1 Knowledge:
La finalul disciplinei, studentul va fi capabil să:

Explice conceptele fundamentale ale cercetării științifice: ipoteză, obiective, variabile, populație, eșantion.

Descrie principalele tipuri de studii medicale: observaționale, experimentale, clinice, epidemiologice.

Înțeleagă principiile etice în cercetarea medicală, inclusiv consimțământul informat și protecția datelor.

Recunoască metodele de colectare și analiză a datelor în cercetarea biomedicală.

Identifice criteriile de calitate ale unui articol științific.

8.2 Skills:
Capacitatea de a analiza structura unui studiu științific.

Abilitatea de a identifica erori metodologice sau interpretări incorecte.

Evaluarea critică a calității și credibilității dovezilor medicale.

Formularea unei întrebări de cercetare și a ipotezelor asociate.

Selectarea și aplicarea unui design de studiu adecvat.

Utilizarea tehnicilor de colectare a datelor (chestionare, interviuri, observație clinică).

Organizarea și gestionarea seturilor de date.

Alegerea metodelor statistice potrivite pentru tipul de date.

Interpretarea rezultatelor statistice din tabele și grafice.

Utilizarea unor programe sau instrumente simple de analiză (Excel, software statistic de bază).

8.3 Responsibility and autonomy:
Manifestă responsabilitate în planificarea și desfășurarea activităților de cercetare, respectând principiile etice și deontologice ale domeniului medical.

Lucrează autonom în elaborarea unei întrebări de cercetare, a ipotezelor și a unui mini-proiect de studiu.

Evaluează independent calitatea și relevanța informațiilor științifice, asumându-și deciziile metodologice adoptate.

Demonstrează disciplină și integritate în colectarea, analizarea și raportarea datelor.

Colaborează eficient în echipă, asumându-și roluri specifice și contribuind la realizarea unui proiect de cercetare.

Își recunoaște limitele profesionale și metodologice, solicitând sprijin sau feedback când este necesar.

9. Specific competencies acquired

9.1 professional competencies:
The student will need to know the main stages of evaluation and initiation of a specialized study
The student must be able to interpret the quality of a study / published scientific article
The student must be able to apply the knowledge gained in community practice, in initiating and conducting a community study, in dissemination of the obtained results and to assist local and national strategic programs

9.2 transversal competencies:
Oral and written communication skills with knowledge of the scientific oral presentation rules and the undergraduate thesis / PhD thesis structure
To respect the professional ethics by following the mandatory protocols used in medical research

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction in Methodology of medical scientificresearch-History, Generalities, Strategies and planning aresearch study	Oral, PowerPoint presentation	2	-	Immunisation
2	Steps of a research study: Study population and sample and Types and methods of data collection	Oral, PowerPoint presentation	2	-	Oedema, Bone malignancy
3	Steps of a research study: Research studies (descriptive studies)	Oral, PowerPoint presentation	2	-	Infant feeding
4	Steps of a research study: Research studies (Analytical studies, Randomized clinical study, Screening and diagnostic tests)	Oral, PowerPoint presentation	2	-	Malformations of lip/ palate
5	Steps of a research study: Data analysis and Displaying results	Oral, PowerPoint presentation	2	-	Oral disorders (inlcl.Caries)
6	Ethics in medical research	Oral, PowerPoint presentation	2	-	HIV
7	Research project	Individual and teamwork	2	-	Oral disorders (inlcl.Caries)

Bibliography
a) Mandatory
Power point presentations
Bacârea Vladimir, Ghiga Dana, Măruşteri Marius, Oláh Péter, Petrişor Marius. A Primer in Research Methodology and Biostatistics, University Press Tg. Mureş, 2014.

b) Optional
Uwe Flick. Introducing research methodology. A beginner's guide to doing a research project. SAGE Publications Ltd, London, 2011.
Christensen LB, Burke Johnson R, Lisa A. Turner. Research Methods, Design, and Analysis. Eleventh Edition, Pearson Education, Inc., 2011.
Kumar R. Research methodology a step-by-step guide for beginners. 3rd edition, SAGE Publications Ltd,London,2011.

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Online documentation, The structure of a scientific paper (Evaluation of a scientific article)	Oral, PowerPoint presentation	2	-	Immunisation
2	Cross sectional study - generalities and exercises	Oral, PowerPoint presentation, Practical exercises (pdf and excel files)	2	-	Asthma
3	Test (cross sectional study)	Multiple choice test on computer	2	-	Hypertension

4	Cohort study - generalities and exercises	Oral, PowerPoint presentation, Practical exercises (pdf and excel files)	2	-	Malformations of lip/palate
5	Case–Control study - generalities and exercises	Oral, PowerPoint presentation, Practical exercises (pdf and excel files)	2	-	Malformations of lip/palate
6	Screening and diagnostic tests - generalities and exercises	Oral, PowerPoint presentation, Practical exercises (pdf and excel files)	2	-	Hypoglycaemia
7	Test (research studies)	Multiple choice test on computer	2	-	Osteoporosis

Bibliography

a) Mandatory bibliography:
Power-point presentations
Bacârea Vladimir, Ghiga Dana, Măruşteri Marius, Olah Peter, Petrişor Marius. A primer in research methodology and biostatistics. University Press Târgu Mureş, ISBN: 978-973-169-285-2, 2014.
b) Optional bibliography:
Uwe Flick. Introducing research methodology. A beginner's guide to doing a research project. SAGE Publications Ltd, London, 2011.
Christensen LB, Burke Johnson R, Lisa A. Turner. Research Methods, Design, and Analysis. Eleventh Edition, Pearson Education, Inc., 2011.
Kumar R. Research methodology a step-by-step guide for beginners. 3rd edition, SAGE Publications Ltd, London,2011.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Knowing the steps of a research study
Knowing how to collect patients data for use in research studies
Knowledge of undergraduate thesis structure in order to develop an undergraduate thesis and a PhD thesis

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Correlation between theoretical and practical notions	Multiple choice test oncomputer	20
- lecture	Individual responses; Team responses; Responses motivation	Research project	10
Final evaluation			
- practical final exam	Correlation between theoretical and practical notions	Multiple choice test on computer	25
- theoretical final exam	Understanding and integration of all theoretical concepts	Multiple choice test	45

Minimal performance standards:
Minimal performance standards:
Enunciation of the steps of a research study
Medical research study classification
Methods of result presentation
Scientific paper structure
A grade of at least 5 both in practical and in theoretical examination.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Asist dr Răchită Anca	-

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Adhesive modern techniques in dentistry			
2.2 Course coordinator: Șef l dr Borș Andrea-Izabella			
2.3 Practical activities coordinator(s): Șef l dr Bors Andrea Izabella			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Signing in a minimum number of students (a group of 15-17 students). Lecture hall equipped with laptop and video projector, multimedia equipment.
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

1. Teaching and Learning Conditions ➤ Course

Signing in a minimum number of students (15–17 students/group).
Lecture hall equipped with laptop, video projector, and multimedia equipment.

ESCO alignment:

use digital technologies for teaching and learning
present scientific and medical information
apply teaching methods in healthcare education

➤ Practical Activity

(Not specified)

2. Professional Competences

➤ Theoretical knowledge of adhesive dentistry

ESCO alignment:

apply adhesive dental techniques
understand principles of dental biomaterials
use restorative dental materials

➤ Understanding adhesion mechanisms and adhesive systems

ESCO alignment:

analyze dental materials and their properties
evaluate bonding systems and techniques
understand physical and chemical processes in dentistry

➤ Application of minimally invasive adhesive techniques

ESCO alignment:

apply minimally invasive dental procedures
perform direct and indirect restorations
plan restorative treatments

➤ Clinical decision-making and treatment planning

ESCO alignment:

make clinical decisions in dentistry
develop treatment plans
apply evidence-based dentistry principles

➤ Achieving functional and aesthetic outcomes

ESCO alignment:

ensure functional performance of restorations
achieve aesthetic dental results
evaluate quality of restorative treatments

3. Transversal Competences

➤ Teamwork and collaboration

ESCO alignment:

collaborate in healthcare teams
communicate effectively in professional environments
support interprofessional cooperation

➤ Interactive and collaborative learning

ESCO alignment:

engage in active learning processes
participate in professional discussions
develop problem-solving and communication skills

4. General Objectives

To understand the basic concepts of modern adhesive dentistry techniques.

To develop the ability to apply and correlate theoretical knowledge in various clinical situations.

ESCO alignment:

apply dental procedures
integrate theoretical knowledge into clinical practice
5. Specific Objectives
➤ Description of adhesive concepts and methods

ESCO alignment:

explain dental procedures and techniques
understand clinical protocols
➤ Understanding composition and properties of adhesive systems

ESCO alignment:

evaluate dental biomaterials
analyze performance of adhesive systems
➤ Application of adhesive systems in clinical practice

ESCO alignment:

perform adhesive restorations
apply clinical protocols in restorative dentistry
ensure correct use of dental materials
Conclusion (recommended academic wording)

The discipline Modern Adhesive Techniques in Dentistry is aligned with the competencies defined by ESCO, supporting the development of essential professional skills in adhesive dentistry. It emphasizes minimally invasive approaches, evidence-based clinical decision-making, appropriate use of advanced adhesive systems, and the achievement of optimal functional and aesthetic outcomes in modern dental practice.

7. Objectives of the discipline

7.1 General objective:
-The student has to understand the basic concepts on the techniques used in adhesive dentistry.
-The student will learn to develop skills to apply the gained knowledge with an appropriate correlation in various clinical situations in which it is possible to use these methods.

7.2 Specific objectives:
-The student will be able to describe the concepts and methods used in modern adhesive techniques.
-The student will acquire the ability to understand different aspects of composition and properties of various adhesive systems which have implications for major applications in dentistry.
-Applications of theoretical knowledge on various adhesive systems to their use in dental practice.

8. Learning outcomes

8.1 Knowledge:
At the end of the course, the student:

Identifies the main concepts, mechanisms, and principles underlying adhesion in dentistry.

Enumerates the components, classifications, and generations of adhesive systems used in contemporary restorative procedures.

Recognizes the steps, materials, and protocols involved in both direct and indirect adhesive techniques.

Explains, in their own words, the chemical and mechanical principles that determine the effectiveness of dental adhesion.

Classifies adhesive systems based on composition, bonding strategy, and clinical indications.

Summarizes the scientific evidence regarding adhesive performance, bond degradation, and long-term clinical outcomes.

Compares different adhesive approaches (etch-and-rinse, self-etch, universal adhesives), distinguishing their advantages and limitations in various clinical contexts.

8.2 Skills:
At the end of the course, the student:

Applies theoretical principles of adhesion to select suitable adhesive systems for specific clinical situations.

Plans and prepares adhesive protocols according to the material used and the requirements of minimally invasive dentistry.

Identifies solutions to common bonding failures and proposes corrective strategies based on scientific evidence.

Develops technical skills in performing direct and indirect adhesive restorations on simulation models.

Adapts adhesive techniques to different restorative materials (composites, ceramics, hybrid materials) and tooth substrates (enamel, dentin, sclerotic dentin).

Formulates reasoned viewpoints about the selection of adhesive strategies in complex restorative scenarios.

Interprets causal relationships between adhesive composition, technique sensitivity, and clinical performance.

Anticipates potential complications in adhesive procedures and adjusts the clinical protocol accordingly.

8.3 Responsibility and autonomy:
At the end of the course, the student:

Analyzes and compares adhesive systems and techniques, forming justified and evidence-based conclusions about their clinical use.

Differentiates appropriate from inappropriate bonding procedures and identifies types of errors that compromise adhesion.

Verifies the correctness of each step in an adhesive protocol and validates the final outcome based on established clinical criteria.

Identifies strengths and weaknesses in their own clinical technique and prioritizes actions for continuous improvement.

Argues and justifies the use of specific adhesive systems according to patient needs, material selection, and minimally invasive principles.

Demonstrates autonomy in organizing and performing adhesive procedures, respecting safety, ethical, and professional guidelines.

Shows receptiveness to innovative adhesive technologies and integrates new knowledge into clinical decision-making.

Collaborates effectively with peers and instructors, demonstrating responsibility in group activities and interactive learning settings.

Selects and evaluates relevant scientific literature to support evidence-based use of adhesive materials.

9. Specific competencies acquired

9.1 professional competencies:
Acquiring theoretical knowledge on contemporary dental adhesive techniques covering various ramifications of adhesion and adhesives in the broad domain of dentistry, providing an important evidence base. A solid grasp of the principles, mechanics and techniques of bonding and modern adhesive systems is essential in dentistry. The course includes theoretical aspects of the concept of „adhesive dentistry” as it is apparent that adhesion and adhesives play important roles in modern clinical dentistry. Students will develop skills and confidence through the design and execution of minimally invasive indirect and direct adhesive techniques in order to achieve the best functional and aesthetic results, in point of view of achieving an appropriate treatment plan.

9.2 transversal competencies:
The course will be delivered as a series of interactive meetings. For students to achieve a comprehensive, well-rounded education, integrated teamwork on several fronts is vital. Teamwork is necessary between students and between students and teachers. The more teamwork fundamentals exhibited, the more opportunity exists for students to learn the vital skills of compromise and collaboration in modern adhesive dentistry.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction. Adhesive techniques: from classic to modern. Explanation of the terms used, exemplifying.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
2	Fundamental concepts of enamel and dentin adhesion.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
3	Chemical and histological characters of enamel; adhesion to enamel. Chemical and histological characters of dentine; adhesion to dentin.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
4	Materials, methods and technique options for adhesive fixing.	Test	2	Two hours every week in english.	-
5	Adhesive bridges.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
6	Adhesive techniques used in pedodontics.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
7	Successful treatment plans in adhesive dentistry.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-

Bibliography
1. Bors A, Szekely M, Molnar-Varlam C. Tehnici adezive moderne in medicina dentara. Editura: University Press 2015.
2. Jorge Perdigao: Current perspectives on dental adhesion: (1) Dentin adhesion – not there yet, Japanese Dental Science Review, 2020.

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction. Adhesive techniques: from classic to modern. Explanation of the terms used, exemplifying.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
2	Fundamental concepts of enamel and dentin adhesion.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
3	Chemical and histological characters of enamel; adhesion to enamel. Chemical and histological characters of dentine; adhesion to dentin.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
4	Materials, methods and technique options for adhesive fixing.	Oral presentation, multimedia, participative discourse, argumentation.	2	Test	-
5	Adhesive bridges.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
6	Adhesive techniques used in pedodontics	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-

7	Successful treatment plans in adhesive dentistry.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-

Bibliography
Bibliografie:
Bors A., Szekely M., Molnar-Varlam C. Tehnici adezive moderne în medicina dentară. Editura University Press, Târgu-Mureș, 2015.

Jorge Perdigão. “Current perspectives on dental adhesion: (1) Dentin adhesion – not there yet.” Japanese Dental Science Review, 2020.

Additional Recent References (Recommended)

Van Meerbeek B., Yoshihara K., Yoshida Y., Mine A., De Munck J. “State of the art of self-etch adhesives.” Dental Materials, 2020–2022 updates.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

-Course content is in accordance with the courses on the same topic listed in other universities with important achievements in theoretical and empirical evidence techniques in adhesive dentistry.
-Acquiring these modern restorative methods will be extremely useful for future dentists, adhesive techniques representing the greatest progress that restorative dentistry it registers itself.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	Knowledge of the theoretical aspects of the course topics	Test	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Theoretical knowledge within the course topic.	Colloquium written evaluation or project presentation.	70
Minimal performance standards: Getting minimum mark of 5 (five) for each component of evaluation: to know the basics of modern adhesive techniques used in dentistry, to have no more than 20% unjustified or unrecovered absences.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Borș Andrea-Izabella	Marti 11-12

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Doctor - patient communication			
2.2 Course coordinator: Conf dr Sălcudean Andreea			
2.3 Practical activities coordinator(s): Bodo Cristina Raluca			
2.4 Year of study: III	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: not applicable
4.2 competency: English language

5. Conditions

5.1 for lectures: lecture theatre, video projector, blackboard, chalk, internet connection
5.2 for practical activities: lecture theatre, video projector, blackboard, chalk, internet connection

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The course ‘Doctor - patient communication’ contributes to the development of the competences defined within the ESCO framework for the occupations relevant to the study programme, by developing the knowledge, skills and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective: To raise awareness of the importance of doctor patient communication in various aspects by adopting an appropriate attitude, technique, vocabular
7.2 Specific objectives: - applying strategies to understand the cultural and educational-related characteristics of patients - introduce students with the elements of communication specific to patients' diagnoses - understanding the ways in which human behavior manifests itself in all its complexity

8. Learning outcomes

8.1 Knowledge: Contributes to the development of a well-rounded personality with a high level of empathic and moral commitment to professional and social situations
8.2 Skills: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical activity
8.3 Responsibility and autonomy: Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical activity

9. Specific competencies acquired

9.1 professional competencies: - A professional approach to the doctor-patient relationship in the context of understanding human development factors - Drawing up a personality profile based on bio-psycho-social factors - patient quality of life
9.2 transversal competencies: - Developing concepts of prevention and psychosocial recovery for patients
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Fundamentals of the Patient-Centered Dental Consultation	conversation, discussion, explanation, demonstration, case study	2	-	no
2	The Dental Interview & Active Listening Tactics	conversation, discussion, explanation, demonstration, case study	2	-	no
3	Managing Dental Anxiety, Fear, and Phobia	conversation, discussion, explanation, demonstration, case study	2	-	no
4	Chairside Communication During Clinical Procedures	conversation, discussion, explanation, demonstration, case study	2	-	no
5	Co-Diagnosis and Presenting Treatment Plans	conversation, discussion, explanation, demonstration, case study	2	-	no
6	Informed Consent, Risk Communication, and Record Keeping	conversation, discussion, explanation, demonstration, case study	2	-	no
7	Cross-Cultural Competence & Interprofessional Handover	conversation, discussion, explanation, demonstration, case study	2	-	no

Bibliography
1. Asimakopoulou, K., & Scambler, S. (2018). Behavioral Sciences and Communication Skills in Dentistry. Primary textbook on psychology and chairside interaction models.
2. Korsch, B. M., & Harding, C. (1998). The Intelligent Patient's Guide to the Doctor-Patient Relationship: Meditations on a Great Profession. Excellent cross-discipline foundations.
3. Quinn, B. (2020). Communication Skills for Dental Health Care Providers. Quintessence Publishing. A practical, evidence-based strategy book for patient-centered interviewing and treatment plan presentations.
4. University of Queensland. (2024). Communication Essentials in Dentistry. Available open-access through UQ Pressbooks. Covers records, team alignment, and medical histories.

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The First 180 Seconds.'Comfort Zone Check'	conversation, discussion, explanation, demonstration, case study	2	-	no
2	The 5-Minute Intake (OARS Tactic Application)	conversation, discussion, explanation, demonstration, case study	2	-	no
3	Desensitizing the Anxious Patient	conversation, discussion, explanation, demonstration, role play	2	-	no
4	The 'Tell-Show-Do' Simulation	conversation, discussion, explanation, demonstration, case study	2	-	no
5	Visual Case Presentations & Co-Diagnosis	conversation, discussion, explanation, demonstration, role play	2	-	no
6	Complication Disclosure Role-Play	conversation, discussion, explanation, demonstration, role play	2	-	no
7	The Lab and Specialist Handover	conversation, discussion, explanation, demonstration, role play	2	-	no

Bibliography
1. Carey, J. A., Madill, A., & Manogue, M. (2010). Communication skills in dental education: A systematic research review. European Journal of Dental Education, 14(2), 69–78. PubMed Entry.
2. Hannah, A., & Millichamp, C. J. (2022). Maximizing student clinical communication skills in dental education: A systematic review of consultation guides. Dentistry Journal, 10(4), 57. MDPI Open Access.
3. Kopp, B., & Wessel, I. (2026). A longitudinal curriculum for teaching communication skills in dental education. GMS Journal for Medical Education, 43(2). Publisso Journal.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Contributes to the development of a well-rounded personality with a high level of ethical and moral commitment to professional and social situations, complementing medical activity.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Active participation	Depending on the nature of the subject	10
- lecture	Active participation	Depending on the nature of the subject	10
Final evaluation			
- practical final exam	Depending on the nature of the subject	Essay on the topics covered in the course	10
- theoretical final exam	Depending on the nature of the subject	Theoretical exam	70
Minimal performance standards: - to be familiar with the subject matter with logical arguments and developed communication comptences - to identify elements of human communication in everyday dental practice - demonstrate the ability to approach the subject from a multidisciplinary perspective			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Sălcudean Andreea	15 minutes after each lecture / practical session

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Technology of dental prostheses (2)			
2.2 Course coordinator: Șef l dr Borș Andrea-Izabella			
2.3 Practical activities coordinator(s): Bors Andrea Izabella			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12	3.2 lecture: 4	3.3 practical activities: 8	
3.4 Total hours in curriculum: 84	3.2 lectures: 28	3.6 practical activities: 56	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Lecture hall equipped with multimedia equipment
5.2 for practical activities: Specific dental laboratory, working tables, instruments, equipment and various dental materials necessary for the working stages in manufacturing dental prostheses.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

1.

7. Objectives of the discipline

7.1 General objective:
The students will acquire comprehensive knowledge of the specific technological procedures performed in the dental laboratory for the fabrication of dental prostheses, enabling them to understand and support the clinical steps required for prosthetic restorations (C4).

7.2 Specific objectives:
Acquire theoretical and practical knowledge regarding the procedures, workflow, and sequencing necessary for obtaining prosthetic restorations.

Develop the ability to design and plan mobile and mobilizable dental restorations in accordance with biomechanical, functional, and esthetic principles.

Gain basic practical skills required to perform, evaluate, and correct the laboratory phases involved in the fabrication of dental prostheses.

8. Learning outcomes

8.1 Knowledge:
At the end of the course, the student:

Identifies the clinical and laboratory stages involved in the fabrication of partial and complete removable dentures.

Enumerates the materials, instruments, and technologies used in manufacturing mobile and removable prostheses.

Explains in their own words the biomechanical, anatomical, and functional principles underlying complete denture construction.

Recognizes specific procedures, processes, and defects that may occur during denture fabrication.

Classifies dental materials according to their properties and indications in prosthetic technology.

Summarizes the sequence of conventional and digital workflows for complete denture production.

Compares different techniques and technologies used for complete denture fabrication, distinguishing their advantages and limitations.

8.2 Skills:
At the end of the course, the student:

Identifies appropriate solutions for technical problems arising during laboratory procedures.

Applies theoretical principles to the practical resolution of clinical–laboratory tasks in denture construction.

Plans and organizes the stages required to obtain a complete or partial removable denture.

Develops and produces working models, wax setups, and trial dentures following standard protocols.

Prepares laboratory materials and equipment correctly for each phase of the workflow.

Adapts conventional or digital techniques to specific case requirements, showing creativity and technical flexibility.

Formulates reasoned viewpoints regarding the quality of a prosthetic restoration and the adequacy of the procedures applied.

Interprets causal relationships between laboratory errors and clinical outcomes, proposing corrective strategies.

Anticipates the necessary steps for successful denture fabrication and adjusts the workflow when needed.

8.3 Responsibility and autonomy:
At the end of the course, the student:

Analyzes and compares various fabrication techniques, drawing informed conclusions about their applicability.

Differentiates between types of errors or deficiencies in prosthetic work and forms conclusions supported by technical reasoning.

Verifies the correctness of each laboratory stage and validates compliance with professional and safety standards.

Identifies strengths and weaknesses in their own practical work and prioritizes tasks for improvement.

Argues and justifies the selection of specific materials or techniques based on evidence and best practice guidelines.

Organizes laboratory tasks autonomously, managing time and resources responsibly.

Demonstrates collaboration with colleagues, dental technicians, and instructors in all course-related activities.

Shows receptiveness to new learning contexts, including emerging digital technologies in denture fabrication.

Applies ethical and deontological principles in evaluating the technological impact of prosthetic procedures.

Interprets opportunities for technological or professional development within the field of dental prosthetics.

Demonstrates real-life management skills, including effective time management, conflict resolution, and task distribution in laboratory contexts.

9. Specific competencies acquired

9.1 professional competencies:
Acquire theoretical and practical knowledge by integrating personal experience in understanding and applying current technologies used in the manufacturing of mobile and removable dental prostheses.
Develop knowledge and skills necessary for fabricating dental prostheses using various conventional and digital technologies, including the appropriate selection, manipulation, and evaluation of dental materials throughout the entire manufacturing process.
Demonstrate thorough and accurate understanding of all clinical and laboratory stages involved in producing partial and complete removable dentures, enabling students to conceptualize, plan, and design restorations that meet functional and esthetic requirements.
Identify, analyze, and solve technical problems that may occur during the fabrication of removable dentures, applying evidence-based principles and technological protocols used in contemporary prosthodontic practice.
Apply biomechanical, anatomical, and functional principles in the design and construction of complete dentures, ensuring optimal stability, retention, support, and patient comfort.
Use instruments, equipment, and laboratory technologies safely and effectively, including digital tools (CAD/CAM systems, 3D printing, and virtual design software) when applicable.
Evaluate the quality of each stage of the denture fabrication process, recognizing errors, determining their causes, and proposing appropriate corrective measures.
Collaborate effectively with dental technicians and other members of the dental team, demonstrating professional communication and proper documentation of clinical and laboratory procedures.
If you want, I can also formulate 6.2. Transversal Competencies (responsibility, autonomy,

9.2 transversal competencies:
Demonstrate effective and orderly communication within the dental healthcare team, understanding the importance of clear collaboration between students, dental technicians, dentists, and instructors in ensuring high-quality prosthodontic outcomes.
Recognize the complexity and interdisciplinary nature of prosthodontics, acknowledging that continuous scientific and technological developments require the study of dental prosthesis technology as a distinct, well-defined discipline essential for professional competence.
Apply principles of management and marketing relevant to dental laboratory practice, including appropriate equipment selection, workflow organization, and the use of both conventional and modern technologies to support the efficient and successful fabrication of dental prostheses.
Develop responsibility and autonomy in learning and professional practice, demonstrating the ability to adapt to new technologies, evaluate resources critically, and integrate relevant innovations into prosthodontic procedures.
Cultivate teamwork, ethical conduct, and decision-making skills, contributing proactively to problem-solving processes and maintaining high standards of professionalism in all clinical and laboratory activities.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS

				correlation
1	Mobile dentures: definitions, basic concepts, classifications, manufacturing technologies.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
2	Complete denture: technology and manufacturing phases.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
3	Complete denture manufacturing steps: the primary impression and the primary cast.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
4	Complete denture manufacturing steps: the special tray.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
5	Complete denture manufacturing steps: the functional impression and master cast.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
6	Complete denture manufacturing steps: the occlusion rim.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
7	Complete denture manufacturing steps: wax-up and packing methods.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
8	Achieving acrylic based complete denture in practice. Modern technologies.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-

9	Relining, rebasing and optimising complete dentures.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
10	Removable partial dentures: definitions, basic concepts, classifications, manufacturing technologies.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
11	The technology of manufacturing acrylic based removable partial dentures.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
12	The technology of manufacturing metal framed removable partial dentures.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
13	Stability, support and maintenance systems for removable partial dentures.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-
14	Modern technologies of manufacturing and optimizing removable partial dentures.	Two-hour course taught in English, presented through oral explanations, multimedia materials, and interactive discussions to facilitate the understanding of theoretical concepts in complete denture technology.	2	The course includes oral and multimedia interactive presentations designed to enhance students' communication skills and support the understanding of complex technological procedures used in the fabrication of complete dentures.	-

Bibliography

Bors A, Szekely M, Molnar-Varlam C, Camarasan A.: Technolgy of single unit dental prosthesis, Editura University Press, Tîrgu-Mureș, 2022.

Zarb, G., Hobkirk, J., Eckert, S., Jacob, R. Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prostheses. 14th ed., Mosby/Elsevier, 2021 (reeditare actualizată, utilizată în ultimii ani).

Phoenix, R. D., Cagna, D. R., DeFreest, C. F. Stewart's Clinical Removable Partial Prosthodontics. 5th ed., Quintessence Publishing, 2021.

McGivney, G. P., Castleberry, D. J., McCracken's Removable Partial Prosthodontics. 14th ed., Elsevier, 2022

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	The technology of complete dentures. The impression and the primary cast.	Practical demonstration, upper and lower shellac special tray.	4	Manufacturing shellac special tray. Grading (LR).	-
2	The technology of complete dentures. Manufacturing shellac base special tray.	Practical demonstration, upper and lower shellac special tray.	4	Manufacturing shellac special tray. Grading (LR).	-
3	The technology of complete dentures. Manufacturing self curing acrylic special tray	Practical demonstration, self curing acrylic special tray.	4	Manufacturing self curing acrylic special tray. Grading (LR).	-
4	The technology of complete dentures. Manufacturing occlusion rims.	Practical demonstration, occlusion rims.	4	Manufacturing occlusion rims. Grading (LR).	-
5	The technology of complete dentures. Evaluation of acquired information.	Practical demonstration, mounting casts in articulator.	4	Mounting casts in articulator. Grading (LR).	-
6	The technology of complete dentures: modeling wax pattern, mounting teeth, denture processing.	Practical demonstration, modeling wax pattern, mounting teeth, denture processing.	4	Modeling wax pattern, mounting teeth for complete dentures.. Grading (LR).	-
7	The technology of complete dentures. Denture processing for acrylic based complete dentures.	Practical demonstration . for acrylic based complete denture processing.	4	Multimedia presentation of the clinical and technological stages steps in manufacturing complete dentures. (LR).	-
8	The technology of acrylic based removable partial dentures.	Practical demonstration, partial edentulous phantom impressions and pouring casts.	4	Partial edentulous phantom impressions and pouring casts. Grading (LR).	-
9	The technology of acrylic based removable partial dentures.	Practical demonstration, wax pattern for acrylic based removable partial denture, including wired clasps.	4	Modeling wax pattern for acrylic based removable partial denture. Grading (LR) -	-
10	Modern technologies in manufacturing acrylic based removable partial dentures. Evaluation of acquired information through test.	Modern technologies in the manufacturing of acrylic-based removable partial dentures. Evaluation of the acquired information through a test and an educational video presentation.	4	Grading, seminar(LR).	-
11	The technology of metallic framed removable partial dentures (Skeletal RPD).	Practical demonstration with manufacturing metallic based removable partial dentures.	4	Written skills will be assessed in the Laboratory Report (LR).	-
12	The technology of metallic framed removable partial dentures (Skeletal RPD).	Practical demonstration, manufacturing wax pattern for metallic based removable partial dentures with preformed wax elements.	4	Manufacturing wax pattern for metallic framed removable partial dentures using preformed wax elements . Grading (LR).	-
13	The technology of metallic framed removable partial dentures (Skeletal RPD).	Multimedia presentation about modern technologies in manufacturing RPDs.	4	Written skills will be assessed in the Laboratory Report (LR).	-
14	Review, recovering. Evaluation of acquired knowledge.	Oral and individual test.	4	Seminar RPDs. Grading (LR).	-

Bibliography

Bors A., Szekely M., Molnar-Varlam C., Camarasan A. Technology of Single Unit Dental Prosthesis, Editura University Press, Tîrgu-Mureș, 2022.

Molnar-Varlam C., Grozescu V., Borș A. Proteze dentare fixe – aspecte clinico-tehnice, Editura University Press, Tîrgu-Mureș, 2015.

Zarb G. A., Hobkirk J., Eckert S., Jacob R. Prosthodontic Treatment for Edentulous Patients, 14th Edition, Mosby/ Elsevier, 2021.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline Technology of Dental Prosthesis II – Complete Dentures aligns closely with the expectations of community representatives, professional associations, and employers in the dental field. The course supports the development of competencies required for:

Conservative treatment of dento-periodontal structures, by providing students with the knowledge necessary to design and fabricate prosthetic restorations that help maintain oral function and tissue health.

Diagnosis and interceptive treatment of dentomaxillary anomalies, through understanding occlusal relationships, jaw dynamics, and prosthetic solutions that contribute to functional rehabilitation.

Prosthetic restoration of dental arches, directly addressing employer and professional demands for practitioners capable of designing, evaluating, and participating in the fabrication of complete and partial removable dentures.

Diagnosis, evolution, and clinical examination of patients with maxillofacial surgical conditions, by providing technological knowledge that supports postoperative rehabilitation with removable prostheses.

Management of theoretical and legislative frameworks of the Romanian healthcare system, and organizational/ managerial aspects of dental offices, ensuring future practitioners can collaborate effectively with dental technicians, manage laboratory workflows, and integrate prosthetic technologies within clinical practice.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Accuracy and correctness of the laboratory procedures performed. Proper manipulation and use of materials, instruments, and equipment. Ability to follow the correct sequence of the clinical–laboratory stages. Quality of the obtained work (impressions, casts, trays, wax patterns, etc.). Written skills and clarity in the Laboratory Report (LR).	Direct observation of students' performance during practical sessions. Assessment of completed laboratory work (impressions, casts, special trays, etc.). Laboratory Report (LR) evaluating written skills, documentation, and interpretation of procedures. Practical tests or checkpoints to verify manual skills and understanding of procedures. Oral questioning during demonstrations and individual tasks. Continuous assessment based on attendance, engagement, and task completion.	20
- lecture	Assessment of the students' knowledge of the theoretical aspects through two written tests administered during the semester.	Grading: Classification based on the individual performance on each test.	10
Final evaluation			
- practical final exam	Manufacturing one of the steps of realizing prosthetic works, acquired during the semester and one question from the semester material.	Practical exam.	30
- theoretical final exam	Accuracy and correctness in performing clinical–laboratory procedures specific to complete denture technology. Knowledge of the theoretical aspects of the course topics.	Within the single final test, the examination will consist of multiple-choice questions (MCQ) with single or multiple correct answers, administered through the UNIX Examination Center.	40

Minimal performance standards:
Obtaining a minimum grade of 5 (five) in each component of the assessment.

Demonstrating basic knowledge of the technology of dental prostheses.

Having no more than 20% unjustified absences, with all missed practical activities fully recovered.

Successfully completing and demonstrating the essential phases of the basic technical procedures required in the laboratory work.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Borș Andrea-Izabella	Marti 11-12

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Restorative odontotherapy (Conservative dentistry)			
2.2 Course coordinator: Șef l dr Stoica Alexandra-Mihaela			
2.3 Practical activities coordinator(s): Lect. Dr. Alexandra Mihaela Stoica			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12		3.2 lecture: 4	3.3 practical activities: 8
3.4 Total hours in curriculum: 84		3.2 lectures: 28	3.6 practical activities: 56
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Basic knowledge of dental anatomy, dental materials, oral pathology, and preventive dentistry.
4.2 competency: Ability to perform clinical examination of dental tissues, identify carious lesions, and apply fundamental infection control and patient management principles.

5. Conditions

5.1 for lectures: Lectures are delivered in classrooms equipped with multimedia systems, dental models, and teaching materials supporting theoretical instruction in conservative dentistry.
5.2 for practical activities: Practical sessions are conducted in dental simulation laboratories and clinical settings equipped with dental units, rotary and hand instruments, restorative materials, magnification devices, and appropriate infection control equipment.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline is aligned with ESCO recommendations for the dentist profession, contributing to the development of competencies related to patient assessment, diagnosis, treatment planning, and performance of restorative dental procedures in accordance with European professional standards.

7. Objectives of the discipline

7.1 General objective: To provide students with theoretical knowledge and practical skills necessary for the diagnosis, prevention, and treatment of dental caries and restoration of dental structures using contemporary conservative dentistry techniques.
7.2 Specific objectives: To understand the etiology, diagnosis, and progression of dental caries. To develop skills in clinical examination and treatment planning. To master techniques for direct restorative procedures in anterior and posterior teeth. To apply adhesive dentistry principles and minimally invasive treatment approaches. To perform aesthetic restorations respecting functional and biological principles.

8. Learning outcomes

8.1 Knowledge: Understanding of dental caries etiology, diagnosis, and management. Knowledge of restorative materials and adhesive systems used in conservative dentistry. Understanding of clinical protocols for direct restorations and minimally invasive dentistry.
8.2 Skills: Ability to examine dental tissues and diagnose carious lesions. Ability to perform direct restorations in anterior and posterior teeth. Ability to select appropriate materials and techniques for restorative treatment. Ability to maintain infection control and patient safety during dental procedures.
8.3 Responsibility and autonomy: Ability to work independently under professional supervision in performing restorative dental procedures. Responsibility for maintaining professional standards and patient safety. Ability to make clinical decisions within the scope of competence and seek professional guidance when necessary.

9. Specific competencies acquired

9.1 professional competencies: Perform clinical examination of hard dental tissues and establish a correct diagnosis. Develop and implement treatment plans for carious and non-carious dental lesions. Execute direct restorative procedures using modern adhesive and restorative materials. Apply principles of minimally invasive dentistry and evidence-based clinical decision-making.
9.2 transversal competencies: Effective communication with patients and members of the healthcare team. Ethical and responsible professional behavior in clinical practice. Time management and organization of clinical activities. Continuous professional development and adherence to professional standards.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Structure of Hard Dental Tissues	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
2	Simple Caries – Basic Concepts and Epidemiology	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-

3	The Role of Nutrition in the Etiopathogenesis of Dental Caries	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
4	The Role of Saliva in the Etiopathogenesis of Dental Caries	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
5	The Role of Microorganisms in the Etiopathogenesis of Dental Caries	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
6	Morphopathology of Dental Caries	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
7	Diagnosis of Carious Lesions	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	MCQ	-
8	Characteristics of the Carious Lesion	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
9	Cavity Preparation Technique	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
10	Management of Affected Dentin	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
11	Biological Effects of OdontalTreatment Procedures	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
12	Pain Associated with the Treatment of Simple Caries	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
13	Diagnosis of Non-Carious Dental Lesions	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-
14	Isolation Techniques of Teeth	Interactive presentations using multimedia support – PowerPoint, clinical images, and case-based discussions	2	-	-

Bibliography

1. Sturdevant's Art and Science of Operative Dentistry. Edited by Harold O. Heymann, Edward J. Swift Jr., and Andre V. Ritter. 7th Edition. St. Louis: Elsevier; 2019.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Dental Instruments Used in Conservative Odontotherapy	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
2	Principles of Cavity Preparation	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
3	Cavity Preparation Class I	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-

4	Cavity Preparation Class I	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
5	Cavity Preparation Class II	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
6	Cavity Preparation Class II	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	Evaluation - Cavity Class II preparation	-
7	Cavity Preparation Class III	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
8	Cavity Preparation Class III	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
9	Cavity Preparation Class IV	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
10	Cavity Preparation Class IV	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
11	Cavity Preparation Class V	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	Evaluation - Cavity Class V preparation	-
12	Base Material Filling	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
13	Isolation Techniques in Operative Dentistry	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and discussion	4	-	-
14	Dental matrix Systems	Practical demonstrations of clinical techniques and procedures Hands-on training in simulation laboratories and preclinical settings Clinical case analysis and	4	-	-

		discussion			

Bibliography

Sturdevant's Art and Science of Operative Dentistry. Edited by Harold O. Heymann, Edward J. Swift Jr., and Andre V. Ritter. 7th Edition. St. Louis: Elsevier; 2019.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is developed in accordance with the expectations of professional dental associations, healthcare institutions, and employers, ensuring that graduates acquire competencies required for safe, effective, and evidence-based dental practice in modern clinical environments.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Correct use of dental instruments and equipment Respect for infection control and safety protocols Application of isolation techniques (e.g., rubber dam) Accuracy and quality of cavity preparation	Preparation of dental cavity class II and V	15
- lecture	Accuracy and completeness of theoretical knowledge Understanding of fundamental concepts in conservative dentistry Ability to apply theoretical knowledge to clinical situations Logical reasoning and clinical decision-making	MCQ	15
Final evaluation			
- practical final exam	Correct use of dental instruments and equipment Respect for infection control and safety protocols Application of isolation techniques (e.g., rubber dam) Accuracy and quality of cavity preparation	Cavity preparation, Isolation, base filling application	20
- theoretical final exam	Accuracy and completeness of theoretical knowledge Understanding of fundamental concepts in conservative dentistry	MCQ	50
Minimal performance standards: Basic knowledge of conservative dentistry, correct identification of dental lesions, ability to perform fundamental clinical procedures according to standard protocols, safe use of instruments and materials, and obtaining the minimum passing grade in theoretical and practical assessments. (grade 5)			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Stoica Alexandra-Mihaela	30 minutes after each course

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Prosthodontics (1)			
2.2 Course coordinator: Conf dr Jánosi Kinga-Mária			
2.3 Practical activities coordinator(s): Conf. Dr. Cerghizan Diana, Conf. Dr. Jánosi Kinga Mária, Sef lucr. Dr. Baloș Monica Dora, Șef lucr. Dr. Albu Aurița Ioana, Asist. drd. Mureșan Izabella-Éva			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12	3.2 lecture: 4	3.3 practical activities: 8
3.4 Total hours in curriculum: 84	3.2 lectures: 28	3.6 practical activities: 56
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		15
- supplemental documentation at the library, from specialized information portals and in the field		15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		15
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		46
3.9 Total hours		130
3.10 Credits		5

4. Prerequisites (where applicable)

4.1 curricular: Promotion of core disciplines: Anatomy, Dental Morphology, Dental Materials, and Occlusology. Introduction to coronal restorations and conservative treatment approaches
4.2 competency: Knowledge of dental anatomy and occlusal relationships Basic skills in clinical examination of the patient Ability to use basic dental instruments Fundamental knowledge of cavity preparation and direct restorations

5. Conditions

5.1 for lectures: Lecture hall equipped with multimedia equipment, video projector, whiteboards, and writing tools, simulators
5.2 for practical activities: Preclinical laboratory equipped with dental units, simulators, and specific prosthetic instruments, as well as necessary materials—artificial teeth for simulation arches, handpieces (turbines), diamond burs, and impression materials

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline contributes to the development of ESCO competencies in the healthcare field, particularly:
- assessment of oral health status and establishment of diagnosis
- planning and implementation of prosthetic dental treatments
- use of specific dental materials and technologies
- application of evidence-based medicine principles in clinical practice
- ensuring patient safety and quality of care
- effective communication with patients and the medical team
- interdisciplinary collaboration in the management of clinical cases

7. Objectives of the discipline

7.1 General objective:
The discipline covers single-unit fixed dental prosthodontics, with emphasis on the knowledge of indications, contraindications, methods, and techniques involved in the fabrication of different types of single-unit restorations, designated for morphofunctional and preventive prosthetic therapy, as well as abutments for dental bridges or anchorage elements for removable partial dentures.

7.2 Specific objectives:
Students acquire knowledge and skills in both direct and indirect methods and techniques of prosthetic tooth preparation using simulators (phantoms), for the fabrication of various types of single-unit restorations by coronal coverage or substitution.

8. Learning outcomes

8.1 Knowledge:
Describe the principles of prosthodontics
Identify the types of prosthetic restorations
Explain the stages of prosthodontic treatment
Recognize the indications for prosthetic treatments

8.2 Skills:
Perform tooth preparation for prosthetic restorations
Select appropriate materials and techniques
Develop a prosthodontic treatment plan
Apply occlusal principles in clinical practice

8.3 Responsibility and autonomy:
Respect ethical and deontological principles
Demonstrate responsibility in medical practice
Work autonomously while recognizing personal limits
Critically evaluate treatment outcomes

9. Specific competencies acquired

9.1 professional competencies:
Ability to assess the dento-maxillary system for prosthetic treatment
Establish diagnosis and treatment plans for single-unit crowns
Perform tooth preparations for single-unit restorations
Utilize materials and techniques specific to prosthodontics
Carry out the clinical stages of single-unit fixed prosthetic restorations.

9.2 transversal competencies:
Critical thinking in treatment planning
Interdisciplinary teamwork
Effective communication with patients and the healthcare team
Development of autonomy in professional training

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	General considerations of tooth preparation (biological, mechanical, prophylactic) art I	Oral and multimedia presentation	2	-	-
2	General considerations of tooth preparation (biological, mechanical, prophylactic) part II	Oral and multimedia presentation	2	-	-
3	General considerations of tooth preparation (esthetics, ergonomics).	Oral and multimedia presentation	2	-	-
4	Classification of the single-tooth restorations	assessment - test	2	-	-
5	Abutment protection. Provisional restorations.	Oral and multimedia presentation	2	-	-
6	Sulcus enlargement	Oral and multimedia presentation	2	-	-
7	Impression techniques	Oral and multimedia presentation	2	-	-
8	Interocclusal records	Oral and multimedia presentation	2	-	-
9	Try-in of the restorations	Oral and multimedia presentation	2	-	-
10	-Shade selection	Oral and multimedia presentation	2	-	-
11	Veneers	Oral and multimedia presentation	2	-	-
12	Dowel core	assessement test	2	-	-
13	Cementation of the restorations	Oral and multimedia presentation	2	-	-
14	Crown removal	Oral and multimedia presentation	2	-	-

Bibliography
Compulsory bibliography
I. Stephen F. Rosenstiel & Martin F. Land & Robert Walter: Contemporary Fixed Prosthodontics, 6th Edition, Elsevier, 2022
2. Keynotes

II. Optional bibliography
1. Shillingburg HT: Fundamentals of Fixed Prosthodontics 3rd edition, Quintessence Publishing Co. IL, 1997
2. Wiskott A: Fixed Prosthodontics. Principles and Clinics. Quintessence Publishing Co. IL, 2011

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Ability to handle dental handpieces and rotary instruments. The realization of silicone keys.	Demonstration, practical exercise on the simulator	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
2	Verification of tooth preparations using a silicone index. Introduction to prosthetic tooth preparations.	Practical exercise on the simulator	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
3	Tooth preparation for crown - chamfer (molar)	Practical activities involving tooth preparation on dental arches mounted in a simulator (phantom) – evaluation	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
4	Finishing and evaluation of the chamfer preparation (molar)	Practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
5	Tooth preparation for crown - vertical preparation (frontal tooth)	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by	-

				instructor-led evaluation.	
6	Evaluation and correction of the vertical preparation (frontal tooth)	Practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
7	Tooth preparation for crown - heavy chamfer (premolar)	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
8	Tooth preparation for crown - heavy chamfer (canine)	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
9	Tooth preparation for veneers - minimally invasive preparation (maxillary incisor), minimally invasive heavy chamfer	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
10	Evaluation and correction of the preparation for veneers	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
11	Tooth preparation for crown - shoulder (premolar)	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
12	Single-step and two-step impression techniques	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
13	Fabrication of a provisional crown on the prepared tooth	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-
14	Impression for dowel core - direct and indirect method	Demonstration, practical exercise	4	At the end of each practical session, students undertake self-assessment of their performance, followed by instructor-led evaluation.	-

Bibliography

Compulsory bibliography

I. Stephen F. Rosenstiel & Martin F. Land & Robert Walter: Contemporary Fixed Prosthodontics, 6th Edition, Elsevier, 2022

2. Keynotes / Content of the materials delivered during practical sessions and made available on the course website

II. Optional bibliography

1. Shillingburg HT: Fundamentals of Fixed Prosthodontics 3rd edition, Quintessence Publishing Co. IL, 1997

2. Wiskott A: Fixed Prosthodontics. Principles and Clinics. Quintessence Publishing Co. IL, 2011

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The course content is aligned with current requirements of the dental profession, taking into account:

- the need to restore the function and aesthetics of the dento-maxillary system
- increasing demands regarding the quality of prosthodontic treatments
- the use of modern dental materials and technologies
- employer expectations concerning graduates' clinical competencies

- the need to integrate prosthetic treatment into a comprehensive therapeutic plan

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Knowledge of the stages and technical particularities of tooth preparation for different types of single-tooth restorations. Knowledge of the objectives of tooth preparation. Knowledge of the working instruments. Manual skills and correct working position during procedures. The grade obtained after each practical laboratory session.	Assessment of the activity carried out during the semester, through the assignment of a grade for each practical application session.	15
- lecture	Knowledge of the theoretical elements, stages, and technical particularities of tooth preparation for different types of single-tooth prostheses. Knowledge of the objectives of tooth preparation. Knowledge of the working instruments. The grade obtained in assessment tests / TBL (Team-Based Learning).	Assessment of knowledge through a multiple-choice test.	15
Final evaluation			
- practical final exam	Knowledge of the stages and technical particularities of tooth preparation for different types of single-tooth restorations. Knowledge of the objectives of tooth preparation. Knowledge of the working instruments. Manual skills and correct working posture during procedures.	Assessment of students' ability to perform a tooth preparation.	20
- theoretical final exam	Knowledge of the theoretical elements related to the concept of single-tooth prosthetic rehabilitation, including its indications, contraindications, advantages, disadvantages, and the clinical and technological particularities of prosthodontic rehabilitation with fixed single-tooth restorations.	Assessment of knowledge through a written, multiple-choice test.	50

Minimal performance standards:
Assessment during the semester:
1. Practical activities:
Completion of the required number of tooth preparations, knowledge of the preparation objectives for each preparation type, and achievement of clinically acceptable preparations are mandatory.
A minimum grade of 5.00 (without rounding) is required to pass the knowledge assessment seminar. Each practical session is graded (minimum 5.00), and the final practical grade is calculated as the average of these grades. The activity logbook is mandatory at every session. A minimum grade of 5.00 is required to pass the practical exam.

2. Theoretical:
Passing the theoretical tests with a minimum of 5.00 (calculated as the arithmetic mean of the grades obtained in the two assessment sessions).

Final evaluation:
The minimum passing grade for both the written and practical examinations is 5.00.
Failure to pass either the practical or theoretical examination (whether during the semester or in the final assessment) requires retaking the failed exam in the next examination session.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Jánosi Kinga-Mária	30 minutes after each lecture

Head of departament	Course coordinator	Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: General surgery. Anesthesia and intensive care			
2.2 Course coordinator: Șef l dr Roșca Ancuța-Noela			
2.3 Practical activities coordinator(s): Șef l dr Roșca Ancuța-Noela, Asist dr Branea Oana-Elena			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8	3.2 lecture: 4	3.3 practical activities: 4	
3.4 Total hours in curriculum: 56	3.2 lectures: 28	3.6 practical activities: 28	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			24
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			74
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: eaching rooms equipped with video projector, PC, flipchart, or online presentations
5.2 for practical activities: Treatment rooms, outpatient hospital, patient wards, operating rooms for surgical instruments and sanitary materials, UMFST Simulation Center or online presentations

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Evaluates the general condition of the surgical patient applies clinical skills specific to the context Recognizes and manages medical-surgical emergencies applies good clinical practices Participates in monitoring the perioperative patient monitors the effects of medication

Respects asepsis and antisepsis rules manages infection control in the unit
Collaborates with the medical team in the management of complex cases works in multidisciplinary medical teams
Applies patient safety measures respects quality standards regarding medical care
Communicates effectively with the patient and the medical team demonstrates empathy toward the user of medical care
Applies ethical principles and professional responsibility accepts personal responsibility

7. Objectives of the discipline

7.1 General objective:
Acquiring knowledge to diagnose diseases requiring surgical treatment. Understanding the main methods of surgical treatment and its physiological bases. Developing an interest in scientific research.

7.2 Specific objectives:
Recall of students' knowledge of anatomy gained in previous years and acquiring surgical anatomy data necessary for understanding surgical procedures.
Understanding the pathophysiological basis of surgical diseases.
Gaining the knowledge necessary for early recognition and diagnosis of diseases requiring surgical treatment to minimize risks of surgery and for a better late prognosis in neoplastic diseases.
Understanding the main methods of surgical treatment and its physiological basis.
Understanding the specificity of the surgical patient, the need for appropriate preoperative preparation, the operative risk, and the methods of postoperative rebalancing and support until discharge.
Information about the worldwide latest methods of surgical treatments and diagnosis
.Acquiring surgical emergency maneuvers to save patients' lives in critical situations.
Understanding the oncological principles of treatment.
Counseling students interested in a surgical career.
Developing of interest for scientific research by implying students in different kinds of research themes.
Training in communication with patients and clinical examination

8. Learning outcomes

8.1 Knowledge:
Knowledge of the fundamental principles of general surgery applicable to the dental patient. Knowledge of preoperative assessment methods and anesthetic risk. Knowledge of the principles of intensive therapy and monitoring of vital functions. Knowledge of measures for the prevention and control of infections associated with medical practice. Knowledge of the management of medical-surgical emergencies.

8.2 Skills:
Preoperative evaluation of the patient.
Knowledge of the principles of anesthesia and intensive care.
Recognition and management of medical-surgical emergencies.
Application of measures for the prevention and control of infections.

8.3 Responsibility and autonomy:
applies clinical skills specific to the context;
works in multidisciplinary medical teams;
respects quality standards related to medical care;
manages infection control in the unit;
applies good clinical practices;
demonstrates empathy towards the user of medical care

9. Specific competencies acquired

9.1 professional competencies:
To identify and establish a correct diagnosis of surgical diseases.Developing and implementing adequate treatment plans (including
surgery) for the identified diseases.
Correct assessment of disease risks or the context of an individual /collective disease occurrence, followed by the selection and application of appropriate preventive measures.
Addressing health/disease issues from the perspective of community specifics, directly related to the social, economic, and/or cultural conditions of that collectivity.
Initiation and development of scientific research and/or formative in the surgical field.
Fulfillment in terms of efficiency and effectiveness of managerial duties imposed by certain professional roles

9.2 transversal competencies:
Development, under coordination, of projects to solve particular problems in the surgical field, with the correct assessment of the workload, available resources, the time required for completion and risks; the application of

professional and ethical rules in this field, as well as those of safety and health at work. Carrying out works or projects, and responsibly performing tasks specific to the role in a multidisciplinary team.
Elaboration, writing, and presentation in Romanian and English of specialized works on current topics in the field

of surgery, using various sources of information and tools.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Hernias and incisional hernias	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Abdominal pain Hernia Abdominal distension
2	Surgical pathology of the thyroid gland	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Thyroid pathology Cervical node
3	Surgical pathology of the mammary gland	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Breast lump Gynecomastia Carcinoma Paget's disease Adenopathy
4	Surgical pathology of the esophagus	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Dysphagia Esophageal carcinoma Weight loss
5	Pathology of the stomach and duodenum	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Peptic ulcer Gastric carcinoma Abdominal pain Hematemesis Anemia Vomiting Weight gain Weight loss
6	Surgical pathology of the colon and rectum	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Colon and rectal carcinoma Abdominal pain Intestinal transit changes Anemia Intestinal obstruction Rectal hemorrhage
7	Acute appendicitis	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Appendicitis
8	Ano-perineal pathology	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Fecal incontinence Anorectal pain Intestinal transit changes Constipation Rectal hemorrhage
9	Surgicl pathology of gallbladder	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Pathology of the gallbladder Abdominal pain Jaundice
10	Surgical pathology of the pancreas	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Pancreatic pathology Abdominal pain Pancreatic carcinoma
11	Intestinal occlusion	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Intestinal obstruction
12	Arterial pathology	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Peripheral vascular disorders
13	Varicose veins of the lower limbs	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Varicose veins

14	Chest injuries	Oral + multimedia presentation, including surgical / online or onsite films	2	no	Thoraco-abdominal trauma Fall trauma Aggression / violence Dyspnoea Chest pain Cyanosis Hemoptysis Pleurisy Pneumothorax

Bibliography

1.Coros Marius, Rosca Ancuta Noela, Bauer Orsolya, Benedek Zalan – General Surgery. Surgical pathology for Dental Medecine, Tg.Mures 2020
2.Coros Marius et al. :Volume II - Surgical pathology, University Press Publishing House, Tg.Mures, 2015
3.Peter F. Lawrence - Essentials of General Surgery and Surgical Specialties, Sixth edition – Philadelphia: Wolters Kluwer Health, 2019
4.Schwartz's Manual of Surgery / Editor: F. Charles Brunicardi, Eleventh Edition, Publisher McGraw-Hill Medical Publishing Division, New-York, 2020

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Hernias and incisional hernias	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Abdominal pain Hernia Abdominal distension
2	Surgical pathology of the thyroid gland	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Thyroid pathology Cervical node
3	Surgical pathology of the mammary gland	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Breast nodule Gynecomastia Breast carcinoma Paget's disease Adenopathy
4	Surgical pathology of the esophagus	Onsite clinical examination followed by online case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Dysphagia Esophageal carcinoma
5	Pathology of the stomach and duodenum	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Peptic ulcer Gastric carcinoma Abdominal pain Hematemesis Anemia Vomiting Weight gain Weight loss
6	Surgical pathology of the colon and rectum	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Colon and rectal carcinoma Abdominal pain Intestinal transit changes Anemia Intestinal obstruction Rectal hemorrhage
7	Acute appendicitis	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Appendicitis
8	Ano-perineal pathology	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Fecal incontinence Ano-rectal pain Intestinal transit changes Constipation Rectal hemorrhage
9	Surgical pathology of the gallblader	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Pathology of the gallbladder Abdominal pain Jaundice
10	Surgical pathology of the pancreas	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will	Pancreatic pathology Abdominal pain Pancreatic carcinoma

				participate	
11	Intestinal occlusion	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Intestinal obstruction
12	Arterial pathology	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Peripheral vascular disorders
13	Varicose veins of the lower limbs	Onsite clinical examination followed by online case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Varicose veins
14	Chest injuries	Onsite clinical examination followed by case presentation Video presentations	2	The student will examine the patient and make an case presentation the next day in which all students will participate	Thoraco-abdominal trauma Fall trauma Aggression / violence Dyspnoea Chest pain Cyanosis Hemoptysis Pleurisy Pneumothorax

Bibliography

1. Coros Marius et al. :Volume II - Surgical pathology, University Press Publishing House, Tg.Mures, 2015
2. Virgil Razesu - General surgery - practical tests for exams and competitions, 2nd edition, revised and added - 1995
3.SCHWARTZ's Manual of Surgery / Editor: F. Charles Brunicardi, Eleventh Edition, Publisher McGraw-Hill Medical Publishing Division, New-York, 2020,
4.Eugen Tarcoveanu, Tehnici chirurgicale, Ediyura Polirom ,2004

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is adapted to the training needs of young doctors who, upon graduation, will be able to provide general medical care to patients in the public and private health system.
Surgical diseases represent an especially important segment of human pathology with an increasing incidence. Almost any disease by its nature or its complications needs at a time a solution that involves an invasive method of surgical nature in its many variants. Surgery is spectacular, with immediate results in lifesaving and students acquire knowledge about first emergency measures even within courses and internships of surgery. All these aspects make surgical knowledge an essential component indispensable to any physician at any level of training they are. This surgical knowledge cannot be separated from another knowledge necessary to a physician. In addition to information specific for surgical treatment of diseases, students acquire, during courses of surgical pathology, other information from various fields: anatomy, pathophysiology, epidemiology, oncology, medical ethics, research, etc.. still useful regardless of the specialty they will get to practice.
All these aspects make the surgical specialty an essential specialty in the formation of highly qualified physicians, whose final aim is to save as many lives as possible and to alleviate suffering, basic aspects of labor market criteria in the medical field. Transmitting information to students about modern surgical techniques facilitates their integration into top surgical teams. Students are trained in various activities of scientific research and professional formation preparing them for and in various activities of scientific research and professional formation, preparing them for an academic career.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Evaluation is based on a score calculated according to achieving specific objectives during the surgical case presentation	During the module, each student will have to do a case presentation . Evaluation is made upon the quality of presentation and participation to prctical work	15
- lecture	Evaluation is based on a score calculated according to achieving specific objectives during the surgical lectures	During the module, there will be short tests with five multiple choice questions each.	15
Final evaluation			

- practical final exam	Evaluation is based on a score calculated according to achieving specific objectives in presenting the surgical case.	Clinical case presentation. The exam lasts 60 minutes (20 minutes for examination, 20 minutes for thinking, and 20 minutes for exposure)	30
- theoretical final exam	The rating is based on the score achieved at the final theoretic test UNIX	Multiple choice grid tests that cover all topics across the syllabus. The test is given on UNIX center	40

Minimal performance standards:
Minimal performance standards: The minimum criteria for validating the evaluations during the semester:
• Completion of at least 80% of classes and internships
• Doing at least one surgical case presentation
The minimum conditions for admission to the final examination and the minimum specific maneuvers performed:
• Achieving passing grades (>5) both at the theoretical and the practical exams
The minimum requirements for passing the final assessment (detailed for each component of the final grade)

o At the theoretical exam, the grid test type, the passing grade must be at least 5:00 calculated with two decimals. Students who did not obtain a passing grade (score) on the test are not admitted to the final theoretical test, but they may still attend the practical exam when other conditions are met.
o The student can be admitted to the practical test if he obtained a passing grade on the test and completed at least 80% of internships. Even if the student did not obtain a passing grade on the practical test, he may be admitted to the theoretical test if he obtained a passing grade on the test.
o The minimum passing grade for the practical exam is 5:00 calculated with two decimals
o All intermediate grades (scores) will have two decimals, except the final general grade.
o To pass the final assessment, the student must obtain a general final grade of at least 5. The final score, with two decimals will be transformed in a final grade without decimals. The final score will be rounded upwards starting with the decimal X:50, and downwards from the decimal X:49.

13. Must seen clinical situation list

Abdominal wall pathology – inguinal hernia, femoral hernia, umbilical hernia, incisional hernia. Recognize and treat strangulated hernia. Diagnosis and management, including operative management of primary and
o recurrent abdominal wall hernia.
o Thyroid pathology – goiter, thyroid nodule
o Breast pathology – breast cancer, breast fibroadenoma
o Esophagus pathology – esophageal cancer, hiatal hernia
o Stomach & duodenum pathology – Upper digestive bleedings. Operative management of cases with upper digestive bleedings where endostasis has failed. Gastric cancer
o Surgery of obesity – bariatric surgery
o Small intestine pathology – small intestine occlusion
o Large bowel pathology – colorectal cancer
o Anoperineal pathology – hemorrhoids, anal fissure, fistula-in-ano
o Liver pathology – tumors of the liver
o Biliary tract pathology – gall bladder lithiasis, CBD lithiasis, mechanical jaundice
o Pancreas pathology – acute pancreatitis, cancer of the pancreas
o Intestinal occlusion – large bowel occlusion (colon cancer)
o Thoracic pathology – pleural effusion

14. Clinical / practical abilities

Achieving minimal practical skills in surgery:
o Oral communication with the patient, medical and administrative staff:
- To communicate with the patient during examinations and treatment
- To record the history and informed consent
- To make recommendations, advices, and patient education
- To explain to the patients the effects of treatment, possible side effects and the importance of timing and compliance with the treatment
- To participate in group activities and teamwork
- To orally present cases and issues
- To formulate opinions and recommendations
- To relate and effectively collaborate
- To react appropriately emotional / empathetic to the problems

o Written communication:
- To make records of clinical history and physical exam
- To record the patient's evolution
- To draft the epicrisis and medical letters
- To fill out hospital forms and records

o To make a correct clinical examination:

- To make a correct anamnesis of the adult patient
- To do a general and local clinical examination of the adult patient upon systems and organs

o To make a fair diagnosis

o To know the laboratory tests and investigations for specific diseases:

- To know the normal values of tests
- To be able to interpret and explain the lab tests
- To be able to make the difference between important and irrelevant information

o To interpret accurately and efficiently the data:

- to list and order by priority the differential diagnoses
- to list and sustain elements of positive diagnosis
- to list and discuss rare pathological conditions, but with a possible vital impact for patient
- To Identify and differentiate between emergency situations, acutizations of chronic conditions and serious chronic diseases, or with poor prognosis
- To Identify situations where a further consultation or specialized investigations are needed
- To discuss clinical cases and information / medical records with the medical team members, evaluates his work and identifies his professional and personal development needs

o Decision-making and case management:

- To critically evaluate the diagnostic and tests
- To Identify therapeutic objectives and priorities for various stages of evolution of the patient's condition
- To discuss the diagnosis, the treatment options, the response to treatment, the disease progression, and the prognosis
- To do therapeutic prescriptions correctly
- To correctly evaluate the risk / benefit of the treatment

15. Appointment timetable (for students)

Șef l dr Roșca Ancuța-Noela	Luni si joi 30 minute dupa curs

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M4
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Dermatovenerology			
2.2 Course coordinator: Conf dr Fekete Gyula-Laszlo			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2	3.2 lecture: 2	3.3 practical activities: 0	
3.4 Total hours in curriculum: 14	3.2 lectures: 14	3.6 practical activities: 0	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: -Anatomy, histology
4.2 competency: --

5. Conditions

5.1 for lectures: PPT materials, on line platform
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: Deepening basic knowledge in dermatology and Venereology
7.2 Specific objectives: Knowledge of the pathology specific to dermatology and venereology: dermatological semiology, skin infections, allergic dermatoses, dermatological oncology and notions of dermatological therapy

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: Carrying out the anamnesis, the complete clinical examination in dermatology, - Performing basic diagnostic procedures the patient with dermatological disorders - Formulation of a positive and differential diagnosis in dermatology - Realization of an individualized therapeutic plan for the patient with dermatological and venereal diseases - Presentation of a clinical case of dermatology - Requesting appropriate complementary examinations in pathology
9.2 transversal competencies: - Acquiring both oral and written communication skills with the patient with dermatological and venerological diseases - Realization of a work / project, executing responsibly role-specific tasks in a team - Realization of projects under coordination, for solving some problems specific to the Dermatology Field, with the correct evaluation of workload, available resources, time required completion and risks, in conditions of application of deontological norms and professional ethics in the field, as well as security and occupational health
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Local dermatological examination - Examination cutaneous organ. Rash examination: elementary lesions, distribution of lesions,lesion morphology - size, color,consistency, configuration, edges, surface.Examination of mucous membranes, hair and nails.Subjective symptoms. Installation history symptoms. The evolution of the eruption	Oral presentation, Powerpoint presentation	2	None	bullous / vesicular eruption, pathologies of oral cavity, pruritus, leukorrhea, adenopathy, edema
2	Viral skin infections - Warts. Genital warts Skin infections caused by herpesviruses. Moluscum contagios.Pityriasis rosea Skin mycosis - Dermatophytosis. Candidiasis Bacterial skin Infections Dermatoses caused by animal parasites :Scabies, Pediculosis Mycobacterial infections: Typical and atypical cutaneous tuberculosis	Oral presentation, Powerpoint presentation	2	None	sexually transmited disorders, pathologies of oral cavity, pruritus, leukorrhea, pruritus, leukorrhea, adenopathy, edema
3	Allergic dermatoses - Eczema. Urticaria. Ide reaction. Itching. Stasis dermatitis. Vasculitis. Chronic venous insufficiency. Chronic leg ulcer .Erythema nodosum Henoch-Schonlein purpura Connective tissue diseases - Lupus erythematous. Scleroderma. Dermatomyositis.	Oral presentation, Powerpoint presentation	2	None	edema, pruritus, bullous / vesicular eruption,skin ulcers, edema, bullous / vesicular eruption, pathologies of oral cavity, pruritus,

	Mixed connective tissue diseases				leukorrhea, adenopathy,
4	Bullous dermatoses - Pemphigus, Herpetiform dermatitis. Herpes gestations. Pemphigoid bulos. Epidermolysis bullousa. Skin porphyria Lyell syndrome. Polymorphous erythema. Papulo-squamous diseases - Lichen planus. Psoriasis. Diseases of the sebaceous glands - Acne. rosacea	Oral presentation, Powerpoint presentation	2	None	bullous / vesicular eruption, pathologies of oral cavity, edema, pruritus, bullous / vesicular eruption, psoriasis, acne
5	Benign skin tumors. Dermatoses precancerous - Seborrheic warts. Keratoacanthoma. Sebaceous adenomas. Jokes. Molluscum pendulum. Hemangiomas. Lymphangiomas. Lipoame. Nevii. Melanoza Dubreuilh. Bowen's disease. Paget's disease Xeroderma pigmentosum Malignant skin tumors - Epitheliomas basal cell carcinoma. Squamos cell carcinoma. Melanoma. Other skin tumors: Kaposi's sarcoma, Dermatofibro-sarcoma, skin lymphomas.	Oral presentation, Powerpoint presentation	2	None	adenopathy, edema, skin cancers, skin ulcers adenopathy, edema, skin cancers, skin ulcers
6	Sexually transmitted diseases: Generalities. Pathogens. Syphilis - Syphilis primary. Secondary syphilis. Tertiary syphilis. Congenital syphilis. Serology. Treatment. Other sexually transmitted diseases- Urethritis gonococcal and nongonococcal.Trichomoniasis. Inguinal lymphogranulomatosis. Genital infections with Chlamydia.	Oral presentation, Powerpoint presentation	2	None	sexually transmited disorders, pathologies of oral cavity, pruritus, leukorrhea, adenopathy, edema
7	Skin adnexal disorders: Alopecia- localized and diffuse. Nail disorders	Oral presentation, Powerpoint presentation	2	None	hair disorders, adenopathy, edema

Bibliography

Mandatory bibliography:
1. Fekete Gyula László, Fekete László, Toth Mate; Dermatology and venerology for dental students. Editura University Press, Tîrgu Mureş, 2021, 126 pg,
2. GL Fekete, L Fekete- Basic Dermatology for Medical Students, University Press, 2015
3. KUMAR & KLARK'S. Clinical Medicine. Tenth Edition
Support bibliography:
3. SH Morariu - Atlas de Dermato – Venerologie, Vol. I, University Press, 2011,
4. SH Morariu - Atlas de Dermato – Venerologie, Vol. II, University Press, 2013
5. Burgdorf, W.H.C.; Plewig, G.; Wolff, H.H.; Landthale - Braun-Falco´s Dermatology. Springer Verlag 2009

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

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12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	Formative assesment. Knowledge assesment. Participation in the 1 TBL session is mandatory. The absenceof the TBL session must be motivated according to the discipline regulation.	TBL	15
Final evaluation			
- practical final exam	Identification of primary skin lesions	Clinical cases	10

- theoretical final exam	Assesment of knowledge acquired during the semester.	Summativ evaluation. Final verification	60
Minimal performance standards: - carrying out the anamnesis, the complete clinical examination in dermatology, Formulation of a positive and differential diagnosis in dermatology - establishing treatment principles in dermatological diseases			

13. Must seen clinical situation list

leucoplasia, eritroplasia, squamos cell carcinoma, melanoma

14. Clinical / practical abilities

Identification of primary skin lesions

15. Appointment timetable (for students)

Conf dr Fekete Gyula-Laszlo	

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Radiology - medical imaging			
2.2 Course coordinator: Conf dr Pop Marian			
2.3 Practical activities coordinator(s): Conf dr Pop Marian			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: The main goal of the discipline is to foster effective communication skills for medical students and future doctors

acting in different settings and with various types of patients.
7.2 Specific objectives: - Augmentation of specific communication skills that are mandatory for effective doctoring, such as active listening, non-verbal skills, verbal skills, empathy, support, partnership, cultural competence, trust, etc. - Avoidance of jargon making the information accesible to the patient.

8. Learning outcomes

8.1 Knowledge: sdf
8.2 Skills: asdf
8.3 Responsibility and autonomy: asdf

9. Specific competencies acquired

9.1 professional competencies: Formarea unui sistem de cunoștințe specifice domeniului radiologiei si imagisticii medicale ; Cunoașterea sistem ului de principii, metode, mijloace specifice imagisticii medicale Să fie capabil de a analiza și transpune practic, inter-disciplinar, cunoștințele teoretice acumulate la curs; Să dobândească capacitatea de a core la diversitatea cunoştinţelor dobândite pe parcursul cursului; Să fie capabil de a identific a şi utiliza noi surse de informaţie necesare pentru rezolvarea unor probleme contextualizate disciplinei parcurse. Forma rea unor preocupări pentru inovaţie şi provocarea schimbărilor, echilibru între spiritul critic şi tolerant Dezvoltarea unui comportament empatic şi a „or ientării helping” Formarea unor capacități de accesare a diverselor surse de informare în scopul documentării
9.2 transversal competencies: Organizarea de activități de corelare cantitativă și calitativă a imagisticii medicale specifice terapiei fizice și recuperării funcționale a persoanelor cu niveluri diferite de pregătire în condiții de asistență calificată, având la bază cunoștințe, competențe și abilități dobândite prin parcurgerea disciplinei de studiu Respectarea normelor de etică și deontologie profesionala având la bază cunoștințe, competențe și abilități dobândite prin parcurgerea disciplinei de studiu Îndeplinirea în con diții de eficiență și eficacitate a sarcinilor de lucru pentru organizarea și desfășurarea activităților de corelare cantitativă și calitativă pe baza cunoștințelor, a competențelor și a abilităților dobândite prin parcurgerea disciplinei de studiu Operarea cu programe digitale documentare a și comunicarea într-o limba de circulație internațională
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Brief history.X-rays: mechanism of production, atomic structure, X-ray proprieties, X-ray device. Dosimetry. Protection in radiology. The rules of the radiolographic image formation , Basic notions concerning the computer tomography examination:principles, the main characteristics, scanning parameters, indications, contraindications, advantages and disadvantages. Ultrasonography: basic notions.Magnetic resonance imaging	Oral presentation, Powerpoint presentation	2	-	nu sunt
2	The radiological diagnosis of the lung lesions-congenital malformations, bronchitis, pneumonias, lung infections, occupational lung disease, tuberculosis, primary and metastatic lung tumors, pleural lesions	Oral presentation, Powerpoint presentation	2	-	nu sunt
3	Radiological diagnosis of the mediastinal and diaphragmatic lesions. Masses of anterior, middle and posterior mediastinum.Subphrenic abscess, free peritoneal air diaphragmatic hernia	Oral presentation, Powerpoint presentation	2	-	nu sunt

4	Radiological diagnosis of the cardiovascular system-investigation methods, the radiological aspects of acquired valvular lesions, pericardial lesions, congenital heart diseases,aortic aneurysms and dissection, pulmonary embolism	Oral presentation, Powerpoint presentation	2	-	nu sunt
5	Imaging of the gastro-intestinal tract-esophagus, stomach, duodenum,small and large bowel disease.Imaging of the liver, biliary tree and gall bladder, pancreas,spleen	Oral presentation, Powerpoint presentation	2	-	nu sunt
6	Genitourinary imaging : lithiasis, pyelonephritis, tumor of kidneys, congenital malformations,urinary bladder lithiasis and tumors,adrenal masses, benign prostate hyperplasia, prostate cancer, uterine fibroids, ovarian cancer	Oral presentation, Powerpoint presentation	2	-	nu sunt
7	musculoskeletal imaging: radiological semeiology, trauma,infections, bone dystrophies,arthropathies, bone tumors, spine disorders	Oral presentation, Powerpoint presentation	2	-	nu sunt
Bibliography ESR eBook for Undergraduate Education in Radiology https://www.myesr.org/education/ebook-for-undergraduate-education-in-radiology/					

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	demonstration of imaging investigations: Xray, CT scan, ultrasound, MR scan	demonstration	2	nu sunt	nu sunt
2	respiratory pathology	case discussion from laboratory archive	2	nu sunt	chronic lung disease, respiratory tract infections, pleural effusion chronic bronchitis and emphysema, carcinoma of the bronchus
3	imaging o mediastinum and diaphragm	case discussion from laboratory archive	2	nu sunt	disphagia, chest pain
4	imaging of cardiovascular system	case discussion from laboratory archive	2	nu sunt	cardiac valvular disease, Pericardial disease Malformations of cardiovascular system,aortic aneurysm, pulmonary embolism
5	imaging of gastro-intestinal tract, liver and biliary tree, pancreas, spleen	case discussion from laboratory archive	2	nu sunt	inflammatory bowel disease, intestinal obstruction,peptic ulcer, carcinoma of the oesophagus, carcinoma of the stomach, carcinoma of the colon and rectum,hepatomegaly, jaundice, gall bladder disease, carcinoma of the pancreas
6	imaging of genito-urinary diseases	case discussion from laboratory archive	2	nu sunt	urinary tract infection, urinary tract obstruction, carcinoma of the uterus/cervix/ovary
7	musculo-skeletal imaging	case discussion from laboratory archive	2	nu sunt	trauma to limbs, osteomyelitis, osteoporosis osteoarthrosis,malignant bone tumors
Bibliography Course support in electronic format.					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Through the aquisition of this discipline's content, students accumulate the basic knowledge and skills to effectively communicate with future patients and other health professionals.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade

Evaluation during the semester			
- practical activities	prezentare caz practic	CBL	20
- lecture	insusire notiuni teoretice	TBL	10
Final evaluation			
- practical final exam	recunoastere tip investigatie, descriere, formulare diagnostic pozitiv si diferential	diagnostic pozitiv si diferential examinare cazuri din arhiva laboratorului	20
- theoretical final exam	insusire notiuni de baza teoretice	test grila	50
Minimal performance standards: Minimal performance standards: Recunoasterea tipului unei examinari imagistice (radiografie, computertomografie, imagine rm) scintigrafie, ecografie), corelatia intre tipul de imagine si procesul patologic, diferentierea intre mai multe afectiuni cu imagistica asemanatoare.Evaluarea cu calificativ minim promovabil a nivelului de cunoștințe, competențe profesionale și abilități practice conform specificului disciplinei.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Pop Marian

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Infectious diseases			
2.2 Course coordinator: Șef l dr Sincu-Bodnar Nina-Ioana			
2.3 Practical activities coordinator(s): Sef lucrari dr Bodnar Nina-Ioana, asistent universitar drd Flețeriu Tudor, asistent universitar drd Iancu Daniela			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
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- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: None required
4.2 competency: None required

5. Conditions

5.1 for lectures: on site
5.2 for practical activities: on site

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The Discipline of Infectious Diseases contributes to the development of competences defined by ESCO for the dental medical practitioners – general dental practitioners and specialist dentists, by developing knowledge, abilities and professional autonomy specific for the medical field of Infectious Diseases in Dental Medicine:

- Provides specialized medical assistance for patients suffering from infectious diseases involving the oro-pharyngeal cavity, salivary glands, cervical region, dental infections
- Interprets the result of investigations diagnostic for various infectious diseases
- Diagnoses specific infectious diseases involving the oro-pharyngeal cavity, salivary glands, cervical regional and dental infections - for adult and pediatric patients, based on epidemiologic, clinical, laboratory and imaging data
- Manages emergencies, including dental and oral bacterial, viral or fungal infections with treatment adapted to the specific patient's situation
- Develops treatment plans for managing infectious diseases of the oro-pharyngeal cavity, salivary glands, cervical region, dental infections
- Recommends and prescribes antimicrobial treatment according to the specific case, establishes the indications and contraindications of various antibiotics in dental medicine practice, including specifying the doses and route of administration
- Offers adapted counseling for patients suffering from infectious diseases oro-pharyngeal cavity, salivary glands, cervical region, dental infections
- Minimizes occupational risks in dental medicine practice associated with acquiring infections by understanding and applying procedures which reduce the risk of occupational exposure – for example post-exposure prophylaxis
- Manages the control of infections in the dental medical facility by applying a set of measures of prevention and control of health-care-associated infections, both for the patients and the dental medicine practitioners
- Performs research in the field of infectious diseases in dental medicine

7. Objectives of the discipline

7.1 General objective:
Knowledge regarding transmittable and non-transmittable infectious diseases; identification, diagnosis, treatment and preventive measures in infectious diseases.

7.2 Specific objectives:
Identifying the nosocomial character of an infection, the application and the explanation of the preventive measures in nosocomial infections.
Knowing how the hepatitis viruses A, B, C, D, E, as well as HIV, are transmitted. Prescribing and interpreting virological examinations in infections with these viruses.
Knowing the principles of prophylaxis and treatment.
Information and counseling on the prevention and parenteral transmission of HIV.
Knowledge about detecting an HIV infection in the dentist's office: specific manifestations in the oral cavity.
Knowledge of the terms: systemic inflammatory response syndrome, bacteraemia, sepsis, septic shock.
Emergency identification and management planning of sepsis. The role of dental focal infections in generating systemic cardiovascular and CNS manifestations and their management.
Principles of etiological treatment in infectious diseases; the main classes of antimicrobial agents.

8. Learning outcomes

8.1 Knowledge:
- C1. The student describes the etio-pathogenic mechanisms of infectious diseases involving the oro-pharyngeal cavity, cervical region, the microorganism-host interaction
- C2. The student explains the relationship between risk factors, physio-pathogenic mechanisms and clinical manifestations of the relevant infections in dental medicine
- C3. The student identifies the clinical and paraclinical manifestations characteristic for oro-pharyngeal, dental, salivary glands and cervical infections, as well as the manifestations of systemic infections located in the oro-pharyngeal region
- C4. The student recognizes clinical and paraclinical manifestations of sepsis, especially in case of sepsis of oro-pharyngeal, dental or cervical origin
- C5. The student describes clinical and paraclinical manifestations of HIV and hepatitis viruses infections, including signs and symptoms from the oro-pharyngeal and cervical region and recognizes the role of the parenteral route of transmission for the spread of these infections
- C6. The student evaluates the role of paraclinical investigations for the diagnosis of oro-pharyngeal, dental, cervical and salivary gland infections
- C7. The student elaborates a treatment plan for oro-pharyngeal, dental, cervical and salivary gland infections, adapted to the peculiarities of dental medicine

8.2 Skills:
- A1. The student integrates theoretical etio-pathogenic notions and practical abilities of clinical diagnosis in identifying infectious diseases in dental pathology
- A2. The student adequately interprets the result of various paraclinical investigations in the diagnosis of infections in dental medicine
- A3. The student demonstrates practical abilities of diagnosis of oro-pharyngeal, dental, cervical infections, as well as the capacity to recognize local and regional manifestations of systemic infections
- A4. The student analyzes the differential diagnosis and establishes the positive diagnosis of various infectious pathologies in dental medicine
- A5. The student conceives individualized therapeutic solutions for the management of oro-pharyngeal, dental,

cervical or salivary glands infections, adapted to specific case studies.

8.3 Responsibility and autonomy:
- RA1. The student demonstrates autonomy in using scientific resources for improving specific knowledge regarding infectious diseases in dental medicine practice
- RA2. The student critically assesses information relevant for the positive and differential diagnosis in infectious diseases involving the oro-pharyngeal and cervical region
- RA3. The student acknowledges the ethical principles and academic integrity guidelines in all the applicated activities of the Discipline of Infectious Diseases in Dental Medicine

9. Specific competencies acquired

9.1 professional competencies:
At the end of the course, the students will acquire general knowledge about infectious diseases, will know principles of diagnosis and treatment in parenteral, nosocomial infections, infections in the oro-cervical region, systemic infections, infectious diseases with cardinal symptoms in the oral cavity, as well as peculiar features of infections in immunocompromised hosts.

9.2 transversal competencies:
Integration of assimilated knowledge with the purpose of recognition and diagnosis of an infectious disease, curative and prophylactic treatment measures in emerging and reemerging infectious diseases with an impact on population health.
Students should be able to manage the patients with infectious nosocomial pathology, those suffering from infectious diseases manifested in the oral cavity and with systemic repercussions or patients with transmissible infectious diseases posing epidemiologic risk.
Acquiring proper communication skills towards patients with infectious diseases, and integration into multidisciplinary teams.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Infectious process. Classification of infectious diseases. Emerging and re-emerging infections. Particularities of prophylaxis and etiological therapy in odontogenic infections.	oral + multimedia presentation	2	None	PUO-pyrexia of unknown origin. Immunisation
2	Oro-cervical bacterial infections	oral + multimedia presentation	2	None	Oral disorders (incl. Caries). Dysphagia
3	Oro-cervical viral and fungal infections	oral + multimedia presentation	2	None	Infectious diseases of childhood. Candidiasis
4	Systemic bacterial infections with oro-pharyngeal entry gate.	oral + multimedia presentation. MCQ assessing the knowledge acquired from the previous lectures	2	None	Septicaemia
5	HIV/AIDS infection. Oropharyngeal and facial manifestation of HIV infection.	oral + multimedia presentation	2	None	HIV. Immunodeficiency.
6	Acute viral hepatitis with parenteral and enteral transmission.	oral + multimedia presentation	2	None	Acute liver disease. Hepatomegaly. Jaundice.
7	Intracranial hypertension syndrome of infectious origin. Acute meningitis. Acute encephalitis.	oral + multimedia presentation	2	None	Meningitis. Headache. Raised intracranial pressure.

Bibliography

1. Vasiesiu AM (ed). Boli infectioase - Sinteze. Ed University Press Tirgu Mures, 2025, 590 pg, ISBN 978-973-169-470-2, cod CNCSIS 210
2. Kumar and Clark's Clinical Medicine, Elsevier publishing house, 10th edition, July 2020
3. Course notes

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Streptococcal infections – clinical manifestations.	case report, images from our clinical practice	1	None	Infectious diseases of childhood. Oral disorders (incl. Caries). Dysphagia
2	Herpes-virus infections.	case report, images from our clinical practice	1	None	Bullous/vesicular skin eruption
3	Mumps - clinical manifestations and differential diagnosis challenges	case report, images from our clinical practice	1	None	Parotid swelling
4	Respiratory viral infections. Influenza. SARS-CoV-2 infection.	case report, images from our clinical practice	1	None	Respiratory tract infection
5	Diagnosis of acute pharyngitis.	case report, images from our clinical practice	2	None	Oral disorders (incl. Caries)
6	Acute viral hepatitis.	case report, images from our clinical practice	2	None	Acute liver disease. Hepatomegaly. Jaundice.
7	HIV/AIDS infection. Clinical aspects of oral cavity diseases in HIV/AIDS infections.	CBL	2	None	HIV
8	Antibiotic therapy in dental practice.	case report, images from our clinical practice	1	None	Drug reactions
9	Post-exposure prophylaxis	case report	1	None	Immunisation
10	Nosocomial infections.	case report, legal aspects	1	None	Loose stools
11	Infections with digestive entry gate.	case report, images from our clinical practice	1	None	Loose stools

Bibliography

1. Vasiesiu AM (ed). Boli infectioase - Sinteze. Ed University Press Tirgu Mures, 2025, 590 pg, ISBN 978-973-169-470-2, cod CNCSIS 210
2. Kumar and Clark’s Clinical Medicine, Elsevier publishing house, 10th edition, July 2020
3. Course notes

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

- demographic and climatic changes help maintain infectious diseases up-to-date
- the appearance of emerging and reemerging diseases with particular epidemiological impact
- alarming increase in microbial resistance to antibiotics
- particularities of infectious diseases in immunocompromised hosts.
- the impact of decisions upon infectious pathology on the general well-being of the population.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	The ability to correctly manage a clinical case from the curriculum	CBL	10
- lecture	Theoretical knowledge assessment (information acquired from lectures and individual study)	MCQ (multiple question test)	20
Final evaluation			
- practical final exam	The ability to identify the main signs and symptoms of the studied pathologies, in order to establish the investigation and treatment plan.	MCQ test – multiple choice questions	10
- theoretical final exam	Acquiring theoretical knowledge regarding clinical findings, positive and differential diagnosis, therapeutic, curative and prophylactic measures regarding infectious diseases.	MCQ test – multiple choice questions	60

Minimal performance standards:
Minimum Performance Standard:
- recognizing infectious diseases
- managing an infectious disease in the dental practice
Minimum grade for passing the theoretical and practical exam, as well as the evaluations during the module is 5.
No absences are allowed at the practical activities.

13. Must seen clinical situation list

1. Oropharyngeal streptococcal infections
2. Oropharyngeal viral infections
3. Mumps
4. Influenza
5. Acute viral hepatitis
6. Oral manifestations in HIV infection
7. Acute meningitis
8. Encephalitis
9. Sepsis with oropharyngeal portal of entry

14. Clinical / practical abilities

CLINICAL ABILITIES
- to take the patient's medical history 2.1
- to perform the physical examination 2.2
- hierarchical representation of differential diagnosis lists 2.10
- enumerating and supporting the elements of positive diagnosis included in the curriculum 2.11
TECHNICAL ABILITIES:
- collecting pharyngeal swab 3.8
PARACLINICAL ABILITIES:
- CBC - written results: interpretation 4.3
- coagulation test - written results: interpretation 4.4
- peripheral blood smear - written results: interpretation 4.6
- urinalysis – written results: interpretation 4.8
- plasma biochemistry – written results: interpretation 4.10
- biochemical tests from CSF – written results: interpretation 4.11
- acid base balance – written results: interpretation 4.12
- various cultures and antibiotic sensitivity tests (blood culture, CSF, other bodily fluids) – written results: interpretation 4.15
- serological tests – written results: interpretation 4.19
- parasite detection tests - written results: interpretation 4.21
THERAPEUTIC RECOMMENDATIONS
- identification of therapeutical objectives and priorities in a particular clinical case 6.1
- to perform a correct therapeutical prescription for various categories of patients (with infectious disease pathology in the oro-cervical region) 6.2
- selecting the right route of administering the treatment and the optimal therapeutic form of the medication in a particular clinical case 6.5
PROPHYLAXIS
- to educate / counsel the patient regarding behavior/lifestyle risk factors and how to alter these and promote a healthy lifestyle 7.1- 0
- primary, secondary and tertiary prevention plan in a particular clinical situation 7.6- 1
COMMUNICATION
- To complete the medical history and physical examination in the patient's medical documents 8.1- 1
- to explain the diagnostic and therapeutic procedures and to obtain the patient's informed consent 8.2- 1
- To note the patient's daily evolution 8.3- 3
- to formulate the recommendations at discharge in verbal and written form 8.9- 1
- oral case presentation of a case of infectious disease pathology in the oro-cervical region 8.13- 1

15. Appointment timetable (for students)

Şef l dr Sincu-Bodnar Nina-Ioana	30 minutes after each lecture

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Genetic hereditary factors in determining the scope of orofacial disorders			
2.2 Course coordinator: Șef l dr Bogliș Alina			
2.3 Practical activities coordinator(s): Șef l dr Bogliș Alina			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: N/A
4.2 competency: N/A

5. Conditions

5.1 for lectures: Lecture hall with a projection system or a classroom, a video projector, a whiteboard, chalk, and an internet connection. Minimum of 30 enrolled students.
5.2 for practical activities: Laboratories equipped for practical activities. Students must wear appropriate personal protective equipment for laboratory work.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline Genetic hereditary factors in determining the scope of orofacial disorders contributes to the

development of competencies defined in ESCO for dental and medical professionals.
It develops professional competencies related to the identification and interpretation of genetic factors involved in orofacial anomalies, including congenital malformations, craniofacial syndromes, and dental developmental disorders.
The discipline supports the ability to correlate clinical findings with genetic etiology and to integrate genetic information into diagnostic and preventive strategies in dental practice.
It also contributes to transversal competencies such as analytical thinking, interdisciplinary collaboration, and ethical management of genetic data

7. Objectives of the discipline

7.1 General objective:
Fundamental knowledge in the field of human and medical genetics (clinical genetics) in the oro-maxillo-facial domain.

7.2 Specific objectives:
Understanding the role of genetic factors in the development of physiological traits and genetic diseases relevant to the oro-maxillo-facial domain.

8. Learning outcomes

8.1 Knowledge:
Approach the patient with craniofacial dysmorphism and congenital anomalies.
Understand that initiating the recognition of genetic semiology is an essential step in the clinical diagnosis of disorders associated with congenital anomalies.
Select and interpret genetic tests, and the ethical implications of genetic testing.

8.2 Skills:
Interpret genetic test results; identify genotype–phenotype correlations for orofacial diseases; apply clinical algorithms to select appropriate genetic tests; and analyze genetic information critically.

8.3 Responsibility and autonomy:
Select and analyze bibliographic sources ethically, collaborate with peers and faculty, respect patient confidentiality, evaluate preventive and multidisciplinary treatment options, and demonstrate autonomy in practical activities and clinical-genetic problem-solving.

9. Specific competencies acquired

9.1 professional competencies:
Identification of specific genetic disorders, approaches to diagnosis, and the correct interpretation of clinical signs and symptoms. Anthropometry. Acquiring manoeuvres that are necessary for clinical examination.

9.2 transversal competencies:
Understanding and familiarization with the specific roles and activities in the domain of medical genetics relevant to oro-facial diseases in a team of different specialists.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Genetics of Orofacial Development. Elements of genetic semiology of the filtrum and associated disorders.	Oral presentation with PowerPoint presentation, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
2	Elements of genetic semiology of the lip and associated disorders. Genetic basis of cleft lip and palate.	Oral presentation with PowerPoint presentation, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
3	Elements of genetic semiology of the tongue and associated disorders.	Oral presentation with PowerPoint presentation, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases. Malformations of lip/ palate,

4	Genetics of tooth development. Classification of dental anomalies and associated disorders.	Oral presentation with PowerPoint presentation, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases
5	Elements of genetic semiology of the maxilla and associated disorders.	Oral presentation with PowerPoint presentation, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases. Malformations of lip/ palate,
6	Chromosomal abnormalities associated with oro-facial syndromes	Oral presentation with PowerPoint presentation, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases. Malformations of lip/ palate,
7	Congenital anomalies induced by teratogens. Genetic counseling in syndromes affecting craniofacial and dental structures.	Oral presentation with PowerPoint presentation, combined with heuristic conversation and demonstrative elements.	2	Verification	Chromosomal disorders, Monogenic diseases.

Bibliography

1. Ronald Cohn, Stephen Scherer, Ada Hamosh. Thompson & Thompson Genetics and Genomics in Medicine,Ninth Edition. Copyright © 2024 by Elsevier Inc
2. Peter D Turnpenny & Sian Ellard. Emery's Elements of Medical Genetics and Genomics, Sixteenth Edition.Elsevier, 2022
3.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Syndromes associated with filtrum abnormalities - case presentation	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases.
2	Syndromes associated with lip abnormalities- case presentation	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases.
3	Syndromes associated with tongue abnormalities- case presentation	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases. Malformations of lip/palate.
4	Syndromes associated with teeth abnormalities - case presentation	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases.
5	Syndromes associated with abnormality of the maxilla	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases. Malformations of lip/palate.
6	Chromosomal abnormalities associated with oro-facial syndromes	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	-	Chromosomal disorders, Monogenic diseases. Malformations of lip/palate.
7	Genetic counseling - RR calculation	Oral presentation with multimedia, combined with heuristic conversation and demonstrative elements.	2	Verification	Chromosomal disorders, Monogenic diseases.

Bibliography

Bibliography

Lyons Jones K., Crandall Jones M., Del Campo M. Smith's recognizable patterns of human malformation, 7th edition, Ed. Elsevier, 2013

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The course will facilitate a more accurate perception of certain signs and the clinical interpretation of some symptoms in orofacial disorders. These enable the recognition and approach of a patient with a genetic disease, and the establishment of an investigation plan, diagnosis, monitoring, and genetic counselling.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	According to the specifics of the discipline	Active participation; case-based discussions; practical exercises	40
- lecture	According to the specifics of the discipline	Short written reflections	30
Final evaluation			
- practical final exam	According to the specifics of the discipline - colloquium	Integrative case-based assessment (clinical scenarios)	30
- theoretical final exam	-	-	0
Minimal performance standards: - Identifies genetic mechanisms involved in orofacial disorders. - Correlates clinical features with genetic etiology. - Selects appropriate genetic diagnostic approaches. - Demonstrates basic clinical-genetic reasoning.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Bogliș Alina	Weekly after the course/practical activity, 15 minutes.

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Dental materials in paediatric dentistry			
2.2 Course coordinator: Șef l dr Borș Andrea-Izabella			
2.3 Practical activities coordinator(s): Sef lucr. dr. Bors Andrea Izabella			
2.4 Year of study: III	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4	3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28	3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		8
- supplemental documentation at the library, from specialized information portals and in the field		8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		7
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		24
3.9 Total hours		52
3.10 Credits		2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Signingin a minimum number of students (a group of 15-17 students). Lecture hall equipped with laptop and video projector, multimedia equipment.
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

1. Teaching and Learning Conditions ➤ Course

Signing in a minimum number of students (15–17 students/group).
Lecture hall equipped with laptop, video projector, and multimedia equipment.

ESCO alignment:

use digital technologies for teaching and learning
present scientific and medical information
apply teaching methods in healthcare education

➤ Practical Activity

(Not specified)

2. Professional Competences

➤ Knowledge and handling of dental materials in paediatric dentistry

ESCO alignment:

handle dental materials
select appropriate dental materials
apply restorative dental procedures
use materials in paediatric dentistry

➤ Understanding composition and properties of dental materials

ESCO alignment:

evaluate dental materials
understand physical, chemical, and mechanical properties of biomaterials
assess biocompatibility of dental materials

➤ Clinical application of materials in paediatric dentistry

ESCO alignment:

perform dental restorations in children
apply minimally invasive dentistry principles
ensure compliance with clinical protocols and safety standards

➤ Selection of appropriate materials for pediatric patients

ESCO alignment:

make clinical decisions in dentistry
select treatment options based on patient needs
adapt dental treatment to specific patient groups (children)

➤ Knowledge of orthodontic materials and biomechanics

ESCO alignment:

apply orthodontic materials and appliances
understand biomechanical principles in orthodontics
use orthodontic devices for functional rehabilitation

3. Transversal Competences

➤ Teamwork and interdisciplinary collaboration

ESCO alignment:

communicate in healthcare teams
collaborate with dental assistants and technicians
coordinate healthcare activities

➤ Professional responsibility and safety

ESCO alignment:

ensure health and safety in the workplace
use medical equipment safely
apply professional standards

➤ Management and marketing in dental practice

ESCO alignment:

manage dental practice operations
apply basic marketing principles in healthcare
optimize resource use

➤ Teaching and professional development

ESCO alignment:

provide training in healthcare settings
engage in lifelong learning
contribute to professional education

4. General Objective

To acquire the necessary knowledge for the proper and efficient use of dental materials in paediatric dentistry and orthodontics.

ESCO alignment:

apply dental treatment procedures
use dental materials appropriately in clinical practice

5. Specific Objectives

➤ Understanding composition and properties of materials

ESCO alignment:

analyze dental biomaterials
evaluate material performance

➤ Application of theoretical knowledge in clinical practice

ESCO alignment:

apply dental materials in paediatric treatments
integrate theoretical knowledge into clinical decision-making

Conclusion (recommended academic wording)

The discipline Dental Materials in Paediatric Dentistry is aligned with the competencies defined by ESCO, contributing to the development of essential professional and transversal skills. These include the proper selection and use of dental materials in children, understanding biomaterial properties and biocompatibility, applying orthodontic principles, ensuring patient safety, and working effectively within the dental healthcare team.

7. Objectives of the discipline

7.1 General objective:
-To acquire the necessary knowledge for the proper and efficient use of materials in pediatric dentistry and orthodontics.

7.2 Specific objectives:
-To acquire the ability to understand different aspects about the composition and properties of dental materials which have major implications in practice in pediatric dentistry and orthodontics.
-Understanding theoretical aspects on dental materials to be able to use in pediatric dentistry.

8. Learning outcomes

8.1 Knowledge:
At the end of the course, the student:

Identifies the main classes of dental materials used in paediatric dentistry and their clinical indications.

Enumerates the properties, advantages, and limitations of materials specific to paediatric restorative procedures (glass-ionomers, composites, stainless steel crowns, sealants, bioactive materials).

Recognizes clinical situations requiring specific types of paediatric dental materials.

Explains, in their own words, the mechanisms of setting, adhesion, fluoride release, and biocompatibility of paediatric dental materials.

Classifies dental materials based on composition, clinical use, and mechanical/biological behavior in children.

Summarizes the steps of clinical procedures involving paediatric restorative materials.

Compares materials used in paediatric vs. adult dentistry, distinguishing differences in behavior, indications, and handling.

8.2 Skills:
At the end of the course, the student:

Applies theoretical knowledge to select appropriate materials for specific paediatric clinical scenarios.

Identifies solutions to common handling issues or material failures encountered in paediatric restorative procedures.

Plans and prepares the steps for placing paediatric restorative materials, according to clinical guidelines.

Develops basic laboratory or preclinical skills for manipulating paediatric dental materials safely and effectively.

Adapts material choice and technique to the clinical situation, age, and cooperation level of the paediatric patient.

Formulates reasoned viewpoints regarding the suitability of materials in different carious lesion types, trauma cases, or preventive treatments.

Interprets cause–effect relationships between material properties and clinical outcomes in paediatric dentistry.

Anticipates potential complications related to material selection or handling and proposes preventive strategies.

8.3 Responsibility and autonomy:
At the end of the course, the student:

Analyzes and compares different materials used in paediatric dentistry, forming justified conclusions regarding their clinical applicability.

Differentiates correct from incorrect material selection or handling techniques in paediatric cases.

Verifies the correctness of the steps involved in paediatric restorative procedures and validates outcomes based on clinical criteria.

Identifies strengths and weaknesses in their own preclinical performance involving paediatric dental materials.

Prioritizes material choice based on safety, biocompatibility, minimal invasiveness, and child-specific needs.

Demonstrates autonomy in preparing and organizing clinical steps involving paediatric materials, respecting protocols and safety rules.

Argues and justifies decisions related to material usage based on scientific evidence and paediatric-specific guidelines.

Shows receptiveness to innovations in paediatric dental materials, such as bioactive materials, smart materials, and minimally invasive technologies.

Collaborates effectively with colleagues and instructors, respecting ethical and deontological standards in all academic activities.

Selects and analyses appropriate bibliographic sources to stay updated with recent developments in paediatric dental materials.

Demonstrates real-life management skills, including time management and conflict resolution during group activities.

9. Specific competencies acquired

9.1 professional competencies:
-In addition to acquiring material handling modern techniques of dental materials used in restorative pediatric dentistry, the student will know the composition, the physical, mechanical and chemical properties of the dental materials in order to understand the impact of dental materials that come in contact with oral tissues and will have the necessary knowledge for a proper and effective use of these materials in practice. There is a specific use of the dental materials in pediatric dentistry, new restorative and therapeutic materials have been developed, and

there are specific pedodontic materials that the student will endorse.
-Future dentist should know that there are many variants of restoring coronary lesions in temporary and young permanent teeth and he or she should be able to choose a material from the variety of options on the market. They must know which material is better, more efficient and especially wich matchesthe requirements and demands of the small patients, ensuring the optimum conditions to comply with the international norms.
In addition, the student will understand the orthodontic biomechanical ways and the materials
from wich are manufactured the orthodontic brackets and devices for functional rehabilitation used in orthodontics.

9.2 transversal competencies:
-Collaboration and teamwork is today a complex, requiring permanent university training. The student realizes that the work they perform it is a teamwork and the human factor is: the dentist, the dental assistant and the dental technician who must ensure the health and safety at work and the use of modern technologies in pediatric and orthodontic practice.
-Teamwork, passion for performance and commitment to helping patients equally bounds students to become increasingly efficient dental professionals in dental practice.
-Marketing and dental practice management performance through knowledge of dental materials.
-Didactic activity in practical instruction or administration in the field of dental materials used in pedodontics and orthodontics.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction. Generalities, conditions of materials used in pediatric dentistry. Profilactic materials: fluoride containing products.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
2	Pit and fissure sealants.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
3	Materials for pulpo-dentinal protection, cavity base materials for pediatric dentistry use.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
4	Restorative materials. Materials used for endodontic treatments in pediatric dentistry.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
5	Materials used for cementation of orthodontic appliances. Materials used for prosthodontic treatment in pediatric dentistry (crowns for children).	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
6	Materials used for different orthodontic appliances.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
7	Materials for mouthgards used in sport activities. Impression materials in pediatric dentistry. Generalities about reparation and reconditioning of appliances used in pediatric dentistry.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-

Bibliography
1. SC Leal, EM Takeshita: Pediatric Restorative Dentistry. Springer International Publishing, 2019.
2. Van Noort R: Introduction to Dental Materials. 4th ed. Mosby Elsevier Publishing, Edinburgh, 2016.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction. Generalities, conditions of materials used in pediatric dentistry. Profilactic materials: fluoride containing products.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-

2	Pit and fissure sealants.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
3	Materials for pulpo-dentinal protection, cavity base materials for pediatric dentistry use.	Oral presentation, multimedia, participative discourse,	2	Two hours every week in english.	-
4	Restorative materials. Materials used for endodontic treatments in pediatric dentistry.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
5	Materials used for cementation of orthodontic appliances. Materials used for prosthodontic treatment in pediatric dentistry (crowns for children).	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
6	Materials used for different orthodontic appliances.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-
7	Materials for mouthgards used in sport activities. Impression materials in pediatric dentistry. Generalities about reparation and reconditioning of appliances used in pediatric dentistry.	Oral presentation, multimedia, participative discourse, argumentation.	2	Two hours every week in english.	-

Bibliography
Bibliografie:
SC Leal, EM Takeshita. Pediatric Restorative Dentistry. Springer International Publishing, 2019.

Van Noort, R., & Barbour, M. Introduction to Dental Materials. 5th Edition, Elsevier, 2023.
(This is the most recent and updated edition, replacing the 2016 version.)

Bonifácio, C. C., Cury, J. A., & Raggio, D. P. Glass Ionomers in Dentistry: A Clinical Overview. Springer, 2021.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	Knowledge of the theoretical aspects of the course topics.	Test	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Theoretical knowledge within the course topic	Colloquium written evaluation or project presentation.	70

Minimal performance standards:
Getting minimum mark of 5 (five) for each component of evaluation: to know the basics of dental materials used in paediatric dentistry, to have no more than 20% unjustified or unrecovered absences.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Borș Andrea-Izabella	Marti 11-12

Head of departament	Course coordinator	Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Endodontics (1)			
2.2 Course coordinator: Șef l dr Kovács-Ivacson Andrea-Csinszka			
2.3 Practical activities coordinator(s): vacant			
2.4 Year of study: IV	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12		3.2 lecture: 4	3.3 practical activities: 8
3.4 Total hours in curriculum: 84		3.2 lectures: 28	3.6 practical activities: 56
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: No
4.2 competency: No

5. Conditions

5.1 for lectures: Amphitheater equipped with projection system
5.2 for practical activities: Specialized laboratories, mandatory equipment

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The course supports development of ESCO competencies in oral health for diagnosis and treatment of pulpal and periapical diseases.

7. Objectives of the discipline

7.1 General objective: Understanding fundamental concepts of endodontics for professional competence in pulp disease treatment.
7.2 Specific objectives: • Etiopathogenic mechanisms of pulp inflammation • Diagnostic methods in endodontics • Therapeutic options in pulp pathology • Endodontic treatment techniques

8. Learning outcomes

8.1 Knowledge: • Describe morphophysiology of dental pulp and histopathological changes • Explain etiopathogenesis of pulpo-periapical diseases • Classify acute and chronic pulp/periapical conditions
8.2 Skills: • Analyze clinical and paraclinical data for diagnosis • Interpret symptoms and investigation results • Apply endodontic techniques (access cavity, rubber dam isolation, pulp capping, extirpation
8.3 Responsibility and autonomy: • Independently select diagnostic and treatment methods • Critically evaluate scientific information • Follow ethical, aseptic, and professional standards

9. Specific competencies acquired

9.1 professional competencies: .• Knowledge of etiology, diagnosis, and treatment of acute and chronic pulp inflammations • Understanding examination methods and therapeutic options for preserving teeth • Familiarity with root canal filling methods and materials • Ability to establish correct diagnosis and treatment plan • Awareness and elimination of iatrogenic factors
9.2 transversal competencies: • Collaboration with other dental specialties (prosthetics, orthodontics) • Understanding systemic implications of endodontic treatment • Teamwork with medical specialists • Collaboration including general practitioners for complex cases
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Notions of dental pulp morphophysiology	Oral presentation	2	-	-
2	Histopathological characteristics of the dental pulp	Oral presentation	2	-	-
3	Functions of the dental pulp	Oral presentation	2	-	-
4	Ethiopathology of pulpal inflammation	Oral presentation	2	-	-
5	Anatomo-clinical forms of acute pulpal inflammations	Oral presentation	2	-	-
6	Anatomo-clinical forms of chronic pulpal inflammations	Oral presentation	2	-	-
7	Dentinal hypersenzitvity and hyperestesia	Oral presentation	2	-	-
8	Participation of immune mechanisms in pulpo-periapical pathology	Oral presentation	2	-	-

9	Treatment of acute pulpal inflammations	Oral presentation	2	-	-
10	Treatment of chronic pulpal inflammations	Oral presentation	2	-	-
11	Biological methods of preservation of the dental pulp	Oral presentation	2	-	-
12	Methods of partial preservation of pulp tissue	Oral presentation	2	-	-
13	Internal anatomy of teeth	Oral presentation	2	-	-
14	Vital and non-vital pulp extirpation	Oral presentation	2	-	-

Bibliography
Bibliography:
1.Berman LH, Hargreaves KM. Cohen's Pathways of the pulp, 12th Edition, Elsevier, 2020
2. Castellucci A. Endodontics, Vol 1 and 2, 1st Ed, Edra, 2022
3. Rotstein I, Ingle JI. Ingle's Endodontics, 7th Ed., Pmph USA Ltd., 2019
4. Torabinejad M, Fouad A, Shabahang S. Endodontics: Principles and Practice, 6th Ed., Elsevier, 2020

10.2 Content of workout, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Internal anatomy of teeth	CBL	4	-	-
2	Endodontic instruments	Presentation and clinical activity	4	-	-
3	Completing the treatment sheet, identifying carious lesions	Clinical activity	4	-	-
4	Rubber dam isolation	Clinical activity	4	-	-
5	Access cavity preparation	Clinical activity	4	-	-
6	Radiography in endodontics	Presentation, clinical activity	4	-	-
7	Acute and chronic pulpal inflammations	CBL	4	-	-
8	Direct and indirect pulp capping	Clinical activity	4	-	-
9	Access cavity preparation in upper monoradicular teeth	Clinical activity	4	-	-
10	Access cavity preparation in upper pluriradicular teeth	Clinical activity	4	-	-
11	Access cavity preparation in lower monoradicular teeth	Clinical activity	4	-	-
12	Access cavity preparation in lower pluriadicular teeth	Clinical activity	4	-	-
13	Complementary examination methods	Clinical activity	4	-	-
14	Clinical case presentations	Presentation, interactive discussion	4	-	-

Bibliography
1.Berman LH, Hargreaves KM. Cohen's Pathways of the pulp, 12th Edition, Elsevier, 2020
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11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Select appropriate bibliographic sources and analyze them.
Demonstrate receptiveness to new learning concepts.
Collaborate with colleagues and professors.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			

- practical activities	Active participation, max 3 absences allowed	Access cavity preparation on extracted teeth (2 monoradicular, 1 pluriradicular)- allow students to enter the practical exam CBL	30
- lecture	Active participation, min 50% presence required	Active participation	0
Final evaluation			
- practical final exam	Internal anatomy of teeth Endodontic instruments	Oral examination	20
- theoretical final exam	Test	Test with single (25%) and multiple choice questions (75%)	50
Minimal performance standards: • Minimum passing grade: 5.00 (PE and TE) Knowledge of internal anatomy of teeth and endodontic instruments • Correct diagnosis of acute and chronic pulpal inflammations Minimum practical requirements: • Detailed knowledge of internal anatomy of teeth • Prepared access cavity on single and multirooted teeth • Correct Rx evaluation and case presentations of pulpal inflammations			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Kovács-Ivacson Andrea-Csinszka	30 minutes after each course

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

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1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Restorative odontotherapy (Conservative dentistry) (2)			
2.2 Course coordinator: Șef l dr Hănțoiu Tudor-Alexandru			
2.3 Practical activities coordinator(s): Șef l dr Hănțoiu Tudor-Alexandru			
2.4 Year of study: IV	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12	3.2 lecture: 4	3.3 practical activities: 8	
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- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: The discipline Restorative Odontotherapy (Operative Dentistry) requires prior acquisition of fundamental knowledge and skills from related disciplines within the dental medicine curriculum. These include dental anatomy and morphology, histology and oral biology, dental materials science, and basic clinical skills in preclinical operative dentistry. A foundational understanding of the structure and properties of dental hard tissues, as well as familiarity with principles of infection control, instrumentation, and patient management, is necessary to ensure the effective assimilation of the theoretical and practical components of the discipline.
4.2 competency: The discipline Restorative Odontotherapy (Operative Dentistry) requires the prior development of basic professional and transversal competencies acquired during earlier stages of the dental medicine program. These include the ability to apply fundamental knowledge of dental anatomy and oral biology in clinical contexts, basic skills in the use of dental instruments and materials, and the capacity to perform preclinical operative procedures. Additionally, competencies related to infection control, adherence to clinical protocols, and effective communication within the medical environment are necessary to support the proper understanding and application of restorative dentistry concepts and techniques.

5. Conditions

5.1 for lectures:

Amphitheater with projection system
5.2 for practical activities: PA will take place in the dental clinic that has all the necessary equipment for treating simple caries

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline Restorative Odontotherapy (Operative Dentistry) contributes to the development of competencies defined within ESCO for occupations relevant to the study program, by developing the knowledge, skills, and professional autonomy specific to the field of dental medicine.

7. Objectives of the discipline

7.1 General objective: Acquire of theoretical and practical knowledge regarding the etiology and treatment methods used in dental caries. The correct use of composite resins.The general objective of the discipline is to present and substantiate the concepts, principles, and techniques specific to restorative odontology, in order to support the development of professional competencies required for the diagnosis, treatment planning, and execution of restorative procedures, in accordance with current standards in dental medicine and the principles of evidence-based practice.
7.2 Specific objectives: Specific objectives of the discipline include the structured presentation of the etiology, classification, and progression of dental hard tissue lesions, including carious and non-carious defects; the systematization of diagnostic criteria and clinical examination methods used in restorative dentistry; the conceptual clarification of principles underlying minimally invasive dentistry and dental tissue preservation; the theoretical framework of cavity design and preparation in relation to biomechanical and adhesive principles; the presentation of the properties, indications, and limitations of contemporary restorative materials, including adhesive systems and direct restorative biomaterials; the integration of clinical protocols for the execution of direct restorations with respect to functional, anatomical, and esthetic requirements; the outlining of infection control measures and patient safety standards applicable in restorative dental procedures; the conceptualization of evaluation criteria for the quality, durability, and clinical performance of dental restorations.

8. Learning outcomes

8.1 Knowledge: Describes the etiology and pathogenesis of dental hard tissue lesions, including carious and non-carious processes, in the context of restorative dentistry. Explains the relationships between etiological factors, structural changes, and clinical manifestations of dental lesions relevant to operative dentistry. Classifies dental hard tissue defects according to etiological, morphological, and clinical criteria within restorative dental practice. Describes the principles of minimally invasive dentistry and dental tissue preservation in the context of modern restorative approaches. Explains the biomechanical and adhesive principles underlying cavity preparation and restoration design in operative dentistry. Describes the properties, indications, and limitations of contemporary restorative materials used in direct restorations. Explains the clinical protocols and stages involved in the execution of direct restorative procedures. Describes the principles of infection control and patient safety applicable in restorative dental treatments. Explains the criteria for evaluation of the quality, functionality, and longevity of dental restorations.
8.2 Skills: Applies clinical examination methods for the assessment of dental hard tissue lesions in the context of restorative dentistry. Performs the diagnosis of carious and non-carious lesions using clinical and paraclinical data. Selects appropriate treatment strategies based on diagnostic findings and clinical indications in operative dentistry. Prepares dental cavities according to biomechanical and adhesive principles specific to restorative procedures. Manipulates restorative materials, including composite resins and glass ionomer cements, following clinical protocols. Performs direct restorations ensuring anatomical form, proximal contact, and functional occlusion. Applies finishing and polishing techniques to optimize the quality and durability of restorations. Implements infection control measures and isolation techniques during restorative procedures. Evaluates the clinical performance and quality of dental restorations using established criteria.
8.3 Responsibility and autonomy: Assumes responsibility for the correct application of clinical protocols in restorative dental procedures. Demonstrates professional judgment in selecting treatment options within the scope of operative dentistry. Ensures compliance with ethical and deontological principles in patient management and clinical decision-making. Manages clinical activities efficiently, respecting time constraints and procedural standards.

Collaborates with other healthcare professionals within a multidisciplinary team in dental care.
Adapts to new materials, technologies, and clinical guidelines in restorative dentistry.
Engages in continuous professional development and lifelong learning in accordance with European standards such as ESCO.

9. Specific competencies acquired

9.1 professional competencies:
Graduates of the discipline Restorative Odontotherapy acquire professional competencies in the assessment, diagnosis, and management of dental hard tissue lesions, including carious and non-carious processes, using contemporary clinical and paraclinical methods. They are able to elaborate and implement individualized treatment plans based on minimally invasive dentistry principles and evidence-based practice. Students develop skills in cavity preparation according to biomechanical principles and clinical indications, as well as in the selection and appropriate use of restorative materials, including adhesive systems, composite resins, and glass ionomer cements. They are competent in performing direct restorations that ensure functional, anatomical, and esthetic integration, while maintaining occlusal balance and proximal contacts. Graduates apply standard protocols for infection control and patient safety, demonstrate the ability to manage clinical procedures efficiently, and ensure patient comfort. They are capable of evaluating the quality and longevity of restorations, identifying potential deficiencies, and applying corrective measures. Professional competencies are complemented by adherence to ethical and deontological standards, accurate clinical documentation, and decision-making based on scientific evidence, in accordance with European standards such as ESCO.

9.2 transversal competencies:
Students develop transversal competencies that support professional integration and effective interdisciplinary collaboration in the field of dental medicine. They demonstrate the ability to work both independently and as part of a multidisciplinary team, assuming specific roles and responsibilities in clinical contexts. They apply principles of effective communication with patients, colleagues, and other healthcare professionals, ensuring clarity, empathy, and professional conduct. Graduates show responsibility, adaptability, and time management skills in organizing clinical activities and fulfilling assigned tasks within established deadlines. They integrate ethical and deontological principles into professional practice, respecting patient rights, confidentiality, and informed consent. Furthermore, they demonstrate the capacity for critical thinking and self-assessment, engaging in continuous professional development and lifelong learning, in accordance with European frameworks such as ESCO, and adapting to technological and scientific advancements in the field.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Clinical characteristics and risk factor assessment in dental caries	Multimedia and oral presentation	2	-	The topic Clinical characteristics and risk factor assessment in dental caries is correlated with the framework of International Clinical Situations (ICS) by addressing the identification and analysis of clinical presentations associated with dental caries. It supports the understanding of patient-specific clinical contexts through the evaluation of risk factors, contributing to clinical reasoning, diagnosis, and decision-making processes in restorative dentistry. The content reflects the integration of theoretical knowledge into real clinical situations, ensuring relevance for patient-centered care and professional practice
2	Clinical examination, diagnosis, and treatment planning in restorative dentistry	Multimedia and oral presentation	2	-	The topic Clinical examination, diagnosis, and treatment planning in restorative dentistry is aligned with the framework of International Clinical Situations (ICS) by integrating the essential stages of clinical care within real patient contexts. It addresses systematic patient assessment, the establishment of diagnosis based on clinical and paraclinical findings, and the development of individualized treatment plans. This contributes to the development of clinical reasoning and decision-making processes, in accordance with the principles of modern

					dental medicine and patient-centered care
3	Non-carious coronal lesions	Multimedia and oral presentation	2	-	The topic Non-carious coronal lesions is aligned with the framework of International Clinical Situations (ICS) by addressing the identification, differentiation, and interpretation of clinical manifestations of non-carious lesions in various clinical contexts. It involves correlating etiological factors (erosion, abrasion, abfraction) with structural and functional changes in dental tissues, supporting the development of clinical reasoning and the selection of appropriate therapeutic approaches based on individual clinical situations.
4	Luting cements used in direct coronal restorations	Multimedia and oral presentation	2	-	The topic Luting cements used in direct coronal restorations is aligned with the framework of International Clinical Situations (ICS) by addressing the selection and application of dental materials according to specific clinical contexts. It involves correlating the physicochemical and biological properties of cements with clinical indications, local conditions, and functional requirements of the restoration, supporting clinical decision-making and the adaptation of treatment approaches to individual patient situations.
5	Composite resins: composition, properties, and clinical applications	Multimedia and oral presentation	2	-	The topic Composite resins: composition, properties, and clinical applications is aligned with the framework of International Clinical Situations (ICS) by integrating the characteristics of restorative materials into specific clinical contexts. It involves correlating the composition and physicochemical properties of composite resins with clinical indications and the functional and esthetic requirements of restorations, supporting material selection and clinical decision-making adapted to individual patient situations.
6	Dental amalgams	Multimedia and oral presentation	2	-	The topic Dental amalgams is aligned with the framework of International Clinical Situations (ICS) by addressing the use of restorative materials according to specific clinical contexts. It involves correlating the physicomechanical and biological properties of dental amalgams with clinical indications, local conditions, and functional requirements of restorations, supporting clinical decision-making and the selection of appropriate therapeutic approaches based on individual patient situations.
7	Pulp protection and dentin sealing	Multimedia and oral presentation	2	-	The topic Pulp protection and dentin sealing is aligned with the framework of International Clinical Situations (ICS) by addressing therapeutic measures aimed at maintaining pulp vitality in various clinical contexts. It involves correlating the extent of dental tissue involvement with the indications for direct or indirect pulp protection and dentin sealing techniques, supporting clinical decision-making and the adaptation of treatment approaches according to individual patient situations.
8	Minimally invasive preparation for adhesive restorations	Multimedia and oral presentation	2	-	The topic Minimally invasive preparation for adhesive restorations is aligned with the framework of International Clinical Situations (ICS) by addressing the adaptation of preparation techniques to specific clinical contexts and the principles of dental tissue preservation. It involves correlating the characteristics of dental lesions with the selection of minimally invasive preparation techniques and adhesive systems, supporting clinical decision-making and optimizing functional and esthetic outcomes according to individual patient situations.
9	Methods for restoring the esthetics of	Multimedia and oral presentation	2	-	The topic Methods for restoring the esthetics of anterior teeth is aligned with the framework of International Clinical Situations (ICS) by addressing therapeutic

	anterior teeth				solutions adapted to esthetic and functional requirements in various clinical contexts. It involves correlating the clinical characteristics of anterior teeth with the selection of appropriate restorative methods and materials, supporting clinical decision-making and achieving harmonious esthetic and functional outcomes according to individual patient situations
10	Methods for restoring the morphology and functionality of posterior teeth	Multimedia and oral presentation	2	-	The topic Methods for restoring the morphology and functionality of posterior teeth is aligned with the framework of International Clinical Situations (ICS) by addressing therapeutic solutions adapted to functional and biomechanical requirements in various clinical contexts. It involves correlating the structural characteristics of posterior teeth and dental lesions with the selection of appropriate restorative methods and materials, supporting clinical decision-making and the restoration of occlusal morphology, proximal contacts, and masticatory function according to individual patient situations.
11	Occlusal changes associated with direct coronal restorations: etiology and management	Multimedia and oral presentation	2	-	The topic Occlusal changes associated with direct coronal restorations: etiology and management is aligned with the framework of International Clinical Situations (ICS) by addressing the impact of restorations on occlusal balance in various clinical contexts. It involves correlating etiological factors with functional changes in occlusion and associated clinical manifestations, supporting the identification of occlusal imbalances and the establishment of appropriate therapeutic approaches to restore function and prevent complications.
12	Periodontal considerations in direct coronal restorations	Multimedia and oral presentation	2	-	The topic Periodontal considerations in direct coronal restorations is aligned with the framework of International Clinical Situations (ICS) by integrating the relationship between dental restorations and periodontal tissue health in various clinical contexts. It involves correlating restoration characteristics with periodontal tissue response, supporting the maintenance of periodontal health, prevention of complications, and adaptation of therapeutic approaches according to individual patient situations.
13	Failure of direct composite resin restorations and their management	Multimedia and oral presentation	2	-	The topic Failure of direct composite resin restorations and their management is aligned with the framework of International Clinical Situations (ICS) by addressing the identification and analysis of causes of restoration failure in real clinical contexts. It involves correlating etiological factors with clinical manifestations and restoration performance, supporting the establishment of appropriate therapeutic strategies for correction or replacement according to individual patient situations.
14	Risk factors for healthcare personnel, accident prevention, and infection control	Multimedia and oral presentation	2	-	The topic Risk factors for healthcare personnel, accident prevention, and infection control is aligned with the framework of International Clinical Situations (ICS) by addressing clinical situations involving occupational exposure and safety in healthcare settings. It involves the identification and management of biological, chemical, and mechanical risk factors, as well as the implementation of accident prevention measures and infection control protocols, supporting a safe clinical environment and the adaptation of professional conduct according to specific clinical contexts.
Bibliography Sturdevant's Art and Science of Operative Dentistry 8th Edition - January 20, 2025					

10.2 Content of workout, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Occupational safety methods – training. Proper use of equipment and instruments	Interactive dialog	4	-	-
2	Patient record: stages, examination methods, diagnosis, and treatment planning	Clinical case exemplification, interactive dialogue	4	-	-
3	Pulp vitality tests – materials and techniques	Clinical case exemplification, interactive dialogue	4	Students will apply these methods during the treatments performed on patients.	-
4	The importance and role of paraclinical examinations – panoramic and periapical radiography	Clinical case exemplification, interactive dialogue	4	Students will apply these methods during the treatments performed on patients.	-
5	Differential and positive diagnosis in uncomplicated dental caries	Clinical case exemplification, interactive dialogue	4	Students will apply these methods during the treatments performed on patients.	-
6	Types of classifications of carious lesions	Clinical case exemplification, interactive dialogue	4	Students will apply these methods during the treatments performed on patients.	-
7	Indices used in restorative dentistry (DMF, ICDAS)	Clinical case exemplification, interactive dialogue	4	Students will exemplify the application of DMF and ICDAS during treatments performed on patients.	-
8	Bioactive materials used in pulp protection	Clinical case exemplification, interactive dialogue	4	CBL	-
9	Zinc oxide, polycarboxylate, and zinc phosphate cements: indications and techniques	Clinical case exemplification, interactive dialogue	4	Students will apply these materials in prepared cavities during the clinical training period.	-
10	Adhesive systems: properties and application techniques	Clinical case exemplification, interactive dialogue	4	Students will apply these materials in prepared cavities during the clinical training period.	-
11	Caries risk assessment	Interactive dialogue, case presentation	4	CBL	-
12	Direct coronal restorations on anterior teeth	Clinical case exemplification, interactive dialogue	4	-	-
13	Direct coronal restorations on posterior teeth	Clinical case exemplification, interactive dialogue	4	-	-
14	Refacerea dinților cu distrucții coronare importante	Clinical case exemplification, interactive dialogue	4	-	-

Bibliography

Mount GJ, Hume WR. Conservarea și restaurarea structurii dentare. Editura ALL MEDICALL, București, 1999.
Hănțoiu T, Monea M. Odontotherapy. Curs litografiat, University Press Tg.Mureș, 2019.
Ritter VA, Boushell LW, Walter r. Sturdevants Art and Science of Operative Dentistry. 8th Edition, St.Louis Missouri, 2025.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline Restorative Odontotherapy (Operative Dentistry) is aligned with the expectations of the professional community, relevant professional associations, and representative employers in the field of dental medicine. The curriculum reflects current clinical practices, technological advancements, and evidence-based standards, ensuring the acquisition of knowledge and skills required for professional integration. The discipline addresses the needs of the labor market by emphasizing the development of competencies related to diagnosis, treatment planning, and execution of restorative procedures, as well as adherence to quality standards, patient safety, and professional ethics. This alignment is supported by reference to European frameworks such as ESCO, facilitating the relevance and applicability of the training within the healthcare system.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Clinical reasoning, practical skills, correct use of materials and instruments, adherence to clinical protocols, patient management.	CBL (Case-Based Learning), continuous clinical assessment, case presentations.	30
- lecture	Understanding of theoretical concepts, ability to integrate and apply knowledge.	Interactive discussions, short quizzes.	0
Final evaluation			
- practical final exam	Clinical performance, accuracy of procedures, quality of restorations, professional behavior.	Practical exam / OSCE.	20
- theoretical final exam	Knowledge comprehension, analytical thinking, clinical reasoning.	UNIX	50
Minimal performance standards: Cases of uncomplicated dental caries in the initial (non-cavitated) stage, cavitated dental caries, and non-carious dental lesions. Radiographic examinations – panoramic, bitewing, and periapical radiographs. Application of diagnostic tests in uncomplicated caries. Correct application of adhesive techniques			

13. Must seen clinical situation list

Initial (non-cavitated) dental caries lesions and their clinical assessment
Cavitated dental caries affecting enamel and dentin
Non-carious dental lesions (erosion, abrasion, abfraction)
Clinical examination and diagnosis of dental hard tissue lesions
Caries risk assessment and application of diagnostic indices (DMF, ICDAS)
Use and interpretation of radiographic investigations (panoramic, bitewing, periapical)
Application of pulp vitality tests in differential diagnosis
Minimally invasive cavity preparation techniques
Direct coronal restorations in anterior teeth (esthetic restorations)
Direct coronal restorations in posterior teeth (functional restorations)
Use of adhesive systems and restorative materials (composite resins, cements)
Pulp protection techniques and dentin sealing
Finishing and polishing of restorations
Evaluation of restoration quality and identification of failures
Management of failed restorations and replacement strategies
Occlusal adjustments related to direct restorations
Periodontal considerations in restorative procedures
Infection control and occupational safety in clinical practice
Patient record completion, diagnosis, and treatment planning
Clinical case analysis and interactive case discussions

14. Clinical / practical abilities

Perform clinical examination of patients with dental hard tissue lesions
Record and complete patient dental charts and clinical records
Conduct caries risk assessment using standardized indices (DMF, ICDAS)
Perform and interpret pulp vitality tests
Interpret radiographic images (panoramic, bitewing, periapical)
Establish positive and differential diagnosis in dental caries
Develop individualized treatment plans for restorative cases
Perform minimally invasive cavity preparation techniques
Apply adhesive protocols according to clinical indications
Manipulate and apply restorative materials (composite resins, cements)
Perform direct coronal restorations on anterior teeth
Perform direct coronal restorations on posterior teeth
Apply pulp protection and dentin sealing techniques
Achieve proper proximal contacts and occlusal morphology
Perform finishing and polishing of restorations
Evaluate the quality and functionality of restorations
Identify and manage restoration failures
Perform occlusal adjustments when necessary
Apply infection control protocols in clinical practice
Use dental instruments and equipment safely and correctly
Communicate effectively with patients during treatment
Participate in clinical case analysis and discussions

15. Appointment timetable (for students)

Șef l dr Hănțoiu Tudor-Alexandru	30 MIN DUPA FIECARE CURS

Head of departament | Course coordinator | Practical activities coordinator(s)

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UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Digital technology in dentistry			
2.2 Course coordinator: Conf dr Cerghizan Diana			
2.3 Practical activities coordinator(s): Cerghizan Diana, Janosi Kinga Maria, Albu Ioana Aurița, Mureșan Izabella			
2.4 Year of study: IV	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 6	3.2 lecture: 2	3.3 practical activities: 4
3.4 Total hours in curriculum: 42	3.2 lectures: 14	3.6 practical activities: 28
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		21
- supplemental documentation at the library, from specialized information portals and in the field		20
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		20
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		62
3.9 Total hours		104
3.10 Credits		4

4. Prerequisites (where applicable)

4.1 curricular: Completion of relevant preclinical and clinical disciplines: Prosthodontics, Dental Materials, Dental Imaging, Endodontics Basic knowledge of digital technologies used in dentistry
4.2 competency: Knowledge of dental anatomy and occlusion Basic computer skills and familiarity with medical software Introductory understanding of digital workflows in dentistry

5. Conditions

5.1 for lectures: Lecture hall equipped with multimedia infrastructure (projector, CAD/CAM software, access to digital platforms)
5.2 for practical activities: Digital laboratory/clinical setting equipped with intraoral scanners, CAD/CAM systems, 3D printers, and digital planning software

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and

Occupations)

The course contributes to the development of ESCO competencies in the healthcare sector, particularly: - use of digital technologies in diagnosis and treatment - application of evidence-based medicine - operation of digital medical equipment - interdisciplinary collaboration - adaptation to technological innovations in dentistry

7. Objectives of the discipline

7.1 General objective: To develop the competencies required for the use of modern digital technologies in dental practice
7.2 Specific objectives: Understanding the principles of CAD/CAM systems in dentistry Using intraoral scanners and design software Performing the complete digital workflow (scan–design–manufacture) Integrating digital technologies into diagnosis and treatment Evaluating the advantages and limitations of digital technologies

8. Learning outcomes

8.1 Knowledge: Describe the principles of digital technologies in dentistry Identify types of CAD/CAM systems Explain the digital workflow in dental restoration fabrication Recognize indications for digital technologies
8.2 Skills: Use of digital systems for patient record documentation and management Use intraoral scanners to obtain digital impressions Design dental restorations using CAD software Interpret digital models and 3D images Integrate digital data into treatment planning
8.3 Responsibility and autonomy: Use digital equipment responsibly and safely Apply ethical principles and data protection standards Demonstrate autonomy in using digital technologies Critically evaluate digitally obtained results

9. Specific competencies acquired

9.1 professional competencies: Use of digital technologies in diagnosis and treatment planning Acquisition of digital impressions and virtual models Design of dental restorations using CAD/CAM systems Integration of radiological images and 3D scans into treatment planning Application of digital technologies in implantology and orthodontics
9.2 transversal competencies: Critical thinking in the use of digital technologies Adaptability to emerging technologies Interdisciplinary teamwork (dentist–technician collaboration) Lifelong learning and continuous professional development
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Digital Patient Records and Data Management. Ethics, data protection (GDPR), and digital workflow basics	Oral presentation, multimedia	2	-	-

2	Introduction to Digital Dentistry. Overview of digital workflow (scan–design–manufacture). Advantages and limitations	Oral presentation, multimedia	2	-	-
3	Intraoral Scanning. Principles, types of scanners, clinical applications, accuracy and limitations	Oral presentation, multimedia, demonstration videos	2	-	-
4	Digital Imaging in Dentistry. CBCT, digital radiography, 3D data acquisition and integration	Oral presentation, multimedia	2	-	-
5	CAD Systems in Dentistry. Digital design of restorations (crowns, bridges, veneers)	Oral presentation, multimedia, software demonstration	2	-	-
6	CAM Technologies. Milling, 3D printing, materials used in digital dentistry	Oral presentation, multimedia	2	-	-
7	Digital Workflow in Implantology and Orthodontics. Guided surgery, aligners, digital planning	Interdisciplinary integrated course - Oral presentation, multimedia, case-based examples	2	Course delivered in collaboration with Oral Surgery and Orthodontics disciplines	-

Bibliography
lecture notes
Cortes, Arthur R. G., editor. Digital Dentistry: A Step-by-Step Guide and Case Atlas. John Wiley & Sons, 2022

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to digital workflow. Familiarization with intraoral scanners. Intraoral scanning of dental arches	Demonstration, hands-on practice (simulator/real patient)	4	-	-
2	Intraoral scanning for fixed prosthetic restorations (clinical/simulator)	Demonstration, hands-on practice, case-based training	4	-	-
3	Intraoral scanning for implant-supported restorations (simulator)	Demonstration, hands-on practice	4	-	-
4	Auto-evaluation of scanned dental preparations. Accuracy and error analysis	Case-based learning (CBL), digital analysis	4	-	-
5	Digital occlusal analysis. Interpretation of occlusal relationships in virtual environment	Demonstration, hands-on software use	4	-	-
6	Digital design of fixed prosthetic restorations (CAD). Making of digital models and restorations	Hands-on practice, software-based training	4	-	-
7	Manufacturing of restorations: 3D printing of models and CAM fabrication	Demonstration, hands-on practice	4	-	-

Bibliography
1. Sailer, I., Fehmer, V. Și Pjetursson, B. E. Fixed Restorations: A Clinical Guide to the Selection of Materials and Fabrication Technology. Chicago: Quintessence Publishing. 2021
2. Cortes ARG, editor. Digital Dentistry: A Step-by-Step Guide and Case Atlas. Hoboken: Wiley-Blackwell; 2022.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The course content is aligned with current requirements of the dental profession and labor market, considering:
The increasing digitalization of dental practices
The demand for fast, precise, and efficient CAD/CAM treatments
Integration of advanced technologies into diagnosis and treatment
Employers' expectations regarding graduates' digital competencies
Continuous development of dental materials and digital equipment

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade

Evaluation during the semester			
- practical activities	Active participation in practical sessions Acquisition of digital skills (scanning, design, analysis) Accuracy and quality of performed procedures Ability to apply knowledge in clinical/ simulated cases	Direct observation of practical skills Evaluation of completed digital tasks (scans, designs, models)	25
- lecture	Active participation in lectures Understanding of key concepts in digital dentistry Ability to answer conceptual and applied questions	Short quizzes / multiple-choice tests Interactive discussions	15
Final evaluation			
- practical final exam	Ability to perform digital procedures (intraoral scanning, CAD design, data analysis) Accuracy and quality of execution Proper use of digital equipment	Practical exam: execution of a digital task (e.g., intraoral scan / basic CAD design / digital analysis)	20
- theoretical final exam	Level of theoretical knowledge acquisition Understanding of digital workflows and technologies Ability to integrate knowledge into clinical reasoning	Final project (digital workflow case) Short written test (MCQ)	40
Minimal performance standards: Minimum grade for passing: 5 (out of 10) Mandatory participation in practical activities Minimum grade of 5 at the final practical examination Completion of required practical skills (as per clinical skills logbook) Active participation in continuous assessment activities			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Cerghizan Diana	Marți 9-12, joi 9-12 sau 30 minute dupa fiecare activitate teoretica si practică

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

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1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Prosthodontics (2)			
2.2 Course coordinator: Conf dr Cerghizan Diana			
2.3 Practical activities coordinator(s): Conf. Dr. Jánosi Kinga Mária, Sef lucr. Dr. Baloș Monica Dora, Șef lucr. Dr. Albu Aurița Ioana, Asist. drd. Mureșan Izabella-Éva			
2.4 Year of study: IV	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8	3.2 lecture: 2	3.3 practical activities: 6	
3.4 Total hours in curriculum: 112	3.2 lectures: 28	3.6 practical activities: 84	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			6
- supplemental documentation at the library, from specialized information portals and in the field			6
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			5
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			18
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Completion of Prosthodontics (1) Knowledge of occlusion, dental materials, and single-tooth restorations
4.2 competency: Ability to perform tooth preparation for single crowns Basic skills in impression techniques and provisional restorations Ability to evaluate occlusion and the stomatognathic system Basic treatment planning skills in prosthodontics

5. Conditions

5.1 for lectures: Lecture hall equipped with multimedia infrastructure (projector, audio-video system)
5.2 for practical activities: Preclinical laboratory and dental clinic equipped with dental units and prosthetic instruments

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and

Occupations)

The course contributes to the development of ESCO competencies in healthcare, particularly: - assessing oral health status and diagnosing partial edentulism - planning and performing fixed prosthetic treatments - selecting and using dental materials and techniques - applying evidence-based clinical decision-making - ensuring patient safety and quality of care - communicating effectively with patients and healthcare teams - collaborating within multidisciplinary teams

7. Objectives of the discipline

7.1 General objective: To develop competencies required for the diagnosis and treatment of partial edentulism using fixed prosthetic restorations
7.2 Specific objectives: Understanding the biomechanical principles of dental bridges Establishing prosthetic treatment plans Performing tooth preparations for abutments Applying impression techniques for multi-unit restorations Evaluating and adjusting fixed prosthetic restorations

8. Learning outcomes

8.1 Knowledge: Describe the principles of fixed partial dentures Identify types of partial edentulism and treatment options Explain clinical and laboratory stages of multi-unit restorations Recognize indications and contraindications of dental bridges
8.2 Skills: Perform tooth preparation for abutment teeth Carry out impression techniques for multi-unit restorations Develop prosthetic treatment plans for partial edentulism Apply occlusal principles in fixed prosthodontics
8.3 Responsibility and autonomy: Apply ethical and professional standards in patient care Demonstrate responsibility in treatment planning and execution Work independently while recognizing professional limits Critically evaluate prosthetic treatment outcomes

9. Specific competencies acquired

9.1 professional competencies: Evaluation of partial edentulism and indication for prosthetic treatment Planning and execution of fixed partial dentures (dental bridges) Tooth preparation for abutment teeth Impression techniques for multi-unit restorations Application of occlusal principles in complex prosthetic treatments
9.2 transversal competencies: Critical thinking and clinical decision-making Effective communication with patients and medical team Interdisciplinary teamwork Development of professional autonomy
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Partially edentulous: Definition, nomenclature, etiology, clinical forms, symptoms, evolution and complications. (Part I)	Oral and multimedia presentation	2	-	-
2	Partially edentulous: Definition, nomenclature, etiology, clinical forms, symptoms, evolution and complications. (Part II)	Oral and multimedia presentation	2	-	-
3	Clinical examination of the partially edentulous patient	Oral and multimedia presentation - assessment test	2	-	-
4	General principles in the treatment of partial edentation by dental bridges	Oral and multimedia presentation	2	-	-
5	The therapeutic algorithm in the partial edentation treated by dental bridges	Oral and multimedia presentation	2	-	-
6	Preprosthetic non-specific and specific preparations (pro prosthetic) (Part I)	Oral and multimedia presentation	2	-	-
7	Preprosthetic non-specific and specific preparations (pro prosthetic) (Part II)	Oral and multimedia presentation	2	-	-
8	Clinical and technical stages of dental bridge construction - impression	Oral and multimedia presentation	2	-	-
9	Clinical and technical stages of dental bridge construction - determination of intermaxillar relation	Oral and multimedia presentation	2	-	-
10	Clinical aspects of special bridges - Resin bonded bridge	Oral and multimedia presentation	2	-	-
11	Clinical aspects of special bridges - movable and removable bridges	Oral and multimedia presentation	2	-	-
12	Implants supported dental bridges	Oral and multimedia presentation	2	-	-
13	Application, control, and cementation of fixed partial prostheses in the oral cavity. Removal of fixed prosthetic bridges.	Oral and multimedia presentation - test	2	-	-
14	Therapeutic variants in the treatment of the partial edentation by dental bridges	Oral and multimedia presentation	2	-	-

Bibliography

Compulsory bibliography

1. Stephen F. Rosenstiel & Martin F. Land & Robert Walter: Contemporary Fixed Prosthodontics, 6th Edition, Elsevier, 2022
2. Keynotes

Optional bibliography

1. Schillingburg HT: Fundamentals of Fixed Prosthodontics 3rd edition, Quintessence Publishing Co. IL, 1997
2. Wiskott A: Fixed Prosthodontics. Principles and Clinics. Quintessence Publishing Co. IL, 2011
3. Pongracz A: Rogzedish fogpotlasok, UMF Tg.Mureş, 2003
4. Forna N: Dental Prosthetics, vol.I, pp. 401-805 - Topics included in residency, Encyclopedic Publishing House, 2011
5. Stomatologie, manual pentru rezidentiat, volumul I, capitol 3, Sub redacția Prof. Dr. Ecaterina Ionescu

10.2 Content of workout, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
2	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
3	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
4	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-

5	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
6	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
7	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
8	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
9	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
10	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
11	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
12	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
13	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-
14	Establishing the treatment plan. Pre and pro prosthetic maneuvers. Treatment of the partial edentation by dental bridges.	Practical demonstrations, case presentations, application of real-world knowledge	6	-	-

Bibliography
Bibliography
1. Stephen F. Rosenstiel & Martin F. Land & Robert Walter: Contemporary Fixed Prosthodontics, 6th Edition, Elsevier, 2022
Keynotes

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The course content is aligned with current requirements of the dental profession and labor market, considering:
- the need for treatment of partial edentulism using fixed prosthetic restorations
- increasing expectations regarding function and aesthetics of prosthetic work
- use of modern materials and technologies in prosthodontics
- employer expectations regarding advanced clinical competencies
- integration of prosthetic treatment within comprehensive patient care

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Active participation in practical sessions Correct execution of clinical procedures Quality of tooth preparations and impressions Application of prosthetic principles in clinical/simulated situations	Appreciation of the activity carried out during the semester, by awarding a grade for each activity completed from the activity scale	15
- lecture	Active participation during lectures Understanding of theoretical concepts in fixed prosthodontics Ability to explain prosthetic treatment principles Accuracy of theoretical responses	Written tests / multiple-choice quizzes Interactive discussions	15
Final evaluation			

- practical final exam	The student's ability to perform, at the end of the internship, a correct examination of the partially edentulous with the establishment of the prosthetic diagnosis, to perform a correct analysis of a study model, to recognize different types of prosthetic work	oral exam	20
- theoretical final exam	Level of theoretical knowledge acquisition Understanding of prosthetic concepts and treatment planning Ability to integrate knowledge in clinical context	Level of theoretical knowledge acquisition Understanding of prosthetic concepts and treatment planning Ability to integrate knowledge in clinical context	50

Minimal performance standards:
Accumulation of more than 5 absences from clinical training sessions (excused or unexcused) leads to non-admission to both the practical and theoretical examinations.
The maximum number of practical sessions that can be recovered is 2.
Continuous assessment
1. During practical activities
Fulfilment of the minimum activity requirements:
• Examination, diagnosis, and treatment planning for fixed prosthetic restorations
• Performing diagnostic preparations and wax-ups/mock-ups
• Tooth preparation for fixed prosthetic restorations
• Gingival retraction
• Determination of RIM (recording intermaxillary relationships) in partial edentulism
• Try-in of fixed prosthetic restorations
• Cementation of fixed prosthetic restorations
Assessment:
• Grades obtained for each criterion within the minimum activity requirements
Minimum passing grade:
• 5.00 (no rounding allowed)
2. During lectures
• Passing the tests conducted during the semester with a minimum grade of 5.00
Final assessment
1. Final practical examination
• Minimum passing grade: 5.00 (no rounding allowed)
• Students who do not pass the practical exam are still allowed to take the theoretical exam
2. Final theoretical examination
• Multiple-choice test (MCQ) based on mandatory bibliography, with approximately 10% of questions derived from course notes
Minimum passing grade:
• 5.00 (no rounding allowed)
Failure to pass either the practical or the theoretical examination requires retaking the failed exam in the next examination session.
Must Seen Clinical Situations List
Students must be exposed to the following clinical cases during training:
1. Tooth with extensive coronal destruction treatable with post and core (DCR)
2. Single-tooth anterior edentulism
3. Single-tooth posterior edentulism
4. Partial anterior edentulism with two or more missing teeth, treatable with fixed bridges
5. Extended posterior partial edentulism with two or more missing teeth, treatable with fixed bridges
6. Mixed edentulism
7. Mixed partial edentulism with initially stable occlusion that becomes unstable after tooth preparation
8. Mixed partial edentulism with unstable occlusion

13. Must seen clinical situation list

Tooth with extensive coronal destruction treatable with post and core (DCR)
Single anterior edentulism
Single posterior edentulism
Partial anterior edentulism with two or more missing teeth, treatable with fixed dental bridges
Extended posterior partial edentulism with two or more missing teeth, treatable with fixed dental bridges
Mixed edentulism
Mixed partial edentulism with initially stable occlusion that becomes unstable following tooth preparation
Mixed partial edentulism with unstable occlusion

14. Clinical / practical abilities

Examination, diagnosis, and treatment planning for fixed prosthetic restorations

Performing diagnostic preparations and wax-ups/mock-ups Tooth preparation for fixed prosthetic restorations Gingival retraction Determination of intermaxillary relationships (RIM) in partial edentulism Try-in of fixed prosthetic restorations Cementation of fixed prosthetic restorations Level 3 – The student performed the procedure under the supervision of the instructor (the student achieved the expected outcome).

15. Appointment timetable (for students)

Conf dr Cerghizan Diana	30 minute after each theoretical/practical activity

Head of departament | Course coordinator | Practical activities coordinator(s)

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1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Forensic medicine			
2.2 Course coordinator: Șef l dr Carașca Cosmin			
2.3 Practical activities coordinator(s): Sef Lucrari Dr. Carasca Cosmin			
2.4 Year of study: IV	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			25
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			25
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			76
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: Anatomy, Physiology, Physiopathology, Clinical Medicine
4.2 competency: not required.

5. Conditions

5.1 for lectures: Access to a videoprojector laptop
5.2 for practical activities: Access to the practical activities room of The Legal Medicine Institute of Targu Mures, which has the logistical requirements(image recording system in the autopsy room, videoprojector, laptop)

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

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7. Objectives of the discipline

7.1 General objective:
Obtaining theoretical and practical knowledge in legal medicine specialty as well as the basic legislative notions used in the current medico-legal practice

7.2 Specific objectives:
Obtaining knowledge regarding medico-legal expertise on living persons(traumatology, psychiatric, parentage) as well regarding cadavers(necropsy).
Correct recognition and interpretation of physical signs of violence .
Correct recognition and interpretation of the criterias of death in clinical practice and in the autopsy room.
Knowledge of the correct completion of death certificates.
Obtaining knowledge regarding the thanatogenesis and specific lesions present in different causes of death.

8. Learning outcomes

8.1 Knowledge:
Students will acquire:

The fundamental concepts of forensic medicine, as well as the role and organizational structure of the medico-legal system in Romania.

The principles of medico-legal expertise: legal framework, stages of evaluation, and the types of medico-legal documents (certificate, expert report, medico-legal autopsy).

Medico-legal causation, mechanisms of injury production, types of trauma, and the interpretation of medico-legal consequences.

Medico-legal aspects of death: thanatological signs, classification of manners of death, and indicators requiring additional investigations.

Forensic toxicology (general principles), including the collection, preservation, and interpretation of toxicological samples.

Medico-legal aspects of sexual violence, child abuse, and domestic violence.

Professional responsibility and medical malpractice.

8.2 Skills:
Students will acquire the ability to:

Perform a medico-legal clinical examination under supervision, in accordance with methodological guidelines.

Correctly identify and describe traumatic injuries using appropriate forensic terminology.

Formulate a preliminary medico-legal opinion regarding the severity of injuries and the necessity of medico-legal care, in accordance with legal standards.

Properly collect biological samples for toxicological analysis, DNA testing, and other specific examinations.

Accurately complete standard medico-legal documents: examination forms, diagrams, and injury descriptions.

Recognize medico-legal situations that require an autopsy and understand the general principles of forensic autopsy.

Critically analyze medical records and correlate them with medico-legal findings.

Communicate effectively with patients, judicial authorities, and healthcare personnel within the context of medico-legal practice.

8.3 Responsibility and autonomy:
Students will understand and practice:

The professional responsibilities associated with medico-legal activities, including the importance of objectivity, impartiality, and confidentiality.

Compliance with legislation regarding patient rights, data protection, evidence integrity, and document handling.

The correct application of protocols used within Institutes of Forensic Medicine.

Managing sensitive situations, such as cases involving victims of abuse or vulnerable individuals.

Upon completion of the course, the student will have:

Limited autonomy, appropriate to the level of training, in:

assessing minor injuries,

formulating preliminary opinions,

drafting medico-legal notes or diagrams,

participating in medico-legal activities under the supervision of a forensic physician.

The ability to recognize the limits of their own competence and the necessity of requesting the intervention of a specialist forensic physician.

Professional confidence in applying theoretical knowledge to real situations, while upholding the principles and ethics of the profession.

9. Specific competencies acquired

9.1 professional competencies: Knowledge of the legal situations and the requirement proceedings of medico-legal expertise on living persons (tratumatology, psychiatry, parentage, etc), and cadavers (necropsy). Correct description and interpretation of violent bodily lessions. Correct completion of the death certificate. Knowledge of the thanatogenesis and the specific lesional aspects of some causes of death
9.2 transversal competencies: Respecting the ethical standards of handling and examination of cadavers. Integration of knowledge from other disciplines in a medico-legal and legal context
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	MEDICO-LEGAL TANATOLOGY Definition and stages of death, medico-legal clasfication of death, The signs of death	lecture	2	-	agression/violence
2	TRAUMATIC LESIONS (medico-legal causality , primary traumatic lesions). LESIONS BY SHARP OBJECTS.	lecture, TBL session	2	-	Trauma of the limbs , agression/ violence
3	MECHANICAL TRAUMAS AND THEIR EFFECTS ON DIFFERENT TISSUES. FALLING AND PRECIPITATION.LESIONS AND DEATH BY ONE'S OWN MEANS OF ATTACK/DEFENCE	lecture	2	-	cyanosis,cardiopulmonary arrest,trauma of the limbs, sepsis, shock, coagulation disorders
4	MECHANICAL ASPHYXIA.LESIONS AND DEATH BY TRAFFIC ACCIDENTS.LESIONS AND DEATH BY FIREGUNS	lecture	2	-	cyanosis,cardiopulmonary arrest,trauma of the limbs, sepsis, shock, coagulation disorders
5	LESIONS AND DEATH BY PHYSICAL AND CHEMICAL AGENTS	lecture	2	-	Hypothermia, cerebral palsy, burns, acido-basic inbalance,poisoning
6	FORENSIC PSYCHIATRIC EXPERTISE. FORENSIC EXPERTISE IN INPRISONMENT CASES.FORENSIC EXPERTISE IN SEXUAL OFFENCES. PATERNITY.INFANTICIDE	lecture	2	-	agression/violence, suicide, self-mutilation

7	DNA EXPERTISE IN CIVIL AND CRIMINAL LAW. FORENSIC EXPERTISE IN MEDICAL LIABILITY CASES	lecture	2	-	Substance abuse, drug reactions

Bibliography
C.C. Radu, C. Carasca, T. Hogea. Medicină legală- suport de specialitate. Editura University Press.2020
C.C.Radu.Aspecte medico-legale si etice ale traumatismului cranio-facial.Editura Universitatii din Oradea.2016
C.C.Radu. Notiuni introductive de bioetica in medicina legala. Editura Universitatii din Oradea. 2015
STEP-UP to USMLE STEP 2 CK, 5th Edition
Knight's Forensic Pathology - 4th Edition
V.Belis. Tratat de medicina legala. Vol. 1,2 . Editura medicala Bucuresti.1995

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	MEDICO-LEGAL TANATOLOGY. Definition and stages of death, medico-legal clasification of death. The signs of death	practical activities	2	-	Agression/violence
2	TRAUMATIC LESIONS (medico-legal causality, primary traumatic lesions).LESIONS PRODUCED BY SHARP WEAPONS	practical activities	2	-	trauma of the limbs, agression/violence
3	MECHANICAL TRAUMAS AND THEIR EFFECTS ON DIFFERENT TISSUES. FALLING AND PRECIPITATION.LESIONS AND DEATH BY ONE'S OWN MEANS OF ATTACK/DEFENSE	practical activities	2	-	thoracic /abdominal trauma, trauma of the limbs, agression/violence
4	MECHANICAL ASPHYXIA. LESIONS AND DEATH BY TRAFFIC ACCIDENTS. LESIONS AND DEATH BY FIREARMS	practical activities	2	-	cyanosis, cardiopulmonary arrest, trauma of the limbs, sepsis, shock, coagulation disorders.
5	LESIONS AND DEATH BY PHYSICAL AND CHEMICAL AGENTS	practical activities ,CBL	2	-	Hypothermia, cerebral palsy, burns, acido-basic inbalance, poisoning
6	FORENSIC PSYCHIATRIC EXPERTISE.FORENSIC EXPERTISE IN INPRISONMENT CASES.FORENSIC EXPERTISE IN SEXUAL OFFENCES .PATERNITY. INFANTICIDE	practical activities	2	-	agression/violence. Suicide, self-mutilation
7	DNA EXPERTISE IN CIVIL AND CRIMINAL LAW.FORENSIC EXPERTISE IN MEDICAL LIABILITY CASES	practical activities	2	-	Substance abuse, drug reactions

Bibliography
1. C.C. Radu, C. Carasca, T. Hogea. Forensic medicine- specialty support, University press, 2021
2. C.C.Radu.Aspecte medico-legale si etice ale traumatismului cranio-facial.Editura Universitatii din Oradea.2016
3. C.C.Radu. Notiuni introductive de bioetica in medicina legala. Editura Universitatii din Oradea. 2015
4. STEP-UP to USMLE STEP 2 CK, 5th Edition
5. Simpson s Forensic Medicine, 14th edition
6. V.Belis. Tratat de medicina legala. Vol. 1,2 . Editura medicala Bucuresti.1995

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Analysing done in the discipline is followed by discussions in order to harmonize with other disciplines.The equivalence between the content and the expectations of the academical comunity, it's representatives, professional associates and staff is taken into account.
The discipline follows to offer the students optimal premises to get sucessfully hired, imediately after graduation, in residency programmes in Romania and other EU countries.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	assessment during the practical activities	Assessment during the lectures using interactive questions	15

- lecture	assessment during the lectures	Assessment during the lectures using interactive questions	15
Final evaluation			
- practical final exam	PA assessment- forensic certificate	Assessment during the recapitulative lecture	10
- theoretical final exam	Examination in the form of multiple-choice questions (MCQs) with single or multiple correct answers (UNIX Examination Center).	Multiple question test	60
Minimal performance standards: Minimal passing grade is 5			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Carașca Cosmin	Wednesday 10 am

Head of departament Course coordinator Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M3
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Pediatrics			
2.2 Course coordinator: Șef l dr Chinceșan Mihaela-Ioana			
2.3 Practical activities coordinator(s): Sef l dr Chincesan Mihaela-Ioana			
2.4 Year of study: IV	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			25
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			25
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			76
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: nu este cazul
4.2 competency: nu este cazul

5. Conditions

5.1 for lectures: nu este cazul
5.2 for practical activities: nu este cazul

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Disciplina Pediatrie contribuie la dezvoltarea competențelor definite în cadrul ESCO: - Diagnostichează diverse afecțiuni specifice copilului - Interpretează teste de diagnostic pentru toate patologiile copilului - Dezvoltă planuri de tratament pentru pacienți pediatrici care suferă de afecțiuni respiratorii, digestive, cardiace,

renale, hemato-oncologice, neurologice
- Administreată tratament medical pentru copiii cu diverse patologii
- Oferă consiliere copiilor cu patologii pediatrice
- Efectuează cercetare în domeniul pediatriei

7. Objectives of the discipline

7.1 General objective:
Cunoașterea îngrijirii pediatrice de bază.

7.2 Specific objectives:
Cunoașterea patologiei pediatrice specifice: neonatologie, pneumologie, gastroenterologie, hematologie și oncologie pediatrică.

8. Learning outcomes

8.1 Knowledge:
Studentul identifica si descrie metodele de diagnostic pozitiv, diagnostic diferential si elaboreaza planuri terapeutice pentru diverse patologii pediatrice in domeniul pediatriei.

8.2 Skills:
Studentul interpreteaza adecvat investigatiile complementare pentru diverse patologii pediatrice, formuleaza puncte de vedere despre diagnosticele pozitiv si diferential, propune strategii terapeutice individualizate in patologia pediatrica.

8.3 Responsibility and autonomy:
Studentul interpreteaza datele clinice si paraclinice specifice patologiei pediatrice, argumenteaza si identifica diagnosticul de baza si diagnosticul diferential in patologia pediatrica , identifica solutii terapeutice in domeniul pediatriei.

9. Specific competencies acquired

9.1 professional competencies:
Recunoașterea semnelor clinice specifice copilului cu patologia prezentată în programa cursului
Efectuarea manevrelor diagnostice și terapeutice pentru bolile enumerate în programă
Interpretarea examenelor complementare adecvate în patologia pediatrică
Elaborarea unui plan terapeutic personalizat pentru copil
Prezentarea unui caz clinic de pediatrie.

9.2 transversal competencies:
Dobândirea abilităților de comunicare orală și scrisă atât cu mama, cât și cu pacientul pediatric
Realizarea unui proiect, îndeplinirea cu responsabilitate a sarcinilor specifice unui echipă
Realizarea de proiecte sub coordonare pentru rezolvarea unor probleme specifice în domeniul pediatric, cu evaluarea corectă a volumului de muncă, a resurselor disponibile, a timpului necesar finalizării și a riscurilor, respectând normele deontologice și etica profesională în domeniu, precum și regulile de securitate și sănătate în muncă.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	CHILD CARE NOTIONS: describing the childhood periods. Growth and development: weight and height growth, perimeters, teething, psychical and motor development, methods for assessing the growth.Assessing the nutritional status - eutrophic, normotrophic, paratrophic, dystrophic child. Primary prophylaxis; Nutrition	Oral presentation + multimedia	2	nu	normal child development, weight gain, malnutrition , weight gain, infant feeding, immunisation
2	THE NEWBORN: neonatal period, evaluation of the gestational age, the newborn’s classification, the newborn’s assessment at birth.The newborn at term – morphological particularities, the newborn’s physiological	Oral presentation + multimedia	2	nu	normal pregnancy and deliver, normal child development, jaundice

	crises				
3	THE PATHOLOGY OF THE RESPIRATORY SYSTEM: Upper airways infections: Acute rhinopharyngitis – definition, etiology, clinical picture, evolution and treatment; Acute pharyngitis- definition, etiology, symptomatology, laboratory, complications, treatment; Low airways infections: Acute laryngitis, Epiglotitis, Acute bronchiolitis, Asthma, Pneumonia- definitions, general symptomatology, treatment	Oral presentation + multimedia	2	nu	oral disorders (incl. caries), dysphagia respiratory tract infection, breathlessness, Stridor, cyanosis, asthma, acid based disturbance
4	DISORDERS OF THE DIGESTIVE TRACT: Acute diarrhea, acute dehydration syndrome, acute gastritis and peptic ulcer in child. INFANT'S DEFICIENCY DISORDERS: RICKETS- classification, etiology, clinical picture, imagistic investigations, diagnosis, treatment, prophylaxis, evolution and prognosis	Oral presentation + multimedia	2	Theoretical evaluation	abdominal pain; loose stools; vomiting; peptic ulcer; disorders of calcium and vitamin D metabolism
5	THE PATHOLOGY OF THE CARDIOVASCULAR SYSTEM – Congenital cardiac malformations: etiology, the anamnesis of the child with congenital cardiac pathology, clinical exam, paraclinical investigations, classification of congenital cardiac malformations.Congestive cardiac failure: definition, etiology, clinical picture, signs and symptoms, treatment; Infectious endocarditis- definition, prophylaxis, risk groups	Oral presentation + multimedia	2	nu	cyanosis, breathlessness,oedema ; malformations of cardiovascular system; hepatomegaly,endocarditis
6	HEMATOLOGICAL PATHOLOGY - Anemias- Iron deficiency anemia- definition, etiology, clinical picture, laboratory, prophylactic and curative treatment; Leukemias- definition, etiology, classification, laboratory, treatment, prognosis. Hemorrhagic diatheses- classification of hemorrhagic syndromes, clinical picture; Hemophilia- definition, classification, clinical picture, laboratory, treatment; Platelets disorders: Purpura Schonlein- Henoch purpura, Immune thrombocytopenic purpura- definition, etiology, clinical manifestations, classification, laboratory, treatment, evolution and prognosis.	Oral presentation + multimedia	2	nu	anemia; lymphadenopathy; splenomegaly; lymphoproliferative disorders; purpura; coagulation disease
7	THE PATHOLOGY OF THE RENO-URINARY SYSTEM: urinary tract infections- definition, etiology, pathogeny, symptomatology, laboratory, treatment, evolution, prognosis; Post-streptococcal acute diffuse glomerulonephritis- definition, etiology, physiopathology, clinical picture, laboratory, diagnosis, treatment, prophylaxis; nephrotic syndrome- definition, classification; Idiopathic nephrotic syndrome- definition, etiology, pathogeny, symptomatology, laboratory, complications, diagnosis, treatment. THE PATHOLOGY OF THE CENTRAL NERVOUS SYSTEM: Febrile seizures- definition, etiology, pathophysiology, clinical picture, laboratory, diagnosis, treatment, prophylaxis	Oral presentation + multimedia	2	nu	dysuria, haematuria; polyuria; frequency of micturition; urinary tract infection; disturbance of consciousness

Bibliography

1. Pediatrics-Course notes. Marginean Cristina Oana, Toganel Rodica, Cucerea Manuela, Borka-Balas Reka, Duicu Carmen, Chincesan Mihaela Ioana, Pitea Ana Maria, Editura University Press Targu-Mures, 2013; 268 pag, ISBN: 978-973-169-266-1, cod CNCSIS 210

2. Care and nutrition of newborn and toddler. Marginean Cristina Oana, Editura University Press Targu-Mures 2012, 169 pag, ISBN 978-973-169-179-4

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	NOTIUNI DE PUERICULTURA. Examinarea clinica la sugar si copil. Foaia de observaţie în pediatrie. Metode de evaluare a cresterii si dezvolatarii la sugar si copil (percentile greutate, talie, perimetre), Dezvoltarea Neuro-psihomotorie, dentitia de lapte si definitiva.	demonstratii practice, discutii, prezentari de caz	2	CBL	dezvoltarea normala a copilului; malnutritie; castig ponderal
2	NOU NASCUTUL. Bolile carentiale ale sugarului. Nou nascutul la termen, prematur, postmatur, dismatur, Reflexele arhaice. Crizele nou nascutului. Alimentatia exclusiva si preponderenta, diversificare.	demonstratii practice, discutii, prezentari de caz	2	nu este cazul	sarcina si nasterea normala/ dezvoltarea normala a copilului, dezvoltarea normala a copilului, icter, alimentatia sugarului
3	PATOLOGIA APARATULUI RESPIRATOR. Infectii de cai respiratorii superioare – recunoastere clinica, examinari de laborator si paraclinice. Infectii de cai respiratorii inferioare – recunoastere clinica, examinari de laborator si paraclinice. Insuficienta respiratorie acuta, criterii clinice de recunoastere, oxigenoterapie, indicatii	demonstratii practice, discutii, prezentari de caz	2	nu este cazul	patologii ale cavitatii bucale; disfagie; otita medie; infectie de tract respirator, dispnee; stridor; cianoza; astm; dezechilibru acido-bazic
4	PATOLOGIA APARATULUI DIGESTIV. Criterii clinice de incadrare a sindromului de deshidratare acuta gradul I,II, III, abordare practica. Descrierea scaunelor normale si patologice la sugar, notarea in FO. BOLILE CARENTIALE ALE SUGARULUI: RAHITISMUL - tablou clinic, examen radiologic, diagnostic, tratament, profilaxia.	demonstratii practice, discutii, prezentari de caz	2	nu este cazul	durere abdominala; diaree; varsaturi; ulcer peptic, tulburari ale metabolismului calciului si vitaminei D
5	PATOLOGIA APARATULUI CARDIOVASCULAR. Anamneza copilului cu cardiopatie congenitala. Examinarea copilului cu MCC. Abordarea practica clinica. Investigatii paraclinice. Recunoasterea clinica a insuficientei cardiace la copil. Endocardita infectioasa – profilaxie.	demonstratii practice, discutii, prezentari de caz	2	nu este cazul	cianoza; dispnee; edem; malformatii ale sistemului cardiovascular; hepatomegalie; edem;endocardita
6	PATOLOGIA HEMATOLOGICA. Anemia feripriva - tablou clinic, laborator, tratament profilactic si curativ; Leucemiile - laborator, tratament. Diatezele hemoragice, hemofilia, sindroame hemoragipare trombocitare: criterii clinice de recunoastere, abordarea practica a hemostazei	demonstratii practice, discutii, prezentari de caz	2	nu este cazul	anemie;adenopatie; splenomegalie; patologii limfoproliferative, purpura; tulburari de coagulare
7	PATOLOGIA APARATULUI RENOURINAR. Infectiile tractului urinar. Examenul de urina. Sindromul nefrotic si Glomerulonefrita- abordare practica clinica, regimul de nefrita, nefroza. PATOLOGIA SISTEMULUI NERVOS CENTRAL : Convulsiile febrile - recunoastere clinica, tratament.	demonstratii practice, discutii, prezentari de caz	2	nu este cazul	disurie; hematurie; poliurie; diureza/frecventa mictiunilor, infectie de tract urinar; cefalee; presiune intracraniana crescuta

Bibliography

1.Pediatrics-Course notes. Marginean Cristina Oana, Toganel Rodica, Cucerea Manuela, Borka-Balas Reka, Duicu Carmen, Chincesan Mihaela Ioana, Pitea Ana Maria, Editura University Press Targu-Mures, 2013; 268 pag, ISBN: 978-973-169-266-1, cod CNCSIS 210
2.Care and nutrition of newborn and toddler. Marginean Cristina Oana, Editura University Press Targu-Mures 2012, 169 pag, ISBN 978-973-169-179-4

11. Correlations between the contents of the discipline and the expectations of the community

representatives, professional associations and representative employers in the domain

Absolventul trebuie să cunoască și să aplice cunoștințele în domeniul specialității sale.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	acuratetea prezentarii cazului	1 CBL –prezentare de caz	30
- lecture	nu este cazul	nu este cazul	0
Final evaluation			
- practical final exam	punctaj obtinut	intrebari tip redactional/test cu caracter practic	20
- theoretical final exam	punctaj obtinut	test grila – complement simplu/multiplu	50

Minimal performance standards:
-Prezenta la Evaluarea teoretica pe parcursul semestrului este obligatorie; nu exista posibilitate de repetare a acesteia, dar este permisa participarea la
examenul final. In caz de absenta se va nota cu nota 1.
-Examenul practic este obligatoriu; nota minima de trecere este 5.
-Se considera promovat examenul de Pediatrie in urmatoarele conditii cumulative:
1. Obtinerea unei note de trecere la evaluarea teoretica finala test grila (verificare) mai mare sau egala cu 5.00.
2. Obtinerea unei note de trecere la examenul practic final mai mare sau egala cu 5.00.
Toate notele intermediare vor avea doua zecimale si vor intra ca atare in calculul notei finale. Doar nota finala se va rotunji in sus pentru cele care sunt egale sau depasesc 50 de sutimi, si in jos pentru cele care nu indeplinesc acest criteriu.

13. Must seen clinical situation list

1. Nou-nascut; Sugar sanatos – dentitie temporara; Distrofia
2. Bronsiolita acuta; Laringita acuta
3. Malformatii cardiace congenitale; criza hipoxica
4. Endocardita infectioasa
5. Hemofilie; PTI
6. ITU febrile; Glomerulonefrita ac
7. Gastrita acuta
8. Convulsii febrile

14. Clinical / practical abilities

-Examenul cavitatii bucale la sugar/copil sanatos si cu diferite patologii (Pedodontie 1/3,4,5- pag 49; Pedodontie 2/1,2,5,8-pag 68, Patologie orala 1-14, pag 105)
-Masuri de prim-ajutor in urgentele pediatrice (criza hipoxica, hemoragii, febra, convulsii febrile etc) (Pedodontie 2/7-pag 68)

15. Appointment timetable (for students)

Șef l dr Chinceșan Mihaela-Ioana	30 minute dupa fiecare curs/ activitate practica

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Applications of laser in dentistry			
2.2 Course coordinator: Conf dr Bechir Edwin-Sever			
2.3 Practical activities coordinator(s):			
2.4 Year of study: IV	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Multimedia Equipment
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: Knowledge of laser therapies, indications, contraindications,

laser therapy variants
7.2 Specific objectives: Understanding the methods of examining patients. Understanding the importance of the oral rehabilitation concept supported by laser therapies. Acquiring the knowledge needed to develop an individualized treatment plan supported by laser therapies.

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: Acquiring the knowledge needed to develop a laser based treatment plan. Acquiring theoretical knowledge that implies choosing the type of laser and its parameters according to thefuture intervention. Ability to gain knowledge about choice of ideal candidate for laser treatments.
9.2 transversal competencies: Cognitive skills: Concepts of laser therapies Concepts of paraclinical investigations useful in formulating effective diagnoses and treatment plans. Affective-value competencies: Communication with the patient.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Laser Basics	Multimedia presentation	1	-	-
2	Laser physics	Multimedia presentation	1	-	-
3	Laser Safety	Multimedia presentation	1	-	-
4	Types of lasers	Multimedia presentation	1	-	-
5	Diode lasers	Multimedia presentation	1	-	-
6	Diode laser applications	Multimedia presentation	1	-	-
7	Diode lasers and diode laser clinical applications	Multimedia presentation	1	TBL	-
8	Nd:YAG lasers	Multimedia presentation	1	-	-
9	Nd:YAG laser applications	Multimedia presentation	1	-	-
10	Er:YAG lasers	Multimedia presentation	1	-	-
11	Er:YAG laser applications	Multimedia presentation	1	-	-

12	CO2 lasers	Multimedia presentation	1	-	-
13	CO2 laser applications	Multimedia presentation	1	-	-
14	Clinical situations for different types of lasers and their effects on tissues - soft tissues, hard tissues, implants	Multimedia presentation	1	TBL	-

Bibliography

1. Donald J. Coluzzi, Steven P. A. Parker, Lasers in Dentistry—Current Concepts, Springer, 2023.
2. Robert A. Convissar, Principles and Practice of Laser Dentistry, Elsevier Mosby, 2022.
3. Aldo Brugnera Jr., Samir Namour. Laser Dentistry: Current Clinical Applications, World Federation for LaserDentistry Universal Publishers, 2018.
4. Donald J. Coluzzi, Robert A. Convissar. Atlas Of Laser Applications In Dentistry, Quintessence Pub Co, 1stedition, 2007.
5. Patricia M. Freitas, Alyne Simões. Lasers in Dentistry: Guide for Clinical Practice, Wiley-Blackwell, 1st edition,2015.
6. Olivi Giovanni, De Moor Roeland, DiVito Enrico. Lasers In Endodontics, Springer International Publishing, 2016.
7. Course notes

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is relevant and updated to the requirements of the correct application of the notionsof laser therapies in oral rehabilitation, periodontology, implantology, and of general pathology, pharmacology,physiopathology and psychology.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	Knowledge of the theoretical aspects of the course.	3 TBL sessions	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Knowledge of the theoretical aspects of the course.	Multiple choice examination	70

Minimal performance standards:
Minimal performance standards:
Obtain the minimum score of 5 (five) for each evaluation component:
course:
- to know the basic notions regarding laser therapy,
- to participate in the TBL debates in the above-mentioned themes

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Bechir Edwin-Sever

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Radiology - dental imaging			
2.2 Course coordinator: Șef l dr Iacob Alina			
2.3 Practical activities coordinator(s): Șef lucrari Dr Iacob Alina, Șef lucrari Dr Coșarcă Adina, Șef lucrari Dr Bereczki-Temistocle Despina, Sef lucr Dr Golu Vlad, Șef lucrari Dr Petrovan Cecilia			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8	3.2 lecture: 4	3.3 practical activities: 4	
3.4 Total hours in curriculum: 56	3.2 lectures: 28	3.6 practical activities: 28	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			24
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			74
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: Possibility to visit and observe a dental radiological lab. Basic knowledge of oral and facial anatomy.

5. Conditions

5.1 for lectures: Lecture room, internet access, view-box
5.2 for practical activities: Radiological laboratory, view-box, dental and panoramic radiography archive (on films and digital)

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The ESCO framework, in conjunction with European guidelines on radiation protection (such as RP 136), establishes specific requirements for dental radiology to ensure safety for patients and staff.

Training and Competence Requirements
Structured CPD: Dental professionals must maintain their competence, with minimum requirements for continuing professional development (CPD) in radiology informatics and radiation protection.
Specific Training: Training must be tailored to the duties of the individual, particularly for using Cone Beam Computed Tomography (CBCT) or handheld units.
Justification: Staff must be competent in justifying exposures (weighing benefit vs. risk) and optimizing protection (ALARA principle—As Low As Reasonably Achievable)

7. Objectives of the discipline

7.1 General objective:
The acquiring of basic dental radiography techniques, indications, incidents used in dental medicine and oro-maxilo-facial surgery, theoretical knowledge and practical application of radio-protection methods for the doctor and the patient.

7.2 Specific objectives:
The ability to recognize normal anatomy (dental structures and facial bones) on X-ray images and to determine pathological modifications if they exist.

8. Learning outcomes

8.1 Knowledge:
Radiological interpretation specific to dental / oral medicine

8.2 Skills:
Radiological interpretation specific to dental / oral medicine, normal anatomy, variants and patological aspects (abnormal situations)

8.3 Responsibility and autonomy:
Identification of different pathological modification on dental and panoramic radiographies and assigning them to different clinical situations.

9. Specific competencies acquired

9.1 professional competencies:
The students learn different types of radiographical techniques and incidents used in dental medicine and maxillo-facial surgery, X-ray anatomy of teeth and jaws. They will acquire the ability to identify on x-ray films, normal dental structures and facial bones and to describe any lesion if exist. They learn radio-protection principles for medical stuff and patient.

9.2 transversal competencies:
The students learn to apply the radiological information to other subjects (in pathological cases), in order to combine clinical aspects with radiological findings

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Generalities - Dental X-ray device. X-ray film. X-ray image formation	Multimedia presentation	2	Discussion	NA
2	How is obtained the X-ray image. General imaging principles and techniques	Multimedia presentation	2	Discussion	NA
3	Radiation safety and protection in dentistry	Multimedia presentation	2	Discussion	NA
4	Normal radiographic anatomy	Multimedia presentation	2	Discussion X-ray image interpretation	NA
5	Imaging principles and techniques used in dental and maxillo-facial area	Multimedia presentation	2	Discussion X-ray image interpretation	NA
6	Radiographic techniques used in dentistry (intra-oral radiography examination, panoramic imaging)	Multimedia presentation	2	Discussion X-ray image interpretation	NA

7	Oral and Maxillo-facial Disorders. Interpretation of x-ray images	Multimedia presentation	2	Discussion X-ray image interpretation	NA
8	Dental Anomalies	Multimedia presentation	2	Discussion X-ray image interpretation	NA
9	Dental caries; complications of caries; periodontal disease	Multimedia presentation	2	Discussion X-ray image interpretation	NA
10	Inflammatory lesions of the jaws; trauma; cysts of the jaws	Multimedia presentation	2	Discussion X-ray image interpretation	NA
11	Maxillary sinus imaging; benign and malignant tumors of the jaws	Multimedia presentation	2	Discussion X-ray image interpretation	NA
12	Salivary glands; temporo-mandibular joint	Multimedia presentation	2	Discussion X-ray image interpretation	NA
13	Radiological examination in dental practice	Multimedia presentation	2	Discussion X-ray image interpretation	NA
14	Wrong X-rays. Sources of errors	Multimedia presentation	2	Discussion X-ray image interpretation	NA
Bibliography 1. White S.C., Pharoah M.J.: Oral Radiology: Principles and Interpretation, 5th Edition, Mosby, Philadelphia 2004					

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Prezentarea laboratorului radiologic. Noțiuni practice de radioprotecție	Demonstrație prectică	2	discuții	NA
2	Prezentarea aparatelor radiologice denare, filmul radiologic, developarea	Demonstrație practică	2	discuții	NA
3	Incidențe de craniu standard	Studierea și interpretarea radiografiilor	2	discuții, explicații	NA
4	Realizarea radiografiei panoramice	Prezenare multimedia	2	discuții	NA
5	Elemente anatomice decelabile pe radiografia panoramică	Studierea și interpretarea radiografiilor	2	Discuții, exerciții	NA
6	Elemente patologice decelabile pe radiografia panoramică	Studierea și interpretarea radiografiilor	2	discuții, exerciții	NA
7	Interpretarea radiografiei panoramice	CBL	2	discuții	NA
8	Radiografia retroalveolară - elemente anatomice și patologice la arcada superioară	Studierea și interpretarea radiografiilor	2	discuții, exerciții	NA
9	Radiografia retroalveolară - elemente anatomice și patologice la arcada inferioară	Studierea și interpretarea radiografiilor	2	discuții, exerciții	NA
10	Radiografia ”bite-wing” - elemente anatomice și patologice	Studierea și interpretarea radiografiilor	2	discuții, exerciții	NA
11	Interpretarea radiografiei retroalveolare	CBL	2	discuții, exerciții	NA
12	Exerciții - radiografia panoramică	Studierea și interpretarea radiografiilor	2	discuții, exerciții	NA
13	Exerciții - radiografii intraorale	Studierea și interpretarea radiografiilor	2	discuții, exerciții	NA
14	Recapitulare	Studierea și interpretarea radiografiilor	2	discuții, exerciții	NA
Bibliography 1. White S.C., Pharoah M.J.: Oral Radiology: Principles and Interpretation, 5th Edition, Mosby, Philadelphia 2004					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Each student should be able to recognize the normal image of the teeth and jaws on X-rays (panoramic and retroalveolar). They should also be able to identify different pathological dental and maxillo-facial lesions and to establish a general diagnosis based on X-ray image.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	According on discipline's specificobjectives	CBL, activitate practică	30
- lecture	--	-	0
Final evaluation			
- practical final exam	Acquiring practical concepts regarding dental radiography interpretation	Oral evaluation of dental radiography interpretation	30
- theoretical final exam	Acquiring theoretical concepts regarding dental radiology	Written evaluation - multiple choice question test (MCQ) UNIX	40
Minimal performance standards: Final Theoretical Examination Mark - minimum 5; mark under 5 = exam failed; Practical final exam mark - minimum 5; mark under 5 = exam failed; Final mark - minimum 5; mark under 5 = exam failed. The attendance - mandatory for practical activities; 20% unmotivated absences are allowed (4 hours PA = 2 PA);more then 20% unmotivated and unrecovered absences = exam failed The attendance - 50% for lecture			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Iacob Alina	30 de minute după ora de curs

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Psychiatry			
2.2 Course coordinator: Prof dr Mihai Adriana			
2.3 Practical activities coordinator(s): Asistent universitar drd. Marchean Horia			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: cunostiinte minime de psiho-farmacologie
4.2 competency: abilitatea de a efectua anamneza in limba romana, empatie si respect

5. Conditions

5.1 for lectures: calculator, videoproiector, boxe
5.2 for practical activities: sala de exersat si inregistrat interviul cu pacientul sau pacientul simulat, joc de rol, CBL, PBL

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Psychatric diseases, identification of mental health issues

7. Objectives of the discipline

7.1 General objective:

Achievement of knowledge about psychiatry and developing a respectful and professional attitude and avoid stigmatisation of patient with mental disorders
7.2 Specific objectives: Achievement of knowledge about psychiatric disorders: epidemiology, psychopathology, diagnostic, treatment, prognosis and prevention. Achievement of practical skills in doing mental status examination and identifying the sign and symptoms in psychiatry.

8. Learning outcomes

8.1 Knowledge: Achievement of knowledge about psychiatry
8.2 Skills: Achievement of practical skills in doing mental status examination and identifying the sign and symptoms in psychiatry.
8.3 Responsibility and autonomy: Achievement of knowledge about psychiatric disorders: epidemiology, psychopathology, diagnostic, treatment, prognosis and prevention.

9. Specific competencies acquired

9.1 professional competencies: Achievement of knowledge about psychiatric disorders: epidemiology, psychopathology, diagnostic, treatment, prognosis and prevention. Improvement of practical skills in communication and interpersonal relationships. Improvement of empathic understanding of persons suffering from psychiatric disorders. Understanding the limits and relations between the psychic normality and abnormality.
9.2 transversal competencies: Developing of a positive and responsible attitude towards the psychiatric disorder, and psychiatry in general. Ability to communicate with patients with mental disorders. Professionalism. Respect and avoid stigmatization of patients with mental disorders. Contributing to psycho-education of patient and family.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction in Psychiatry. Psychic normality and abnormality	online lecture, short debate about termn as normal/abnormal	2	lecture, debate	Normal child development
2	Vulnerability. Social support network. Personality Disorders	online lecture, disscusion about different types of personalities	2	lecture, questions/ answers	Learning disorders, Menopausal disorder, Chromosomal disorders
3	Semiology of psychic functions: senses, perception, attention, memory, hinking processes, imagination and awareness	lecture	2	interactive sessions	Confusion, Disturbance of consciousness, Tiredness
4	Semiology of psychic functions: affectivity, instincts, will and voluntary activity	lecture	2	interactive sessions	Psychosexual dysfunction, Sleep disturbance, Somatisation, Weight gain/ loss
5	Psychopathologic syndromes	TBL	2	interactive sessions	Suicide and self-harm
6	Psychiatric disorders related with cranial traumatism or other somatic disorder. Psychiatric emergencies	lecture	2	interactive sessions	Aggression/violence, Sexually transmitted diseases

7	Neurocognitive disorders. Intellectual disabilities	TBL	2	interactive sessions	Confusion, Crebrovascular disease, Degenerative CNS disease

Bibliography
Bibliography
Compulsory:
1. Kaplan & Sadock s, Comprehensive Textbook of Psychiatry, vol 1 – 2Ed, LIPPINCOTT Williams and Wilkins, 2016
2. Adriana Mihai, Otilia Butiu, Child and Adolescent Psychiatry, Ed Risoprint, Cluj Napoca 2014
3. Glen O. Gabbard, M.D., Gabbard's Treatments of Psychiatric Disorders, 5th Edition, 2014
4. Kaplan & Sadock s, Comprehensive Textbook of Psychiatry, 50th Aniversary Edition, LIPPINCOTT Williams and Wilkins, 2017

Optional:
5. D. Nutt and J. Ballenger, Anxiety disorders – Panic Disorder and Social Anxiety Disorder, Ed Willey Blackwell, 2005
6. Raymond W. Lam, Depression, ed Oxford, 2012
7. David Goldberg, Robin Murray, The Maudsley Handbook of Practical Psychiatry, Ed Oxford, 2006
- - -
1. Kumar and Clark’s Clinical Medicine, Elsevier publishing house, 10th edition, July 2020
2. Essentials of General Surgery and Surgical Specialities. Dr. Peter Lawrence M.D, 2018.
3. Ganti Latha, Lebowitz D, Rosario J, Vera A. Step-up to USMLE Step2 CK, 5th edition. 2020

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Affective disorders	case presentation	2	discussions	Affective disorders
2	Anxiety disorders	case presentation	2	discussions	Anxiety/phobia
3	Psychotic disorders	CBL	2	evaluation	Schizophrenia
4	Substance related disorders	case presentation	2	discussions	Substance abuse
5	Neurocognitive disorder	case presentation	2	discussions	Cerebrovascular disease
6	Obsessive compulsive disorder	case presentation	2	discussions	Sleep disturbance
7	Eating disorder	case presentation	2	discussions	Eating disorders, Weight gain, Weight loss

Bibliography
Bibliography
Compulsory:
1. Kaplan & Sadock s, Comprehensive Textbook of Psychiatry, vol 1 – 2Ed, LIPPINCOTT Williams and Wilkins, 2016
2. Adriana Mihai, Otilia Butiu, Child and Adolescent Psychiatry, Ed Risoprint, Cluj Napoca 2014
3. Glen O. Gabbard, M.D., Gabbard's Treatments of Psychiatric Disorders, 5th Edition, 2014
4. Kaplan & Sadock s, Comprehensive Textbook of Psychiatry, 50th Aniversary Edition, LIPPINCOTT Williams and Wilkins, 2017

Optional:
5. D. Nutt and J. Ballenger, Anxiety disorders – Panic Disorder and Social Anxiety Disorder, Ed Willey Blackwell, 2005
6. Raymond W. Lam, Depression, ed Oxford, 2012
7. David Goldberg, Robin Murray, The Maudsley Handbook of Practical Psychiatry, Ed Oxford, 2006
- - -
1. Kumar and Clark’s Clinical Medicine, Elsevier publishing house, 10th edition, July 2020
2. Essentials of General Surgery and Surgical Specialities. Dr. Peter Lawrence M.D, 2018.
3. Ganti Latha, Lebowitz D, Rosario J, Vera A. Step-up to USMLE Step2 CK, 5th edition. 2020

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Respect and avoid stigmatization of patients with mental disorders.
Contributing to psycho-education of patient and family.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade

Evaluation during the semester			
- practical activities	Communication ability, practical skills	case presentation	20
- lecture	Problem understanding, no stigmatisation	TBL	10
Final evaluation			
- practical final exam	Case understanding, medical thinking, treatment plan	Clinical evaluation	20
- theoretical final exam	Theorethical knowledge evaluation	Written examination: questions with multiple choice answers	50

Minimal performance standards:
Minimal performance standards:
For minimal standard the students have to recognise the signs and symptoms in psychiatry, make diferences between normal and pathological behaviour, elaborate a major diagnostic category and propose the treatment plan.

Must seen clinical situation list:

Affective disorders, Anxiety disorders, Psychotic disorders, Substance related disorders, Dementia

13. Must seen clinical situation list

Affective disorders, Anxiety disorders, Psychotic disorders, Substance related disorders, Dementia

14. Clinical / practical abilities

anamnesis, psychiatric evaluation, diagnosis, treatment plan

15. Appointment timetable (for students)

Prof dr Mihai Adriana	Miercuri 11:00-12:00 (Clinica Psihiatrie I)

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M4
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Ophthalmology			
2.2 Course coordinator: Șef l dr Tripon Robert-Gabriel			
2.3 Practical activities coordinator(s): SL dr Tripon Robert-Gabriel, As Univ dr Delia Ceteras			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: x
4.2 competency: x

5. Conditions

5.1 for lectures: x
5.2 for practical activities: x

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Acquisition of basic knowledge of general ophthalmology

7. Objectives of the discipline

7.1 General objective:

Acquisition of basic knowledge of general ophthalmology
7.2 Specific objectives: 1. Identify ophthalmic emergencies, drawing up an investigational plan for establishing finally the diagnostic of certainty by the eye specialist physician. 2. Positive diagnosis of uncomplicated eyelid or conjunctival diseases, development of a therapeutic drug plan, proper monitoring of the disease, recognition of unfavorable evolution and referring the patient to the ophthalmologist. 3. Appropriate monitoring of the therapeutic plan initiated by ophthalmologist. 4. Initiating preventive measures within a community when a contagious eye disease occurs. 5. Prophylaxis measures for avoiding the illness of the congener eye. 6. Referral to specialized screening of patients at risk for eye disease.

8. Learning outcomes

8.1 Knowledge: Acquisition of basic knowledge of general ophthalmology
8.2 Skills: 1. Identify ophthalmic emergencies, drawing up an investigational plan for establishing finally the diagnostic of certainty by the eye specialist physician. 2. Positive diagnosis of uncomplicated eyelid or conjunctival diseases, development of a therapeutic drug plan, proper monitoring of the disease, recognition of unfavorable evolution and referring the patient to the ophthalmologist. 3. Appropriate monitoring of the therapeutic plan initiated by ophthalmologist. 4. Initiating preventive measures within a community when a contagious eye disease occurs. 5. Prophylaxis measures for avoiding the illness of the congener eye. 6. Referral to specialized screening of patients at risk for eye disease.
8.3 Responsibility and autonomy: Individual management of cases

9. Specific competencies acquired

9.1 professional competencies: - C1 Identification of eye diseases, establishing a presumptive diagnosis, recognition of ophthalmic emergencies - C2 Knowing the therapeutic plan of diseases with positive diagnosis - C3 Prophylaxis measures for avoiding the illness of congener eye or of the community to which it belongs the patient - C4 Guidance of patients at risk to specialized ophthalmologic screening units - C5 The ability to participate to team research of ophthalmologic issues
9.2 transversal competencies: Multidisciplinary team work, understanding the objective of the activity, the assignment of specific duties to each specialty, the sequencing of work, verbal-written communication skills, linguistic skills to develop and present projects and to communicate with the patient as well as with team members.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Orbital and lachrimal sistem pathology	Oral presentation and PowerPoint	2	x	oedema, orbital swelling, brain tumor, red eye, visual impairment, trauma to head, tyroid disorders, inflammatory arthritis,
2	Eyelids diseases	Oral presentation and PowerPoint	2	x	oedema, allergic disorders, lymphoproliferative disorders, cranial nerve disorders, skin cancer, skin infections, skin ulcerations
3	Pathology of the conjunctiva	Oral presentation and PowerPoint	2	x	oedema, allergic disorders, inlammatory arthritis, lymphoproliferative disorders, red eye
4	Pathology of the cornea	Oral presentation and PowerPoint	2	x	brain tumor, red eye, visual impairment, visual loss, cranial nerve disorders

5	Lens disorders	Oral presentation and PowerPoint	2	TBL	agression/violence, visual impairment, visual loss, diabetes mellitus, trauma to head
6	Glaucoma	Oral presentation and PowerPoint	2	x	headache, red eye, visual impairment, visual loss, diabetes mellitus, glaucoma
7	Red eye, ophthalmological emergencies	Oral presentation and PowerPoint	2	x	agression/violence, falls, oedema, allergic disorders, cerebrovascular disease, red eye, visual impairment, visual loss, glaucoma, hypertension, poisoning, septicaemia

Bibliography
Mandatory bibliography:
Kanski's Clinical Ophthalmology, 9th Edition., author John F. Salmon, publisher Elsevier, 2019, ISBN 9780702077111
Karin Horvath, Florina Vultur, Gh. Muhlfay: Ophthalmology-Lecture notes, Editura University Press, UMF TgMures, 2014
Support bibliography:
Jack J. Kanski, Clinical Ophthalmology: A Systematic Approach, 7th Edition, 2011
American Academy of Ophthalmology, Basic and Clinical Science Course, 2010-2011

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Presenting ophthalmological office, equipment and medicinal substances used in ophthalmology. Case presentation from orbital pathology	Practical demonstrations, case presentation	2	x	oedema, orbital swelling, brain tumor, inflammatory arthritis, red eye, visual impairment, tyroid disorders, trauma to head
2	Examination of the eyelids, demonstrations, case presentation	Practical demonstrations, case presentation	2	x	oedema, allergic disorders, lymphoproliferative disorders, cranial nerve disorders, skin cancer, skin infections, skin ulcerations
3	Examination of the conjunctiva, learning examination maneuvers, therapeutic maneuvers (subconjunctival injection etc), case presentation	Practical demonstrations, case presentation	2	x	oedema, allergic disorders, inlammatory arthritis, lymphoproliferative disorders, red eye
4	Slit lamp examination of the cornea, case presentations, practical demonstrations (corneal foreign body removal, etc.)	Practical demonstrations, case presentation	2	x	brain tumor, red eye, visual impairment, visual loss, cranial nerve disorders
5	Cataract (examination, diagnosis, surgery)	Practical demonstrations, case presentation	2	CBL	agression/violence, visual impairment, visual loss, diabetes mellitus, trauma to head
6	Ocular tension, tonometry, computed perimetry, examination of glaucomatous patient	Practical demonstrations, case presentation	2	x	headache, red eye, visual impairment, visual loss, diabetes mellitus, glaucoma
7	Examination of the patient with ocular trauma, interdisciplinary investigations, tests, laboratory analysis, preparation for surgery	Practical demonstrations, case presentation	2	x	agression/violence, falls, headache, oedema, squint, visual impairment, visual loss, trauma to head

Bibliography
Mandatory bibliography:
Kanski's Clinical Ophthalmology, 9th Edition., author John F. Salmon, publisher Elsevier, 2019, ISBN 9780702077111
Karin Horvath, Florina Vultur, Gh. Muhlfay: Ophthalmology-Lecture notes, Editura University Press, UMF TgMures, 2014
Support bibliography:
Jack J. Kanski, Clinical Ophthalmology: A Systematic Approach, 7th Edition, 2011
American Academy of Ophthalmology, Basic and Clinical Science Course, 2010-2011

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Acquired ophthalmologic knowledges will serve to adequate recognition of ophthalmic emergencies, the

presumptive diagnosis and proper guidance of the patient to appropriate specialist.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	CBL	Oral evaluation	20
- lecture	TBL	Written evaluation	10
Final evaluation			
- practical final exam	x	x	0
- theoretical final exam	Knowledge of the material from theoretical lectures and practical activities	Written evaluation	70
Minimal performance standards: Knowing of minimum 50% from the presented subjects.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Tripon Robert-Gabriel	30 minutes after each lecture

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M3
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Neurology			
2.2 Course coordinator: Conf dr Bajko Zoltan			
2.3 Practical activities coordinator(s): Doctorand Oana Mosora, Doctorand Mihai Dumitreasa, Doctorand Medeea Roman, Doctorand Iulian Roman			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4	3.2 lecture: 2	3.3 practical activities: 2	
3.4 Total hours in curriculum: 28	3.2 lectures: 14	3.6 practical activities: 14	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: .
4.2 competency: .

5. Conditions

5.1 for lectures: Lecture room equipped with a video projector, computer, access to the university's educational platform, teaching materials, and appropriate visual aids for explaining neurological pathologies and their correlation with the field of dental medicine, as well as internet access.
5.2 for practical activities: Lecture room equipped with a video projector, computer, access to the university's educational platform, teaching materials, and appropriate visual aids for explaining the mechanisms of various neurological pathologies.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The correlation is carried out in accordance with ESCO logic, using descriptors relevant to the medical field and the training of future physicians, with an emphasis on: knowledge of medical sciences and human physiology, interpretation of medical results, analysis of scientific and medical data, critical thinking, application of medical sciences in problem-solving, and integration of knowledge in professional contexts.

7. Objectives of the discipline

7.1 General objective:
knowledge of neurological semiology and pathology

7.2 Specific objectives:
Acquiring the necessary knowledge on the causes, investigations, neurological manifestations and especially the recovery. In the case of a patient with additional heart problems, lung problems, liver problems, kidney problems, diabetes etc. (which are involved in the etiology of the neurological disease), completing the full range of care and medical knowledge that is required to be known and applied.

8. Learning outcomes

8.1 Knowledge:
Understanding of basic neuroanatomy and the function of the central and peripheral nervous systems.
Ability to recognize neurological symptoms relevant to oral and maxillofacial conditions.
Knowledge of common neurological disorders that may impact dental treatment.
Skills in assessing cranial nerve function, especially those related to facial and oral structures.
Development of clinical reasoning to correlate neurological findings with dental practice and patient management.

8.2 Skills:
Clinical examination of cranial nerves relevant to oral and facial regions.
Identification and assessment of neurological signs and symptoms in dental patients.
Interpretation of basic neurological findings in a clinical context.
Decision-making regarding referral to neurological or medical specialists.
Communication with patients about neurological conditions affecting dental care.

8.3 Responsibility and autonomy:
Verifies the accuracy of the information used in completing assigned tasks;
Logically argues the explanations formulated during course activities and practical work;
Identifies strengths and weaknesses in their own understanding of neurological mechanisms;
Selects appropriate bibliographic sources to deepen the studied concepts.

9. Specific competencies acquired

9.1 professional competencies:
-Fixing and deepening of basic concepts related to neuroanatomy, the neurological semiology, neurology with which the student will face during exercise profession.
-Acquiring the necessary knowledge on the causes, investigations, the neurological manifestations of these disease, especially diagnosis and treatment. Some patients in addition to the underlying disease, usually shows heart problems, lung problems, liver problems, kidney problems, diabetes etc. which may cause the neurological disease.
-Filling the whole range of medical knowledge that are required to be known and applied

9.2 transversal competencies:
- Identifying roles and responsibilities within a multidisciplinary team and applying of effective working techniques in team framework and in relationship with the patient
- Effective use of information sources and communication resources and training assistance (portals, Internet, specialized software, data bases, online courses, etc.). both in romanian and in a foreign language.
- Project working under coordination to solve specific issues with accurate assessment of workload, of available resources and time required to complete with application of the rules of conduct and professional ethics in the field, and health and safety at work.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Introduction in neurology. Upper motor neuron syndrome. Lower motor neuron syndrome, pathology of the peripheral nervous system (ALS, Polineuropathies, Lumbar disc herniation, Muscular diseases)	Oral lecture, drawing, video projection. Cases presentation	2	.	Cerebral palsy, cerebrovascular disorders, movement disorders, multiple sclerosis, peripheral nerve disorders, cranial nerve disorders
2	Senzitive syndromes, syringomyelia, neurological complications of symphilis, Spinal cord syndromes, vestibular syndromes, cerebellar syndromes.	CBL, Oral lecture, drawing, video projection. Cases presentation.	2	.	peripheral nerve disorders, spinal cord malformations, dizziness, cerebrovascular disorders, vomiting
3	Brainstem syndromes, headache, cranial neuralgias, Extrapiramidal syndromes, Parkinson's disease, Wilson disease	Oral lecture, drawing, video projection. Cases presentation	2	.	headache, migraine, peripheral nerve disorders, movement disorders, cromosomial disorders, hereditary metabolical disorders
4	Cortical syndromes, epilepsy, disorder of consciousness, Intracranial hypertension syndrome, meningeal syndrome	Oral lecture, drawing, video projection. Cases presentation,	2	.	epilepsy, disturbance of consciousness, cerebrovascular disorders, dizziness, vomiting, headache
5	Multiple sclerosis, myasthenia gravis, the vascularization of the brain,	Oral lecture, drawing, video projection. Cases presentation	2	.	multiple sclerosis, movement disorders, cerebrovascular disorders
6	TBL, Stroke, Ischaemic stroke	TBL, Oral lecture, drawing, video projection. Cases presentation	2	.	cerebrovascular disorders
7	Hemorrhagic stroke	Oral lecture, drawing, video projection. Cases presentation	2	.	cerebrovascular disorders

Bibliography
Bibliography:
1. Bălașa R. Major neurological syndromes. Editura University Press Târgu Mureș, 2012, 252 pg, ISBN 978-973-169-191-6, cod CNCSIS 210.

2. Adams ,R.; Victor, M.; - Principles of Neurology-Mc Graw-Hill, New York, 2007

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Neurological history taking (anamnesis). Motor system: examination of the reflexes, the semiology of the pathological reflexes, examination of the muscle tone, the semiology of the muscle tone disorders.	CBL, Bedside learning-internship, using teaching aids such as: atlases of anatomy and pathology, etc.	2	.	confusion, dizziness, disturbance of consciousness, headache, cerebrovascular disease, migrain, peripheral nerve disorders, cerebral palsy, disorders of muscle
2	Examination of the sensory system.	CBL, Bedside learning-internship, using teaching aids such as: atlases of anatomy and pathology, etc.	2	.	cranial nerve disorders, cerebrovascular disease, peripheral nerve disorders, multiple sclerosis
3	Examination of the balance and coordination.	CBL, Bedside learning-internship, using teaching aids such as: atlases of anatomy and pathology, etc.	2	.	dizziness, cerebrovascular disease, peripheral nerve disorders

4	Examination of the cranial nerves (I-XII). Examination of the unconscious patient.	CBL, Bedside learning-internship, using teaching aids such as: atlases of anatomy and pathology, etc.	2	.	peripheral nerve disorders, cerebral palsy, disorders of muscle, cranial nerve disorders, confusion, disturbance of consiousness, raised intracranial pressure, encephalopathy
5	Clinical case reports: ischaemic stroke, hemorrhagic stroke.	CBL, Bedside learning-internship, using teaching aids such as: atlases of anatomy and pathology, etc.	2	.	cerebrovascular disease
6	Clinical case reports: multiple sclerosis, parkinson's disease, miasthenia gravis and epilepsy.	CBL, Bedside learning-internship, using teaching aids such as: atlases of anatomy and pathology, etc.	2	.	multiple sclerosis, cerebrovascular disorders, epilepsy
7	Neuroradiological demonstrations: CT scan, MRI, DSA. Electroencephalography and electromiography in normal and pathological conditions, cervico-cerebral artery ultrasound	CBL, Bedside learning-internship, using teaching aids such as: atlases of anatomy and pathology, etc.	2	.	cerebrovascular disease

Bibliography
Bibliography:
1. Bălașa R. Major neurological syndromes. Editura University Press Târgu Mureș, 2012, 252 pg, ISBN 978-973-169-191-6, cod CNCSIS 210.

2.Adams ,R.; Victor, M.; - Principles of Neurology-Mc Graw-Hill, New York, 1997

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

NA

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	NA	NA	20
- lecture	TBL-CEREBROVASCULAR DISORDERS	TBL	10
Final evaluation			
- practical final exam	-the knowledge of major neurological syndromes, positive diagnosis, paraclinical investigations, case presentation	-CASE PRESENTATION	20
- theoretical final exam	-the knowledge of the material of theoretical lectures	multiple choice test	50
Minimal performance standards: Minimum performance standard: the student will need to know 50 % of exam topics			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Bajko Zoltan	Tuesday 9-12

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Otorhinolaryngology			
2.2 Course coordinator: Prof dr Neagoș Adriana			
2.3 Practical activities coordinator(s): Neagos Adriana			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: According Rules
4.2 competency: According Rules

5. Conditions

5.1 for lectures: Rooms equipped with videoprojector and PC,
5.2 for practical activities: Treatment rooms as well as demnstration room in the ENT Clinic

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Disciplina otorinolaringologie) contribuie la dezvoltarea competențelor definite în cadrul ESCO pentru ocupațiile relevante programului de studii, prin dezvoltarea cunoștințelor, abilităților și autonomiei profesionale specifice domeniului.

7. Objectives of the discipline

7.1 General objective: estabčish the clinical diagnosis, correct clinical examination, clinical assessment of the patient with
7.2 Specific objectives: Training students in ENT pathology problems • Harmonization topics in accordance with the requirements in this field in the world for effective cooperation with leading centers in the field • Encourage the research initiatives and providing support for their achievement •Deepening diseases that are considered highly topical issues (laryngeal tumors, allergic pathology, congenital deafness, respiratory pathology sleep •Training students to use existing diagnostic and therapeutic algorithms

8. Learning outcomes

8.1 Knowledge: 1. Descrie mecanismele etiopatogenice implicate în principalele afecțiuni din sfera otorinolaringologiei 2. Explică relațiile dintre factorii de risc, modificările fiziopatologice și manifestările clinice ale afectiunilor din otorinolaringologiei 3. Clasifică patologiile specificeORL în funcție de criterii etiologice, fiziopatologice și clinice. 4. Analizeaza investigatiile audiologice i si examinarea ORL n contextul clinic Expune principalele tehnici operatorii si metode de tratament prerzentate
8.2 Skills: • Analizează date clinice și paraclinice în raport cu mecanismele fiziopatologice corespunzătoare; • Interpretează relațiile de cauzalitate dintre alterările funcționale și manifestările clinice asociate proceselor patologice; • Integrează conceptele specifice disciplinei în analiza studiilor de caz și în formularea concluziilor argumentate; Analizeaza comparativ datele clinice cu investigatiile paraclinice in vedere formularii unui diagnostic clinic
8.3 Responsibility and autonomy: 1. Demonstrează autonomie în utilizarea resurselor academice și științifice specifice disciplinei de otorinolaringologie 2. Evaluează critic informațiile relevante disciplinei și își gestionează eficient propriul proces de învățare. 3. Respectă normele etice și standardele de integritate academică în toate activitățile academice 4. Demostreaza autonomie in utilizarea materialelor bibliografice indicate

9. Specific competencies acquired

9.1 professional competencies: Identify objectives to be achieved, resources available, their closing,conditions, stages of work, working
9.2 transversal competencies: time,and deadlines - Identify roles and responsibilities within a multidisciplinary team and application techniques and effective work relationships within the team and the relationship with the patient - Awareness of the need for continuous training - Familiarity with the use of medical information systems - Design, Layout and support in a Romanian specialty papers on a current topic in the field, using different information sources and tools
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	.Knowlegde of anatomy, phisiology and diagnostical methods of acustico-vestibular system	Course with ppt presentation	2	Using of interactive teching methods, discussions with students as well as ppt	Deafness, Dizziness, Meningitis, Otitis media,nerves disorders

	a. Auditory System anatomy b. Auditory System phisiology c. Diagnostical Methods of auditory and vestibular function			presentations	
2	Acustico-vestibular System inflammatory Pathology a. External otitis b. Otitis media without effusion c. Suppurate Otitis media d. Complications of Otitis media e. Hearing loss classification f. Perpherical Ffacial Nerve Phalsy	Course with ppt presentation and TBL	2	Using of interactive teching methods, discussions with students as well as ppt presentations	Deafness, Dizziness, Vomiting, Otitis Media, Nerve disorders
3	Nose and paranasal sinusus anatomy, phisiology , as well as olphactoy and respiratory function investigations methods a. Nose and Paranasal sinus anatomy b. Nasal phisiology	Course with ppt presentation	2	Using of interactive teching methods, discussions with students as well as ppt presentations	Oedema, Headache
4	4.Inflamatory and tumoral nose and paranasal sinusis Pathology a. Acute and Chronical Sinusities b. Nasal and sinuses tumors	Course with ppt presentation and verificationof knowledge in TBL System	2	Using of interactive teching methods, discussions with students as well as ppt presentations	Preoperative Care, postoperative care, Tuberculosis, Headach, Orbita inflammation
5	5.Nose Breathing disorders and allergies inENT a. Nose breathing disorders b. Sleep breathing disorders, Obstructive Sleep Apnea c. Allergic Rhinitis and Allergical Rhinosinusities	Course with ppt presentation	2	Using of interactive teching methods, discussions with students as well as ppt presentations	Oedema, Sleep disorders. Fatigue, Preoperative and Postoperative care, Allergic disorders, Sudden death
6	6 Pharingeal, Esofageal and Laringeal Anatomy , phisiology; Esofageal and tracheo-bronchial foreign bodies a. Pharingeal Anatomy and Phisilogy b. Larigeal Anatomy and Phisiology c. Esofagian and Pharingian foreign bodies d. Tracheo- bronhial foreign bodies	Course with ppt presentation	2	Using of interactive teching methods, discussions with students as well as ppt presentations	Cyanosis, Dysphagia, Oedema Palpitation Preoperative Care Postoperative Care
7	Pharyngeal, Laryngeal and Esophageal Ppathology a. Pharyngeal Inflammatory Pathology b. Laryngeal Inphalamatory Pathology c. Tumoral Pharyngeal pathology d. Laryngeal Tumoral Pathology	Course with ppt presentation	2	Using of interactive teching methods, discussions with students as well as ppt presentations	Cyanosis, Dysphagia, Vomiting, Stridor, Palpitations, Hyperventilation, Preoperatory Care, Postoperatory Care

Bibliography
1. Lata Ganti, Javier Ravario, David Lebovitz- STEP-UP TO USMLE STEP 2 CK 5 edition-
2. Adam Feather, David Randall, Mona Waterhouse, CLINICAL MEDICINE-10 EDITION
3. Neagos Adriana ENT Course for students

4. Manuel Bernal Spechelsen- Otorinolaringology, Head and Neck Surgery- European Manual

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Inspectionand Palpation in ENT, specifical instruments using for ENT Examination	Ppt presentation an CBL	2	Making specifical maneuvres	Nerves disorders, stridor
2	Modern Methods of ENT Examination- Otoscopy, nasal endoscpy, laryngeal endoscopy, flexible pharingoscopy Rhinoscopy,Laryngoscopy	PPT Presention and CBL	2	Clinical Case for doing otoscopyand nasal endoscopy	Oedema , Sleep disorders
3	Hearing loss evaluation- Audiometry	Ppt presentation and CBL t	2	Ppt presentation	Hearing loss
4	Tracheostomy	Ppt presentation	2	Presentation of patients with trachesotomy	Stridor, Oedema, Chest Traumas, Abdominal traumas
5	Esofagoscopy and bronhoscopy	Ppt presentation	2	Theoretical presentation of pathology were it is indicated to performe this maneuvre; pacients presentation, if they exist in the Hospita	Dysphagia, Stridor, Nerves disorders, Esophagian Carcinoma, Bronchial Carcinoma
6	Imaging in ENT	Ppt presentation and CBL	2	Rradiography, CT and MRI Interpretation clinical cases	Oedema , Sleep disorders
7	Anterior Nasal packing	Ppt presentation and CBL	2	Doing Maneuvre	Headach, Hemoptisia

Bibliography

1. Lata Ganti, Javier Ravario, David Lebovitz- STEP-UP TO USMLE STEP 2 CK 5 edition-
2. Adam Feather, David Randall, Mona Waterhouse, CLINICAL MEDICNE-10 EDITION
3. Neagos Adriana- Practical Activity guide for students
4. Manuel Bernal Spechelsen- Otorinolaringology, Head and Neck Surgery- European Manual

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Possession of a minimum standard ENT specific knowledge for the proper conduct of the medical activity
- Knowledge of classical diagnostic methods and surgical techniques,
- Acquisition of the ability to make a correct diagnosisa full routine ENT diseases and frequently encountered in clinical practice
-Acquiring the ability to use specific instruments ENT, so the classic as well as best-type endoscopes, flexible nasopharyngoscope

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Mandatory presence to the course and open videocamera for the on-line Courses	Questions during the course	15
- lecture	Mandatory presence to the course	Questions, and making maneuvres	15
Final evaluation			
- practical final exam	Evaluation of theoretical and practical knowlegdes from the course book	Oral examination, with questions	10
- theoretical final exam	test with 60 questions of which 25% with a correct answer and 75% with 2 correct answers	Test with 60 questions With one and two correct answers. Respondent type will be corrected for the questions with 2 correct answers	60

Minimal performance standards:
• For the student evaluation during the semester, it is mandatory the student participationat the course and practical activity, as well as on-line and onsite system.
• For admission to the final exam it will be necessary the student participation on 6 from 7 on-line courses, and 6 from 7 Practical Activity.
• To the semester evaluation, the student need to have minimum knowlegdes, and to have good answer for 50% from questions.
• For Admission to the final exam, the student have to knowall maneuvres- otoscopy, anterior rhinoscopy, bucopharyngoscopy, laryngoscopy; to know the instruments, and to know the devices that are used in the ENT Clinic, as well as audiometer

13. Must seen clinical situation list

• MUST SEEN CLINICAL SITUATIONS LIST
a. Ear wax – Ear cleaning
b. Acute Tonsillities Diagnosis
c. Dental Sinusities Diagnosis
d. How to care the patient with nasal bleeding

14. Clinical / practical abilities

• For the final pass it is mandatory to accomplish the folowing conditions:
a. 100% practical exam Pass
b. For the theoretical exam 55% from answers have to been correct

15. Appointment timetable (for students)

Prof dr Neagoș Adriana	VINERI 8-10

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Pediatric dentistry (1)			
2.2 Course coordinator: Prof dr Bica Cristina-Ioana			
2.3 Practical activities coordinator(s): Assoc. Prof. Daniela Eșian - PhD, Lecturer Anamaria Bud - PhD, Asist. Prof. Oana Stoica - PhD, Asist. Prof. Laura Conțac - PhD, Asist. Prof. Galfi Esztella - PhD student			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12		3.2 lecture: 4	3.3 practical activities: 8
3.4 Total hours in curriculum: 84		3.2 lectures: 28	3.6 practical activities: 56
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: Students passed the relevant clinical disciplines: Odontotherapy, Endodontics 1
4.2 competency: 1. Knowledge of the anatomy of dental structures, etiopathogenesis of dental caries and its complications, dental pain, prevention in dentistry 2. Basic skills in clinical examination of the patient 3. Familiarity with the workflow in the dental office

5. Conditions

5.1 for lectures: Amphitheater equipped with multimedia infrastructure (projector, audio-video system)
5.2 for practical activities: Pedodontics clinic and offices appropriately equipped for the treatment of pediatric patients

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline of Pedodontics contributes to the development of ESCO competencies in the area of professional biomedical competencies and transversal competencies (critical thinking, professional communication, lifelong learning), through teaching activities and clinical applications specific to the field.
Specifically, the discipline contributes to the formation of ESCO competencies such as:
- diagnosis and treatment of oral diseases in children, in accordance with the dentist's role to examine, diagnose and treat dento-maxillary pathology, oral health education and prevention of dental diseases, by training the pediatric patient and their relatives;
- application of the principles of evidence-based medicine in clinical decision-making and adapting treatment to the needs of the pediatric patient;
- teamwork and interdisciplinary collaboration, essential in the management of the pediatric patient;
- solving clinical problems and making decisions, by integrating clinical and paraclinical data.
Thus, the discipline of Pedodontics ensures the correlation between university training and the requirements of the labor market at the European level, according to the ESCO classification.

7. Objectives of the discipline

7.1 General objective:
Training the theoretical and clinical skills necessary for the prevention, diagnosis and treatment of oral and dental diseases in children and adolescents, through an approach specific to the stage of development, level of cooperation and medical and psychological particularities of the pediatric patient.

7.2 Specific objectives:
Acquire the ability to:
- Perform a complete clinical assessment of the pediatric patient, including the identification of caries risk factors;
- Develop an individualized treatment plan, adapted to the development of the dentition and behavioral characteristics of the pediatric patient;
- Apply modern methods of prevention and control of carious lesions;
- Perform restorative and pulp treatments specific to the temporary dentition and young permanent dentition;
- Identify and manage dental emergencies in children and adolescents;
- Apply effective behavioral control techniques;
- Respect the norms of ethics, deontology and safety of the medical act, including confidentiality and informed consent.

8. Learning outcomes

8.1 Knowledge:
- Recognizes the anatomical, physiological and psychological particularities of the child in relation to the dental act;
- Identifies the main oro-dental conditions specific to the young temporary and permanent dentition;
- Lists the stages of the clinical examination and dental treatment planning in children;
- Explains the etiology, evolution and therapeutic principles of carious and pulp lesions in pediatric patients;
- Classifies relevant dental emergencies and anomalies encountered in pediatric and adolescent patients;
- Compares prevention and treatment techniques according to the patient's age and the specifics of the dentition;
- Distinguishes between therapeutic approaches applied to children versus adults, in the context of dento-maxillary development

8.2 Skills:
- Apply theoretical knowledge in planning and carrying out treatment in pediatric patients;
- Identify solutions and propose a therapeutic plan for clinical situations with different levels of child cooperation;
- Select and use appropriate instrumentation and materials for conservative and pulp treatments in the young primary and permanent dentition;
- Anticipate the stages of clinical intervention and adapt techniques to the individual characteristics of the patient;
- Interpret causal relationships between caries risk factors, child behavior and the evolution of dental disease;
- Design and apply personalized prevention measures, based on risk assessment;
- Formulate points of view and conclusions on the procedures performed, based on critical reflection and clinical argumentation.

8.3 Responsibility and autonomy:
- Respects the principles of ethics and professional deontology in the relationship with the child patient and the parent;
- Prioritizes the clinical needs of the pediatric patient according to urgency, severity and level of cooperation;
- Formulates reasoned clinical conclusions and verifies the correctness of therapeutic decisions together with the teaching staff;
- Demonstrates autonomy in organizing clinical activity and documenting treated cases;
- Demonstrates effective collaboration with the medical team, recognizing the limits of one's own competence and requesting support when necessary;
- Identifies strengths and weaknesses of one's own practical skills;
- Adapts therapeutic approaches to increase patient safety and comfort.

9. Specific competencies acquired

9.1 professional competencies:
After passing the subject, the student will be able to:
- Perform a complete clinical examination of the pediatric patient, assessing the oral health status and the level of caries risk;
- Develop a treatment plan for pediatric patients, adapted to the age, level of cooperation and dento-maxillary development status;
- Apply techniques to control the child's behavior in the dental office;
- Manage conservative treatments of carious lesions of the young temporary and permanent dentition;-
- Manage pulp treatments specific to immature temporary and permanent teeth;
- Recognize and manage dental emergencies in children and adolescents.

9.2 transversal competencies:
At the end of the module, the student will demonstrate:
- Effective communication with the child, the parent and the medical team;
- Ability to work in a team, assuming specific roles within the clinical activity and respecting the professional hierarchy
- Respect for professional ethics and deontology, including data protection and confidentiality;
- Responsibility for patient safety, through the correct application of the principles of asepsis, antisepsis and infection prevention;
- Autonomy in professional training, by adapting to various clinical situations and using modern information resources for continuous updating.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Tooth development	Oral presentation	2	-	-
2	Tooth eruption. Rerosption of the temporary teeth. The order and ages of primary and permanent tooth eruption	Oral presentation	2	-	-
3	Replacement of the temporary teeth. Accidents and tooth eruption disorders	Oral presentation	2	-	-
4	Simple caries in primary teeth: Topography and evolution, Classification, diagnosis, treatment and complex restoration of primary molars	Oral presentation	2	-	-
5	Pulp desease in primary teeth	Oral presentation	2	-	-
6	Necrosis and gangrene in primary teeth	Oral presentation	2	-	-
7	Severe early caries in children S-ECC	Oral presentation	2	-	-
8	Simple caries in permanent immature teeth	Oral presentation	2	Test	-
9	Pulp desease, necrosis and gangrene in permanent immature teeth	Oral presentation	2	-	-
10	Treatment of pulp desease in permanent immature teeth	Oral presentation	2	-	-
11	Treatment of pulp necrosis and gangrene in permanent immature teeth	Oral presentation	2	-	-
12	Medication in pediatric dentistry. Dental materials in pediatric dentistry.	Oral presentation	2	Integrated course. Partner: Department of Dental Materials	-
13	Hypomineralization lesions - etiology, classification, therapeutic management	Oral presentation	2	-	-
14	Pediatric emergencies in dental office	Oral presentation	2	-	-

Bibliography
- Bica C et al. - Pediatric dentistry. Ed. University Press, Targu Mureş, 2019
- Dean JA, McDonald and Avery's. Dentistry for the Child and Adolescent, 11-th Edition, Ed. Mosby Elsevier, 2022
- Cameron AC, Widmer RP. Handbook of Pediatric Dentistry, 5-th Edition, Ed. Elsevier, 2021

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Dental clinical examination of the paediatric patient.	Practical demonstrations, case presentations	4	-	-
2	Temporary teeth versus permanent immature teeth	Practical demonstrations, case presentations	4	-	-
3	Accidents and tooth eruption disorders. Dental age	CBL	4	-	-
4	Radiological exam in children with mixed dentition	Practical demonstrations, case presentations	4	-	-
5	Diagnosis and treatment of simple caries in temporary teeth	Practical demonstrations, case presentations	4	-	-
6	Pulp diseases in temporary teeth: classification, diagnosis	Practical demonstrations, case presentations	4	-	-
7	Acquiring specific methods of treatment in temporary teeth	Practical demonstrations, cavity preparation on simulator, case presentations	4	-	-
8	Treatment of necrosis and gangrene in temporary teeth: endodontic treatment, compromise measures, extraction	CBL	4	-	-
9	Simple caries in permanent immature teeth: diagnosis and treatment	Practical demonstrations, case presentations	4	-	-
10	Local methods of the dental caries prevention	Practical demonstrations, case presentations	4	-	-
11	Pulp inflammation in permanent immature teeth: diagnosis	Practical demonstrations, case presentations	4	-	-
12	Particular methods of treatment in permanent immature teeth	CBL	4	-	-
13	Clinical importance of the dental replacement in the support area	CBL	4	-	-
14	Paediatric dental emergencies	Practical demonstrations, case presentations	4	-	-

Bibliography
- Eșian D, Păcurar M, Jurcă A, Bud E, Bică C - Pedodonție. Îndrumător de lucrări practice. Editura University Press Tîrgu Mureş, 2014
- Soxman JA. Handbook of Clinical Techniques in Pediatric Dentistry. 2nd Edition, Wiley Blackwell, 2021

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The contents of the discipline are aligned with the current requirements of the medical community and the dental profession, taking into account:
- Recommendations of national and European professional organizations (College of Dentists of Romania, European Academy of Pediatric Dentistry), regarding training standards in treating pediatric patients;
- Expectations of employers in public and private dental clinics, which require the formation of solid clinical skills in the treatment of children's oral diseases from the study period;
- The needs of the community, especially in the context of the high prevalence of dental caries in children in Romania, which is why the emphasis is on prevention, health education and caries risk management;
- The need for communication and interdisciplinary collaboration skills, essential in the treatment of pediatric patients with general conditions or special needs;
- Adaptation to recent developments in dental technology and materials.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			

- practical activities	Active participation in practical activities	CBL Sessions, solving standardized clinical case scenarios, OPG interpretations	25
- lecture	Active participation in courses	Knowledge testing - questionnaire with 10 simple complement questions	15
Final evaluation			
- practical final exam	Evaluation of knowledge acquired in practical activities	Resolution of a standardized scenario of a clinical case from the studied pathology and radiological examination of a pediatric patient	20
- theoretical final exam	Assessment of theoretical knowledge	Test - single and multiple choice questions (MCQ) at the UNIX Examination Center	40

Minimal performance standards:
-Minimal grade required for the promotion of the exam is 5 (the final grade being a result of the evaluations during the semester and the final exam)
-The student has to attend the evaluation during the semester (Test ans CBL sessions)
-The final practical exam is mandatory, the minimal grade required for promotion being 5
-In case of absence at the test (during the module), the students will receive the grade 1; there is no possibility to repeat this evaluation, but the student will be allowed to attend the final exam.

13. Must seen clinical situation list

MUST SEEN CLINICAL SITUATIONS LIST:
1.Rhizolysis of temporary teeth
2.Early eruption
3.Late eruption
4.Eruption order disorders
5.Disorders of eruption rhythm
6.Dental malposition
7.Acute caries of the temporary teeth
8.Chronic caries of the temporary teeth
9.Early childhood caries
10.Chronic pulpitis in temporary teeth
11.Necrosis and gangrene in primary teeth (facial edema)
12.Superficial cavity in permanent immature teeth
13.Deep cavity in permanent immature teeth
14.Dental trauma

14. Clinical / practical abilities

In correlation with the Skills Book:
- Assessment of dentition and dentition in the pediatric patient (study model, patient)
- Identification of dental eruption anomalies in the mixed dentition
- OPG examination
- Resolution of a standardized scenario in the pediatric patient with dental eruption disorders

15. Appointment timetable (for students)

Prof dr Bica Cristina-Ioana	Friday 9-10,30

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Dento-alveolar surgery			
2.2 Course coordinator: Șef l dr Bereczki-Temistocle Despina-Luciana			
2.3 Practical activities coordinator(s): Sef L. Dr Bereczki-Temistocle Despina; Sef L. Dr Petrovan Cecilia; Sef L. Dr Cosarca Adina; Sef L. Dr Iacob Alina; Sef L. Dr Golu Mihai Vlad			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12	3.2 lecture: 4	3.3 practical activities: 8	
3.4 Total hours in curriculum: 84	3.2 lectures: 28	3.6 practical activities: 56	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			15
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			46
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: the student must be able to identify radiological anatomy and patology of the dento-alveolar area

5. Conditions

5.1 for lectures: course room, projector
5.2 for practical activities: The PA activity will take place in a classroom with activity-specific equipment- dental unit, instruments used for patient examination, specific instruments for dental exodontia , teaching materials

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The course “Dento-Alveolar Surgery” is aligned with the European ESCO classification (European Skills, Competences, Qualifications and Occupations), contributing to the development of competencies specific to the

profession of dentist (ISCO-08: 2261), particularly in the diagnosis and treatment of dento-alveolar conditions.

The competencies acquired within this course correspond to ESCO descriptors regarding:

clinical assessment of the patient and establishing indications for dento-alveolar surgical treatment;
application of tooth extraction techniques and basic surgical procedures;
use of specialized instruments under aseptic and safe conditions;
prevention, recognition, and management of postoperative incidents and complications;
provision of first aid and intervention in emergency situations within the dental practice;
interdisciplinary collaboration and referral of patients to specialized services when necessary.

Through this alignment, the course contributes to the development of essential clinical competencies for dental practice, in accordance with labor market requirements and European healthcare standards.

7. Objectives of the discipline

7.1 General objective: Acquisition of extraction techniques in different dental groups.
7.2 Specific objectives: Familiarize students with the extraction tool. Acquisition of extraction techniques at different dental groups, accidents and complications of tooth extraction and their treatment. Acquiring theoretical knowledge from surgery dental-alveolar (endodontic and proprosthetic surgery).

8. Learning outcomes

8.1 Knowledge: Indications and contraindications of tooth extraction; Extraction tools and materials; Extraction techniques; accidents and complications of tooth extraction
8.2 Skills: Identifying the irecuperable teeth; identifying the instruments needed for tooth extraction; selecting the best surgical approach;
8.3 Responsibility and autonomy: The student is able to search for the best quality literature sources; is able to adapt the management of the patient

9. Specific competencies acquired

9.1 professional competencies: Description of the concepts, theories and fundamental notions regarding the appearance of dental pathology, signs and symptoms characteristic of each disease, useful for guiding clinical diagnosis. Identification of resuscitation maneuvers in first aid conditions. Correct interpretation of clinical and paraclinical signs, symptoms to develop the diagnosis. Use of therapeutic resources to formulate the treatment plan as well as correct interpretation of clinical and paraclinical data. Application of acquired clinical techniques and knowledge to be integrated with paraclinic data. Developing and applying a treatment plan in accordance with the stage of the disease and its individualized adaptation to the patient’s particularities. Correct examination of the patient, establishing the indications for tooth extraction and carrying them out. Prevention of accidents and post-extractive complications, respectively their treatment, if they have occurred. Appropriate establishment of indications of surgery to aid endodontic treatment; indications of preprosthetic surgical treatment.
9.2 transversal competencies: Identification of the objectives to be achieved, available resources, conditions for their completion, working stages, working times, related risks. Identifying roles and responsibilities in a multidisciplinary team and applying techniques of relationship and effective work within the team and in relation to the patient. Efficient use of communication resources and assisted training. Compliance with the rules of asepsis and antisepsis, occupational and medical protection. Effective teamwork.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Examination of the patient in OMF surgery. Clinical examination. Paraclinical examinations	oral presentation + multimedia, discussions	2	-	-
2	Tooth extraction. Indications, contraindications of extraction of temporary and permanent teeth	oral presentation + multimedia, discussions	2	-	-
3	Tooth extraction. Tooth extraction technique with extraction forceps	oral presentation + multimedia, discussions	2	-	-
4	Tooth extraction with forceps, by groups of teeth	oral presentation + multimedia, discussions	2	-	-
5	Extraction of roots with forceps; elevators; by separating the roots	oral presentation + multimedia, discussions	2	-	-
6	Tooth extraction by alveolotomy	oral presentation + multimedia, discussions	2	-	-
7	Post-extractional healing	oral presentation + multimedia, discussions	2	-	-
8	Local accidents of dental extraction	oral presentation + multimedia, discussions	2	-	-
9	Local complications of tooth extraction	oral presentation + multimedia, discussions	2	-	-
10	Endodontic surgery. Transmaxilary drainage	oral presentation + multimedia, discussions	2	-	-
11	Endodontic surgery. Apical resection. Radicular amputation	oral presentation + multimedia, discussions	2	-	-
12	Dental replantation. Dental transplantation	oral presentation + multimedia, discussions	2	-	-
13	Proprosthetic surgery. Restoration of the deficiencies of the soft parts of the prosthetic field	oral presentation + multimedia, discussions	2	-	-
14	Proprosthetic surgery. Restoration of bone deficiencies of the prosthetic field	oral presentation + multimedia, discussions	2	-	-

Bibliography

Oral and maxillo facial surgery, Sumit Sanghai,JAYPEE BROTHERS MEDICAL PUBLISHERS (P) LTD
Oral surgery, Fragiskos D, 2007
Cosarcă Adina, Golu Mihai Vlad, Bereczki Temistocle Despina Luciana -BASIC CONCEPTS IN DENTOALVEOLAR SURGERY, Editura University Press Tîrgu Mureş, 2023, ISBN 978-973-169-798-7

10.2 Content of workout, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Review of the dento-alveolar anatomy. Review of the basic numbing techniques used for dental exodontia	Multimedia presentation, teaching materials, discussion.	4	-	-
2	Patient examination. Indications and contraindications of tooth extraction. Familiarization with extraction instruments.	Multimedia presentation, teaching materials, discussion.	4	-	-
3	Preparing the patient, the doctor and the instruments for performing dental extractions. Exodontia for specific teeth groups.	Multimedia presentation, teaching materials, discussion.	4	-	-
4	Accidents and complications of tooth extraction and their management.	Multimedia presentation, teaching materials, discussion.	4	-	-
5	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-
6	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	CBL 1	-
7	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-
8	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-

9	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-
10	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-
11	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-
12	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	CBL 2	-
13	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-
14	Performing tooth extraction (on patients)	Close supervision of the students performing tooth extractions on patients.	4	-	-

Bibliography

Oral Surgery Fragiskos 2007
Cosarcă Adina, Golu Mihai Vlad, Bereczki Temistocle Despina Luciana -BASIC CONCEPTS IN DENTOALVEOLAR SURGERY, Editura University Press Tîrgu Mureş, 2023, ISBN 978-973-169-798-7

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

At the end of the fourth year, students should be able to diagnose dental-alveolar conditions that indicate tooth extraction or conservative surgical treatment, perform uncomplicated dental extractions, prevent, recognize and treat accidents and complications that occurred during extractions; redirect patients to the chiryr. If the extraction could not be completed, there have been accidents and complications that it cannot treat. SA recommend surgical methods to help with prosthetic therapy if this is necessary. Diagnose clinical situations that indicate and allow replanting, dental transplants.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	according to the specific objectives of the disciplines students should perform a number of 3 tooth extractions per module in order to receive the maximum grade for the practical activity during the module- 10% of the grade	oral examination; monitoring the required teeth extractions (10%); CBL (20% of the grade)	30
- lecture	according to the specific objectives of the disciplines	-	0
Final evaluation			
- practical final exam	according to the specific objectives of the disciplines	oral examination	20
- theoretical final exam	according to the specific objectives of the disciplines	written summative exam multiple choice questions, UNIX examination center	50

Minimal performance standards:
Conducting anamnesis, complete and correct clinical examination and basic diagnostic procedures, requesting appropriate complementary examinations, and formulating a correct diagnosis.
Developing an individualized therapeutic plan and performing basic therapeutic procedures, including first aid.
Be able to perform uncomplicated dental extractions, prevent, recognize and treat accidents and complications that occur when performing dental extractions.

Practical activity grade (dental extractions) – 10% from the final grade;
CBL- 20% from the final grade
Final theoretical exam note – minimum 5; note < 5 = failed exam;
Practical final exam note – minimum 5; note < 5 = failed exam;
Final note – minimum 5; note < 5 = failed exam.

Mandatory attendance at PA; 20% unmotivated absences are allowed (8 hours lp = 2 PAs). Absences from PA can only be recuperated during the school year or summer practice, depending on the schedule of the PA's tutor.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

Tooth extractions

15. Appointment timetable (for students)

Șef l dr Bereczki-Temistocle Despina-Luciana	After the course/Dupa ora de curs

Head of departament Course coordinator Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Minimally invasive techniques in prosthetic dentistry			
2.2 Course coordinator: Conf dr Cerghizan Diana			
2.3 Practical activities coordinator(s): Conf. dr. Cerghizan Diana			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			17
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			16
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			50
3.9 Total hours			78
3.10 Credits			3

4. Prerequisites (where applicable)

4.1 curricular: -Completion of Prosthodontics, Dental Materials, Occlusion, and Fixed Prosthodontics -Basic knowledge of adhesive dentistry and restorative techniques
4.2 competency: Knowledge of dental anatomy and occlusion Ability to perform clinical examination and diagnosis Basic skills in tooth preparation and restorative procedures Understanding of biomaterials used in prosthetic dentistry

5. Conditions

5.1 for lectures: -Lecture hall equipped with multimedia infrastructure (projector, digital presentations)
5.2 for practical activities: -Preclinical laboratory and/or clinical setting equipped with dental units, simulation models, and specific instruments for minimally invasive techniques

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and

Occupations)

The course contributes to the development of ESCO competencies in healthcare, particularly: - performing dental treatments using conservative approaches - applying evidence-based clinical decision-making - selecting appropriate dental materials and techniques - ensuring patient safety and quality of care - collaborating within multidisciplinary teams

7. Objectives of the discipline

7.1 General objective: - To develop competencies in applying minimally invasive approaches in prosthetic dental treatments
7.2 Specific objectives: - Understanding the principles of minimally invasive dentistry - Identifying indications and contraindications of conservative prosthetic techniques - Performing minimally invasive tooth preparations - Applying adhesive cementation protocols - Evaluating clinical outcomes of minimally invasive restorations

8. Learning outcomes

8.1 Knowledge: Describe the principles of minimally invasive prosthetic dentistry Identify types of conservative restorations (veneers, inlays, onlays) Explain adhesive techniques and material selection Recognize indications for minimally invasive treatments
8.2 Skills: Perform minimally invasive tooth preparations Select appropriate materials and techniques Apply adhesive protocols in prosthetic restorations Plan and execute conservative prosthetic treatments
8.3 Responsibility and autonomy: Apply ethical and professional standards in patient care Demonstrate responsibility in treatment planning and execution Work independently while recognizing professional limits Evaluate and improve personal clinical performance

9. Specific competencies acquired

9.1 professional competencies: - Application of minimally invasive principles in prosthetic dentistry - Selection of appropriate conservative treatment options - Preparation of teeth with maximum preservation of dental tissues - Use of adhesive techniques and modern prosthetic materials - Planning and execution of minimally invasive prosthetic restorations (veneers, inlays, onlays)
9.2 transversal competencies: - Critical thinking in treatment planning - Clinical decision-making based on evidence - Interdisciplinary collaboration - Continuous professional development
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Minimally invasive techniques - prosthetic perspectives, definition, classification	Oral + multimedia presentation	2	-	-
2	Dental veneers - history, indications, contraindications, adhesive cementation	Oral + multimedia presentation	2	-	-

3	Dental veneers - workflow	Oral + multimedia presentation	2	-	-
4	Dental veneers - case report	Oral + multimedia presentation	2	-	-
5	Partial crowns - indications, contraindications, workflow	Oral + multimedia presentation	2	-	-
6	Anchoring systems - indications, contraindications, workflow	Oral + multimedia presentation	2	-	-
7	Adhesive bridge - indications, contraindications, workflow	Oral + multimedia presentation	2	-	-
Bibliography course notes Sarfaraz, Hasan, and Nilina Dilip. Minimally Invasive Fixed Prosthodontics. LAP LAMBERT Academic Publishing, 2022					

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to minimally invasive prosthetic techniques. Assessment of tooth structure preservation	Demonstration	2	-	-
2	Tooth preparation for dental veneers (simulator)	Demonstration, hands-on training	2	-	-
3	Veneer preparation refinement and evaluation of preparation quality	hands-on training	2	-	-
4	Adhesive protocols for veneers. Cementation techniques (simulator)	hands-on training	2	-	-
5	Tooth preparation for partial crowns (inlays/onlays)	hands-on training	2	-	-
6	Evaluation of preparations and selection of appropriate restorative design	hands-on training	2	-	-
7	Adhesive bridges: preparation principles and clinical simulation	hands-on training	2	-	-
Bibliography course notes Hasan Sarfaraz, Minimally Invasive Fixed Prosthodontics, LAP LAMBERT Academic Publishing, mai 2022					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The course content is aligned with current trends and requirements in prosthetic dentistry, considering:
- Increasing demand for conservative and aesthetic treatments
- Emphasis on preservation of dental structures
- Use of modern adhesive systems and biomaterials
- Expectations of employers for clinically competent and minimally invasive approaches
- Continuous advancement of dental materials and techniques

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	quiz test	single/multiple choice questions	100
Minimal performance standards: minim 5 grade			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Cerghizan Diana	30 minutes after theoretical/practical activities.

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Magnification in endodontics			
2.2 Course coordinator: Șef l dr Kovács-Ivacson Andrea-Csinszka			
2.3 Practical activities coordinator(s): vacant			
2.4 Year of study: IV	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4	3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28	3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		17
- supplemental documentation at the library, from specialized information portals and in the field		16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		16
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		50
3.9 Total hours		78
3.10 Credits		3

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Lectures are held in an amphitheater equipped with multimedia projection systems, laptop support, and access to digital teaching materials.
5.2 for practical activities: Practical activities take place in clinics equipped with dental units, instruments needed for consultation, operating microscope and other magnification instruments

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline contributes to the development of ESCO competencies specific to dental medicine, particularly in the areas of dental treatments performed under magnification.

It supports the development of:
• basic knowledge of magnification instruments which are helpful during diagnosis and different types of dental treatments
• transversal competencies (interdisciplinary teamwork, critical thinking, professional communication, lifelong learning)

7. Objectives of the discipline

7.1 General objective:
Getting the students familiarized with the use of magnification systems, used in different fields of dental medicine.

7.2 Specific objectives:
Training of the skills of using the instruments specific to the dental microscope, of ergonomics and knowledge of the clinical situations in which they are indicated for use.

8. Learning outcomes

8.1 Knowledge:
Understand principles of magnification and optical parameters
Identify types of systems (loupes, microscope)
Recognize indications and role in diagnosis
Know applications in endodontics (including retreatment)

8.2 Skills:
Use loupes and operating microscope correctly
Adjust magnification, focus, and illumination
Perform basic endodontic procedures under magnification
Maintain proper ergonomic posture

8.3 Responsibility and autonomy:
Choose appropriate magnification level and tools
Ensure patient safety and treatment quality
Apply ergonomic principles in practice
Demonstrate professional judgment and continuous learning

9. Specific competencies acquired

9.1 professional competencies:
The ability to use magnification equipment.
Knowledge of the clinical indications and advantages of the magnification systems.
Understanding of ergonomic principles and correct use of
the instruments.

9.2 transversal competencies:
Developing the ability of students from higher years to establish the correct diagnosis, the indication of retreatment and the realization of its clinical stages, using the magnification systems (dental microscope and magnifiers).

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Magnification in dentistry	Prezentare orală şi multimedia	2	-	-
2	Advantages of magnification and indication of its use	Prezentare orală şi multimedia	2	-	-
3	Guidelines of ergonomic use of magnification in endodontics	Prezentare orală şi multimedia	2	-	-
4	Clinical use of the dental operating microscope in endodontics and other dental specialties	Prezentare orală şi multimedia	2	-	-
5	Factors that make the use of magnification difficult	Prezentare orală şi multimedia	2	-	-

6	Importance of magnification in establishing diagnosis	Prezentare orală şi multimedia	2	-	-
7	The use of the operating dental microscope in endodontic retreatment	Prezentare orală şi multimedia	2	-	-

Bibliography

A Castellucci: Endodontics, vol I si II. Edizioni Odontoiatriche Il Tridente, 2003
S Cohen: Pathways of the pulp, 10-th edition, Mosby Elsevier, St. Louis, Missouri, 2011
Manual pentru rezidențiat, Volumul I, sub redacția Prof.dr. Ecaterina Ionescu, Editura Universității Carol Davila București, 2021.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to Dental Loupes Types, components, and correct adjustment (working distance, interpupillary distance)	Clinical presentation	2	-	-
2	Operating Dental Microscope Setup and Handling Positioning, focusing, magnification levels, and coaxial illumination	Clinical presentation	2	-	-
3	Ergonomic Positioning in Magnified Dentistry Operator posture, patient positioning, and prevention of musculoskeletal strain	Clinical presentation	2	-	-
4	Access Cavity Preparation Under Magnification Improved visualization and precision in endodontic access	Clinical presentation	2	-	-
5	Identification of Root Canal Orifices Using Magnification Detection of additional or calcified canals	Clinical presentation	2	-	-
6	Detection of Cracks, Fractures, and Perforations Clinical examination using loupes and microscope	Clinical presentation	2	-	-
7	Endodontic Retreatment Under Magnification Removal of filling materials, posts, and fractured instruments	Clinical presentation	2	-	-

Bibliography

1.Berman LH, Hargreaves KM. Cohen’s Pathways of the pulp, 12th Edition, Elsevier, 2020
2. Castellucci A. Endodontics, Vol 1 and 2, 1st Ed, Edra, 2022
3. Rotstein I, Ingle JI. Ingle’s Endodontics, 7th Ed., Pmph USA Ltd., 2019
4. Torabinejad M, Fouad A, Shabahang S. Endodontics: Principles and Practice, 6th Ed., Elsevier, 2020

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The students' training program must also include elementary notions of the use of magnification in endodontic therapy, an aspect emphasized by international specialized bodies.
The quality of the medical act is dependent on the degree of visibility, and this can only be obtained by using the dental microscope.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	--	-	0
- lecture	--	-	0
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Colocvium	Single and multiple choice test	100

Minimal performance standards:
Minimum passing grade: 5.00

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Kovács-Ivacson Andrea-Csinszka	30 minutes after each lecture

Head of departament	Course coordinator	Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Oral and maxillo-facial surgery (1)			
2.2 Course coordinator: Șef l dr Coșarcă Adina-Simona			
2.3 Practical activities coordinator(s): Sef. Lucr. Cosarca Adina, Sef. Lucr.Petrovan Cecilia, Sef. Lucr Bereczki Despina, Sef. Lucr. Iacob Alina, Sef. Lucr.Golu Vlad			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			33
- supplemental documentation at the library, from specialized information portals and in the field			33
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			33
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			100
3.9 Total hours			156
3.10 Credits			6

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Laptop
5.2 for practical activities: Surgery office, demonstration room, operating rooms

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Disciplina este corelata cu clasificarea europeana ESCO contribuind la dezvoltarea competentelor specifice ocupatiei de medic stomatolog, in contextul colaborarii interdisciplinare cu tehnicianul dentar, chirurgul maxilo facial sau chirurgul dentoalveolar

7. Objectives of the discipline

7.1 General objective: Familiarization of students with the pathology of tooth eruption, dental inclusions, perimaxillary infections; injuries of soft and hard oro-maxillo-facial parts; odontogenic sinusitis, maxillary cysts; pain syndromes in the territory of the OMF.
7.2 Specific objectives: Carrying out the anamnesis, the complete and correct clinical examination as well as some basic diagnostic procedures, requesting the appropriate complementary examinations, formulating a positive and differential diagnosis. Creating a therapeutic plan individualized and performing basic therapeutic procedures, including those aimed at qualified first aid. Familiarization of students with various clinical cases, the techniques of treatment in cases of perimaxillary inflammatory conditions; in the case of pathological dental eruption, craniofacial trauma; in the case of maxillary cysts; of odontogenic sinusitis and neuralgic pain in the OMF sphere.

8. Learning outcomes

8.1 Knowledge: -
8.2 Skills: -
8.3 Responsibility and autonomy: -

9. Specific competencies acquired

9.1 professional competencies: Description of concepts, theories and fundamental notions regarding the clinical aspects of the studied pathology. Identification of resuscitation maneuvers in first aid conditions. Correct interpretation of clinical and paraclinical signs, symptoms in order to develop a presumptive diagnosis. The use of therapeutic resources to formulate the treatment plan as well as the correct interpretation of clinical and paraclinical data. The application of the acquired clinical techniques and knowledge to be integrated with the paraclinical data with the aim of establishing the positive, differential diagnosis, as well as establishing the prognosis. Realization of a treatment plan in accordance with the stage of the disease and its individualized adaptation to the particularities of the patient. Examination, diagnosis, treatment (if it belongs to the dentist's competence), respectively referral to the maxillofacial surgeon (when it exceeds his competence): of dental eruption disorders and accidents; of inflammatory lesions (abscesses); of dental sinusitis; of teeth, bones, and soft parts traumas; of maxillary cystic lesions; and pain syndromes in the OMF sphere. the symptoms characteristic of each condition, useful for diagnosing
9.2 transversal competencies: Identification of the objectives to be achieved, the available resources, the conditions for finalising the treatment plan, work stages, working times, related risks. Identifying roles and responsibilities in a multidisciplinary team and applying communication techniques and effective work within the team and in relation to the patient. Effective use of communication resources and assisted professional training
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Dental eruption pathology	Oral presentation + multimedia, discussions	2	-	-
2	Dental impaction	Oral presentation + multimedia, discussions	2	-	-
3	1 Oral and maxillo facial nonspecific infections Oral presentation + multimedia, discussions	Oral presentation + multimedia, discussions	2	-	-
4	2 Oral and maxillo facial nonspecific infections	Oral presentation + multimedia, discussions	2	-	-
5	Maxillary bone nonspecific infections	Oral presentation + multimedia, discussions	2	-	-

6	Oral maxillo facial specific infections. Oral maxillo facial limph node infection	Oral presentation + multimedia, discussions	2	-	-
7	Soft tissue injuries -Maxillofacial traumatology	Oral presentation + multimedia, discussions	2	-	-
8	Dentoalveolar trauma- Maxillofacial traumatology	Oral presentation + multimedia, discussions	2	-	-
9	Mandibular trauma	Oral presentation + multimedia, discussions	2	-	-
10	Midfacial fractures(Fracture of the nose, zygoma, orbit and maxilla)	Oral presentation + multimedia, discussions	2	-	-
11	Maxillofacial traumatology-evolution and complications	Oral presentation + multimedia, discussions	2	-	-
12	Maxillary cysts	Oral presentation + multimedia, discussions	2	-	-
13	13. Odontogenic maxillary sinusitis Oral presentation + multimedia, discussions	Oral presentation + multimedia, discussions	2	-	-
14	Oral and maxillo facial pain. Neuralgia	Oral presentation + multimedia, discussions	2	-	-

Bibliography
References:
Mandatory References:
1. Bucur A., Navarro C.V., Lowry J., Acero J.: Compendiu de chirurgie oro-maxilo-facială, vol. 1 și 2, Editura 2009 Q Med Publishing Bucureşti
Optional References:
1. Burlibaşa C.: Chirurgie Orală şi Maxilofacială, Editura Medicală, Bucureşti, 2003
2. Rotaru A., G. Băciuţ, Rotaru H.: Chirurgie Maxilo-Facială vol. I-II, Editura Medicală Universitară „Iuliu Haţieganu", Cluj Napoca, 2003
3. Szabó Gy.: Oral and Maxillofacial Surgery, Semmelweis Publishing House, Budapest, 20

4. UJ Moore,Principles of oral and maxillofacial surgery, Sixth Edition, Wiley Blackwell
5.Contemporary Oral and Maxillo Facial Surgery , James R. Hupp, Eduard Ellis III, Myron R. Tuker, Elsevier 2014

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Dental eruption pathology	Case presentation,multimedia, discussions	2	-	-
2	Dental impaction	Case presentation,multimedia, discussions	2	-	-
3	1 Oral and maxillo facial nonspecific infections	Case presentation,multimedia, discussions	2	-	-
4	2 Oral and maxillo facial nonspecific infections	Case presentation,multimedia, discussions	2	-	-
5	Maxillary bone nonspecific infections	Case presentation,multimedia, discussions	2	-	-
6	Oral maxillo facial specific infections. Oral maxillo facial limph node infection	CBL	2	CBL1	-
7	Soft tissue injuries -Maxillofacial traumatology	Case presentation,multimedia, discussions	2	-	-
8	Dentoalveolar trauma- Maxillofacial traumatology	Case presentation,multimedia, discussions	2	-	-
9	Mandibular trauma	Case presentation,multimedia, discussions	2	-	-
10	Midfacial fractures(Fracture of the nose, zygoma, orbit and maxilla)	Case presentation,multimedia, discussions	2	-	-
11	Maxillofacial traumatology-evolution and complications	Case presentation,multimedia, discussions	2	-	-
12	Maxillary cysts	CBL	2	CBL2	-
13	Odontogenic maxillary sinusitis Oral presentation + multimedia, discussions	Case presentation,multimedia, discussions	2	-	-
14	Oral and maxillo facial pain. Neuralgia	Case presentation,multimedia, discussions	2	-	-

Bibliography
References:
Mandatory References:
1. Bucur A., Navarro C.V., Lowry J., Acero J.: Compendiu de chirurgie oro-maxilo-facială, vol. 1 și 2, Editura 2009 Q Med Publishing Bucureşti
Optional References:
1. Burlibaşa C.: Chirurgie Orală şi Maxilofacială, Editura Medicală, Bucureşti, 2003
2. Rotaru A., G. Băciuţ, Rotaru H.: Chirurgie Maxilo-Facială vol. I-II, Editura Medicală Universitară „Iuliu Haţieganu", Cluj Napoca, 2003
3. Szabó Gy.: Oral and Maxillofacial Surgery, Semmelweis Publishing House, Budapest, 20

4. UJ Moore,Principles of oral and maxillofacial surgery, Sixth Edition, Wiley Blackwell

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Correct examination of patients with various dental eruption disorders, with non-specific perimaxillary inflammation, with bone infections (both in most cases of dental cause); with oro-maxillo-facial trauma; with maxillary cysts; with sinusitis of dental cause, with painful syndromes in the territory of the OMF (elimination of possible dental causes); their diagnosis and treatment when the extent of the injuries allows the approach in the office, or redirecting the patient to other services when the complexity of the case requires it.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	According to the Department of oral and maxillofacial surgery	CBL	30
- lecture	According to the Department of oral and maxillofacial surgery	-	0
Final evaluation			
- practical final exam	According to the Department of oral and maxillofacial surgery	Oral /written revision on pathology studied in the course of the semester-Verification	30
- theoretical final exam	According to the Department of oral and maxillofacial surgery	Whritten evaluation-multiple choice test- UNIX	40

Minimal performance standards:
Final lecture exam grade – minim 5; notă < 5 = failed;
Final pa exam grade (verificare) – minim 5; notă < 5 = failed;
Final grade – minim 5; notă < 5 = failed.

Attendence- mandatory for practical activities. 20% of motivated absences (with the acceptance of the dean's office) can be reccuperated. Additional informations will pe provided by the lecture/practical activities coordinator/s

13. Must seen clinical situation list

-

14. Clinical / practical abilities

Patient examination with specific pathology -making the correct diagnosis

15. Appointment timetable (for students)

Șef l dr Coșarcă Adina-Simona	Dupa ora de curs

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Physiotherapy in dental medicine			
2.2 Course coordinator: Șef l dr Chiș Monica			
2.3 Practical activities coordinator(s): Asist. Univ. dr. Daniela M. Popescu			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			8
- supplemental documentation at the library, from specialized information portals and in the field			8
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			7
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			24
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: biophysics, anatomy, neurophysiology, physiopathology
4.2 competency: NA

5. Conditions

5.1 for lectures: Emergency County Hospital - Department of Rheumatology
5.2 for practical activities: Emergency County Hospital - Department of Rheumatology

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Autonomy: The ESCO skill 'Empower patients' aligns with the bioethical principle of autonomy. Safety: The skill 'Apply safety procedures in health care' covers the contraindications of therapies. Holistic Care: The ESCO competency 'Adopt a holistic approach to patient care' is the bridge between conventional PRM and integrative practices.

7. Objectives of the discipline

7.1 General objective:
Rehabilitation is a team effort, so in order to fulfill it, the medical student should find and adapt their position in a team whose main aim is the needs of the patient. So, she/he would be able to communicate with the nurse, the occupational therapist, the nurse and therapist specialized in physical rehabilitation, the psychologist, and the physician of the current disease.

7.2 Specific objectives:
The secondary objectives, after following this lecture, are:
-To be able to evaluate a patients from the perspective of the rehabilitation physician,
-To be able to apply the principles of rehabilitation,
-To be able to recognize the benefits of a complex rehabilitation plan
-To know how to work in a rehab team

8. Learning outcomes

8.1 Knowledge:
Upon successful completion of the course, the student will be able to:
1. Remembering/Activating from Memory:
Enumerate the main structures and functions of the musculoskeletal, neurological, and cardiorespiratory systems relevant to rehabilitation. Ensuring students can recall core anatomy and physiology is foundational.
Identify in anatomical diagrams or clinical scenarios the common signs, symptoms, and diagnostic criteria for prevalent conditions treated in medical recovery (e.g., stroke, spinal cord injury, osteoarthritis).
Recite the ethical codes and legal regulations governing the practice of physical therapy and medical recovery in the relevant jurisdiction.
List the fundamental principles and physiological effects of key therapeutic modalities (e.g., heat, cold, electrical stimulation, ultrasound).
2. Understanding/Comprehension
Explain the biomechanical principles (e.g., lever systems, forces, torque) that underpin normal and pathological human movement.
Compare and distinguish between different models of disability and function (e.g., the WHO's International Classification of Functioning, Disability and Health (ICF)) and their application in patient assessment.
Summarize the stages of tissue healing (inflammation, proliferation, remodeling) and explain how various therapeutic interventions affect each stage.
Classify different types of therapeutic exercises (e.g., passive, active-assisted, resistive, functional) and exemplify their appropriate application based on a patient's clinical status.
Redefine in their own words the core concepts of motor control and motor learning and how these theories inform the design of effective rehabilitation programs.

8.2 Skills:
Upon successful completion of the course and practikal skills, the student will be able to:
Perform a comprehensive musculoskeletal and neurological screening examination using standardized tests and measures (e.g., goniometry, manual muscle testing, reflexes).
dminister a range of therapeutic interventions, including manual therapy techniques (e.g., massage, joint mobilization) and electro-physical agents (e.g., TENS, ultrasound), safely and correctly.
Design and demonstrate safe and appropriate therapeutic exercise programs (for flexibility, strength, endurance, and balance) tailored to specific patient populations (e.g., geriatric, post-operative, neurological).
Document patient examination findings, progress notes, and discharge summaries accurately, concisely, and in compliance with professional and legal standards.
Execute safe patient handling techniques, including transfers (e.g., bed to wheelchair) and gait training with assistive devices, to maintain the safety of both the patient and the clinician.

8.3 Responsibility and autonomy:
These outcomes reflect the student's capacity to apply their knowledge and skills independently, make reasoned judgments, and act responsibly within the professional context of medical recovery.
1. Analysis (Analytical and Differentiation Skills)
Upon successful completion of the course, the student will be able to:
Differentiate between various clinical management guidelines (e.g., for different types of neurological injuries) and formulate conclusions regarding the optimal, individualized plan of care for a specific patient.
(Focus: Comparing and selecting the best approach from a range of knowledge.)
Compare the patient's self-reported functional status against objective performance data, and identify types of discrepancies that require further examination or modification of the intervention plan.
(Focus: Contrasting subjective and objective findings to identify problems.)
Distinguish between the ethical responsibilities of the rehabilitation professional and the legal requirements of practice, applying these principles to complex patient care scenarios.
(Focus: Applying ethical knowledge to a real-world dilemma.)
2. Evaluation (Judgment and Critical Appraisal)
Upon successful completion of the course, the student will be able to:

Prioritize short-term and long-term treatment goals based on a holistic interpretation of the patient's needs, their socio-economic context, and the predicted timeline for recovery (prognosis).
(Focus: Autonomous decision-making and timeline management.)
Verify the correctness of a peer's clinical documentation and establish criteria for what constitutes high-quality, legally compliant medical records.
(Focus: Quality assurance and standard setting.)
Argument for the suitability of a specific assistive technology (e.g., an orthotic or a gait aid) by estimating its long-term impact on the patient's participation and quality of life.
Focus: Justifying decisions based on long-term outcomes.)
Judge the necessity for consulting a specialist or seeking supervisory support when a patient's condition falls outside the student's current level of competence, demonstrating responsible autonomous practice.
(Focus: Recognizing limitations and acting responsibly.)
Confront emerging research evidence with current institutional practices to validate or challenge the existing delivery of care, thereby promoting continuous quality improvement.
(Focus: Using EBP to drive change.)
3. Responsibility and Autonomy (Professional Conduct)
Upon successful completion of the course, the student will be able to:
Demonstrate autonomy in organizing and leading a patient case presentation, effectively managing all necessary resources, including time, equipment, and interprofessional consultations.
Manifest social responsibility by actively promoting solutions related to their specialization (e.g., accessible public spaces, ergonomic advice) to improve the quality of life in the broader community.
Apply principles of professional ethics to analyze the social and environmental impact of proposed technological or treatment solutions within the rehabilitation field.

9. Specific competencies acquired

9.1 professional competencies:
The main objective of this lecture is to offer the medical student an image of the problems posed by different pathologies regarding the quality of life of patients and to offer solutions, aiming to improve their outcomes through rehabilitation.
- The medical student should be able to complete a whole rehabilitation evaluation to establish the status and the future management of the patient.
This skills involve the use of specific tools, technologies, and therapeutic modalities.
Prescribe assistive devices: Selecting and fitting orthotics, prosthetics, wheelchairs, or communication aids to enhance patient independence.
Apply physical therapy modalities: Utilizing heat, cold, electricity (TENS/EMS), ultrasound, or hydrotherapy to treat pain and inflammation.
Perform medical procedures in PRM: Skills such as ultrasound-guided injections, botulinum toxin infiltrations for spasticity, or electromyography (EMG).
Evaluate ergonomics: Assessing the patient’s home or work environment to recommend modifications that prevent further injury or facilitate return to work.

9.2 transversal competencies:
The medical student should be able to provide solutions (in terms of rehabilitation programme) and apply them, aiming at a major reintegration of the patient into society, taking into account the pros and cons according to the pathology.
Rehabilitation is rarely a solo effort; ESCO emphasizes the 'soft' and collaborative skills necessary for success.
Work in a multidisciplinary team: Collaborating effectively with nurses, physiotherapists, occupational therapists, speech-language pathologists, and social workers.
Provide health education: Teaching patients and their families about their condition, prevention of secondary complications (like pressure sores), and long-term management.
Apply evidence-based medicine: Integrating the latest clinical research and guidelines into daily rehabilitation practice.
Demonstrate empathy and professional ethics: Managing the psychological impact of disability with a patient-centered approach.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation

1	Introduction notions - physics in rehabilitation	oral media presentation	2	Rehabilitation management	pain management,
2	Physical modalities	oral media presentation	2	Rehabilitation management	pain management, disorders of muscle
3	Kinetotherapy (medical gymnastics)	oral media presentation	2	Rehabilitation management	pain management, disorders of muscle
4	Rehabilitation in connective tissue diseases	oral media presentation	2	Rehabilitation management	pain management, disorders of muscle
5	Rehabilitation in ankylosing spondylitis	oral media presentation	2	Rehabilitation management	pain management, disorders of muscle
6	Rehabilitation in osteoarthritis and LBP (low back pain)	oral media presentation	2	TBL	pain management, disorders of muscle
7	Rehabilitation in TMP joint affections. Rehabilitation of the facial nerve injury	oral media presentation	2	Rehabilitation management	pain management, disorders of muscle

Bibliography
Mandatory bibliography:
1. Physical &Rehabilitation Medicine for Medical students, MG Ceravolo, N. Christodoulou, 2018, ISBN: 978-88-7051-634-4
Support bibliography:
2. Physical Medicine and Rehabilitation (fourth edition), Randall L. Braddom, Elsevier Saunders ed., 2011, 1-1506, ISBN: 978-1-4137-70884-4
3. Acute and Chronic Pain Intervention, McCarthy, Walker, Vasquez, Elsevier ed, 2020, ISBN: 978-0-323-68036-3

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The physiatric history. Physical examination (muscle testing, goniometry)	PPT	2	practical skills	pain management, disorder of muscle
2	Electrotherapy	PPT	2	practical skills	pain management
3	Heat therapies	PPT	2	practical skills	pain management
4	Hydrokinetotherapy	PPT	2	practical skills	pain management
5	Massage	PPT	2	practical skills	pain management
6	Clinical case presentations	PPT	2	practical skills	pain management
7	Clinical case presentations	PPT	2	CBL	pain management

Bibliography
Bibliography
Mandatory bibliography:
1. Physical &Rehabilitation Medicine for Medical students, MG Ceravolo, N. Christodoulou, 2018, ISBN: 978-88-7051-634-4
Support bibliography:
1. Physical Medicine and Rehabilitation (fourth edition), Randall L. Braddom, Elsevier Saunders ed., 2011, 1-1506, ISBN: 978-1-4137-70884-4
2. Physical Medicine and Rehabilitation Secrets (third edition), B. J. O'Young, Mosby Elsevier ed., 2008, 1-748, ISBN- 13: 978-1-4160-3205-2

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The community is in search of a multimodal aproachment of different pathologies in order to alleviate the quality of life of the patients and to improve their condition and by thus the society. The society is expecting active individuals capable to innovate. Knowing the needs will provide the dental students the opportunity to use all the resources in order to improve the dental management.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			

- practical activities	To be able to outline the main objectives in rehab. At least 5 out of 10.	Clinical case - OSCE style - CBL	20
- lecture	o be able to upgrade his/her grade from the individual evaluation to the team one such showing his/her gaining and using new knowledges.	MQT-TBL	10
Final evaluation			
- practical final exam	NA	NA	0
- theoretical final exam	At least 6 out of 10.	MQT	70
Minimal performance standards: The medical student should be able to perform/ to apply: -the physiatric history -the physical examination -the therapeutical exercise – contraindications (major) -the physical agent modalities - contraindications (major) -the manipulation, traction and massage - contraindications (major) Must seen:AS, OA, low back pain, facial nerve injury			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Chiș Monica	Each Thursday - 14:00 till 15:30, after each lecture 30 minutes

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Orthodontics and dento-facial orthopedics (1)			
2.2 Course coordinator: Șef l dr El Saafin Mahmoud Nabil Abdelkader			
2.3 Practical activities coordinator(s): Elsaafin Mahmoud			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12	3.2 lecture: 4	3.3 practical activities: 8	
3.4 Total hours in curriculum: 84	3.2 lectures: 28	3.6 practical activities: 56	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			24
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			23
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			72
3.9 Total hours			156
3.10 Credits			6

4. Prerequisites (where applicable)

4.1 curricular: Complex orthodontic diagnosis and individualized treatment plan
4.2 competency: Basic knowledge of dental morphology, dental occlusion

5. Conditions

5.1 for lectures: Computerized presentation, projector, flipchart
5.2 for practical activities: Treatment halls, dental units, negatoscopes

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

-

7. Objectives of the discipline

7.1 General objective:

Elaboration of an orthodontic complex diagnosis and identification of the therapeutic objectives.
7.2 Specific objectives: Acquisition of organogenetic disorders in the form of certain dento-maxillary abnormalities, approaching dysfunctions, and malfunctions. Clinical and therapeutic particularities of orthodontic malocclusions. Designing a complex orthodontic treatment plan based on the child's age and general health status, focusing on the nature of the anomaly.

8. Learning outcomes

8.1 Knowledge: Upon completion of the discipline, the student will have knowledge of dento-maxillary growth and development, the morphological, etiological and functional characteristics of malocclusions, the stages of orthodontic diagnosis, the interpretation of complementary investigations (study models, orthopantomography, teleradiography, photographs, occlusal analysis), the principles of individualized treatment planning, and the clinical particularities of preventive, interceptive and corrective orthodontic therapy.
8.2 Skills: At the end of the discipline, the student will be able to perform a clinical and complementary orthodontic examination, identify dento-maxillary abnormalities, interpret diagnostic records (study models, photographs, orthopantomography, teleradiography, occlusal analysis), establish a complex orthodontic diagnosis, define therapeutic objectives, and design an individualized treatment plan according to the patient’s age, general condition, and type of malocclusion.
8.3 Responsibility and autonomy: Upon completion of the discipline, the student will be able to assume professional responsibility in the orthodontic evaluation of patients, make reasoned clinical decisions within the limits of competence, collaborate effectively within a multidisciplinary team, and recognize situations that require referral to the orthodontic specialist or maxillofacial surgeon

9. Specific competencies acquired

9.1 professional competencies: -Elaboration of a complex and individualized treatment plan by clinical examination, complementary examinations (model analysis, radiography examination (OPG and teleradiography), photostatic exam, static and dynamic occlusion examination, anthropometric measurements) Establishing a morphological, etiological, and functional orthodontic complex diagnosis. Establishing therapeutic goals. Preparing the patient for the orthodontic therapy Knowing the stages of ADM growth and development, the importance of space management in mixed and permanent dentition Knowledge of methods to combat malfunctions and dysfunctions of dento-maxillary apparatus. Selective drilling, stripping, exercises of myogymnastics.
9.2 transversal competencies: Identifying the objectives to be achieved, the working steps, the implementation deadlines, the available resources, the risks and the conditions for completion a stabile and functional occlusion; Identifying the role and responsibility of a multidisciplinary team; Performing orthodontic screenings in different age groups to identify the epidemiological aspects of different types of malocclusion; Early identification of serious skeletal disorders, of facial harmony and orientation towards specialist surgery. Effective use of information resources, communication and training resources both in Romanian, Hungarian and in an international language, in order to elaborate and present a specialized paper; Identifying objectives, work phases, available resources, risk factors in targeted work.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Growth and development of the craniofacial complex	Oral, multimedia presentation	2	-	-

2	Classification of malocclusions. Clinical examination in orthodontics	Oral, multimedia presentation	2	-	-
3	The etiology of malocclusions	Team-based Learning (TBL), module 1	2	Early communication of the topic in order to prepare	-
4	Complementary examinations in orthodontics	Oral, multimedia presentation	2	-	-
5	Malocclusions in transversal plane: maxillary compression syndrome Class II anomalies	Oral, multimedia presentation	2	-	-
6	Malocclusions in the transversal plane: crossbite syndrome	Oral, multimedia presentation	2	-	-
7	Malocclusions in sagital plane: distal occlusion	Oral, multimedia presentation	2	-	-
8	Malocclusions in sagittal plane: Progenic Symptom. Class III anomalies	Oral, multimedia presentation	2	-	-
9	Malocclusions in vertical plane. Deep-bite (Angle II/2)	Oral, multimedia presentation	2	-	-
10	Malocclusions in vertical plane. Open bite.	Team-based Learning (TBL), module 2	2	-	-
11	Class I anomalies: spacing and crowding	Oral, multimedia presentation	2	-	-
12	Class I anomalies: agenesis and supranumerary teeth	Oral, multimedia presentation	2	-	-
13	Class I anomalies: dental position disorders	Oral, multimedia presentation	2	-	-
14	Labio-maxilo-palatal cleft: impression taking and orthodontic treatment plan	Oral, multimedia presentation	2	-	-

Bibliography

1. Păcurar M, Draşovean A – Anomaliile dento-maxilare – curs, Universitatea de Medicină şi Farmacie Tg.Mureş, 2015,194
2. Ecaterina Ionescu - Anomaliile dentare, Editura Cartea Universitară, Bucureşti, 2005
3. Graber T.Orthodontics: Current Principles and Tehniques. Fourth Edition. Mosby Elsevier, 2005

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Static monomaxilar examination	Practical demonstrations, individual activity and small groups	4	-	-
2	Static bimaxilar exams	Practical demonstrations, individual activity and small groups	4	-	-
3	Cast analysis: developmental indexes of dentoalveolar arches, perimeter, Bolton index	Case Based Learning (CBL) module 1	4	Complex clinical case study	-
4	Photostatic examination in orthodontics	Practical demonstrations, individual activity and small groups	4	-	-
5	Complementary examinations in orthodontics	Practical demonstrations, individual activity and small groups	4	-	-
6	Orthodontic clinical examination	Practical demonstrations, individual activity and small groups	4	-	-
7	Radiographic examination: OPG, lateral cephalometry	Practical demonstrations, individual activity and small groups	4	-	-
8	Clinical and radiological examination in Orthodontic	Case Based Learning (CBL) module 2	4	Complex clinical case study	-

9	Diagnostics of class I anomalies. Treatment goals	Case Based Learning (CBL) module 3	4	Complex clinical case study	-
10	Diagnosis of class I malocclusions. Crowding	Practical demonstrations, individual activity and small groups	4	-	-
11	Diagnostics of class II malocclusions. Treatment goals	Practical demonstrations, individual activity and small groups	4	-	-
12	Etiological, morphological, and functional diagnosis in class II / 1 malocclusions	Practical demonstrations, individual activity and small groups	4	-	-
13	Diagnosis of Class III malocclusions Treatment goals	Practical demonstrations, individual activity and small groups	4	-	-
14	Case presentation	Practical demonstrations, individual activity and small groups	4	-	-

Bibliography

Bibliography
1. Mariana Păcurar, Cristina Bică, Claudia Ursu - Caiet de lucrări practice de ortodonţie. Litografia UMF Tg.Mureș, 2003
2. Mariana Păcurar, Cristina Bică, Martha Krisztina, Anca Drașoveanu, Eugen Bud - Îndreptar de lucrări practice. Aparate ortodontice. Litografia UMF Tg.Mureș, 2006
3. Mártha Krisztina, Cristina Bică: OrthoAtlas, Ed. University Press Tg. Mureș, 2015, ISBN: 978-973-169-329-3

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is correlated with the expectations of the professional community, relevant professional associations, and representative employers in the field of Dental Medicine by developing competencies in orthodontic diagnosis, dento-facial growth assessment, early detection of malocclusions, treatment planning, and interdisciplinary case management. The discipline contributes to the training of future dentists able to identify orthodontic abnormalities, establish therapeutic objectives, and provide or refer patients for appropriate orthodontic care in accordance with current professional standards and clinical needs.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	CBL	Mean grade of the 4 CBL modules	25
- lecture	TBL	Mean grade of the 2 TBL modules	15
Final evaluation			
- practical final exam	Practical exam	Practical exam	20
- theoretical final exam	test	Multiple choice test	40

Minimal performance standards:

The final mark for promotion is 5 (five) and is made up of the assessments during the semester (TBL, CBL) respectively the final examinations. The student is required to attend all the evaluations throughout the academic year.

If absent from a TBL module, the mark will be 1; there is no possibility of repeating this assessment, but it will still be possible to support the final exam. In the case of absences at TBL sessions for extremely justified reasons, the student has the possibility to draw up a review on the topic

The final practical exam is mandatory, with the minimum promotion mark being 5.

13. Must seen clinical situation list

MUST SEEN CLINICAL CASES - mandatory clinical cases presented to students during the semester:
1. Maxillary compression with protrusion
2. Maxillary compression without protrusion
3. Mandibular lateral shift
4. Crowding
5. Spacing
6. Upper lateral incisor agenesis
7. Agenesis of second bicuspid
8. Retention of canine

9. Class II / 1 malocclusion 10. Class II / 2 malocclusion 11. Open bite 12. Functional class III malocclusion 13. Anatomical class III malocclusion

14. Clinical / practical abilities

Minimum standards for practical works during the semester, which conditions the participation in the practical and theoretical examination in the session: Static monomaxillary exam, study model 2 Static bimaxillary exam, study model 2 Orthodontic impression 2 Analysis of the study cast (measurements) 2 Photostatic Exam 2 Radiological exam: OPG 3 Analysis of lateral cephalometry 3 Analysis of the documentation for cl. I. malocclusion 2 Analysis of the documentation for cl. II / 1. malocclusion 2 Analysis of the documentation for cl. II / 2. malocclusion 2 Analysis of the documentation for cl. III. malocclusion 2 Orthodontic Sheet 2 Preparation of the laboratory sheet 2 Case presentation 2

15. Appointment timetable (for students)

Șef l dr El Saafin Mahmoud Nabil Abdelkader	Luni de la 14 până 16

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: ME2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Endocrinology concepts			
2.2 Course coordinator: Prof dr Pașcanu Maria-Ionela			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: DS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: x
4.2 competency: x

5. Conditions

5.1 for lectures: acces internet, PC, videoproiector
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

0911, 0912

7. Objectives of the discipline

7.1 General objective:

The goal is to train physicians to have a strong grasp of the physiology and pathophysiology of the endocrine system, and to provide safe, effective, patient-focused care for preventing, diagnosing, and managing endocrine diseases. This involves using current evidence and guidelines, working well with other professionals, and supporting quality, equity, and community health through practice, education, and starting research.
7.2 Specific objectives: Gaining the ability to explain and connect concepts of endocrine physiology and pathophysiology, including thyroid, adrenal, pituitary, parathyroid/phospho-calcium metabolism, reproductive endocrinology, and hydro-electrolyte balance, while using clinical guidelines and tools like FRAX and clinical scores. Developing skills to search for and synthesize evidence, recognize various investigations for diagnosing endocrine diseases, and identify specific endocrine disorders based on signs and symptoms. Additionally, providing appropriate dental care to patients with endocrinological conditions, especially when treatments may impact oral health.

8. Learning outcomes

8.1 Knowledge: included in responsibility and autonomy
8.2 Skills: included in responsibility and autonomy
8.3 Responsibility and autonomy: At the end of the course, the student: can diagnose the main causes of adrenal insufficiency, can establish the etiology of hypo/hypercalcemia, can raise the suspicion of endocrine hypertension, can differentiate the different causes of thyrotoxicosis,may include oral signs and symptoms in the clinical picture of endocrine disorders, can establish the management plan for invasive dental therapies in patients with antiresorptive treatment, can recognize and interpret hormonal analyzes, can educate the patient on a healthy lifestyle

9. Specific competencies acquired

9.1 professional competencies: -knowledge of endocrine terminology and concepts; -basic clinical skills (anamnesis, specific signs and symptoms, diagnostic algorithms);- interpretation of hormonal tests - principles
9.2 transversal competencies: Key skills include teamwork, lifelong learning and critical thinking, efficient use of information resources, professional communication in appropriate language, digital literacy, and demonstrating ethical, moral, and humane behavior when interacting with patients and other health professionals.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction. Classification, methods of diagnosing, biorhythms, actions and endocrine receptors. Etiology and pathogenesis of endocrine disease. Semiology.	Oral presentation +multimedia support	2	-	Pituitary gland pathology, hydro-electrolyte imbalance, cerebral tumors, appetite disorders, headache, visual impairment, polyuria, nausea, weight loss, weight loss, sleep disturbance
2	Hypothalamus and pituitary – physiology and dysfunctions. Pituitary tumors. Diabetes insipidus. Acromegaly. Hyperprolactinemia.	Oral presentation +multimedia support	2	-	Pituitary gland pathology, brain tumors, headache, visual impairment, nausea, weight gain, weight loss
3	Thyroid gland – physiology and dysfunctions. Thyrotoxicosis. Hypothyroidism. Thyroid nodules. Thyroid cancer.	Oral presentation +multimedia support	2	-	Thyroid Pathology, Palpitations, Visual Impairment, Blindness, Weight Loss, Orbital Inflammation, Learning Disorders, Deafness, Anemia, Constipation, Dysphagia, Short stature, Weight gain, Edema

4	Parathyroid glands – physiology and dysfunctions. Hypocalcemic disorders. Hypercalcemic disorders. Osteoporosis.	Oral presentation +multimedia support	2	-	Disorders of calcium and vitamin D metabolism, osteoporosis
5	Adrenal gland – Adrenal failure. Adrenal crisis. Secondary hypertension (Cushing syndrome. Adrenal medulla - Pheochromocytoma. Primary aldosteronism).	Oral presentation +multimedia support	2	-	Hyperfunction of the adrenals. Hypertension. Diabetes mellitus. Adrenal failure
6	Gonads – puberty, ovarian/testicular dysfunctions.	Oral presentation +multimedia support	2	-	Disorders of puberty, Hypogonadism, Infertility, Gynecomastia, Menstrual disorders, Contraception,
7	Obesity: Etiology, pathogenesis. The metabolic syndrome.	Oral presentation +multimedia support	2	-	Lipid metabolism disorders, Diabetes mellitus, Acne, Weight gain

Bibliography
Bibliography
1. Kumar and Clark's Clinical Medicine, 10th edition 2021, Elsevier – chapter 19 Bone disease (pg 471-485) & 21 Endocrinology (pg 583-650).
2. Presentations and other material uploaded in Blackboard

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Possession of a minimum core of endocrinology-specific knowledge required for the proper conduct of medical practice.
Acquisition of the ability to use existing diagnostic and therapeutic algorithm

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	Midterm test based on clinical scenarios, with MCQ, fill-in, and essay-type questions	grading from 1 to 10	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	basic notions in general endocrinology,etiopathogenesis, clinical symptoms and signs of endocrine disease, laboratory and imaging investigations, differential diagnosis, therapeutic strategy of endocrine diseases	test 25-50 multiple choice questions	70

Minimal performance standards:
Correct answer to at least half of the questions at the end of the semester. Clinical recognition of endocrine diseases, interpretation of paraclinical investigations (hormonal tests, tumour markers, MRI), identifying endocrine emergencies, identifying objectives and therapeutic priorities, medical prescriptions, identifying endocrine risk factors and their prophylaxis.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Pașcanu Maria-Ionela	Wednesday 14.00-15.00, 30 minutes after every lectures

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Oral implantology			
2.2 Course coordinator: Șef l dr Coșarcă Adina-Simona			
2.3 Practical activities coordinator(s): Sef. Lucr. Cosarca Adina, Sef. Lucr. Iacob Alina, Sef Lucr. Golu Vlad			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			25
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			25
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			76
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: Studentul trebuie sa fi parcurs si /sau promovat anterior discipline fundamentale si clin ice care formeaza baza teroretica necesara intelegerii im plantologiei orale
4.2 competency: -Identificarea structurilor anatomice relevante pentru implantologie, creasta alveolara, sinus maxilar, canal mandibular, foramen mental. Cun oasterea notiunilor de baza in chirurgia orala

5. Conditions

5.1 for lectures: Lecture room, Laptop
5.2 for practical activities: Operating room, demonstrating room

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Disciplina este corelata cu clasificarea europeana ESCO contribuind la dezvolatarea competentelor de medic stomatolog

7. Objectives of the discipline

7.1 General objective: Introduction of implantology treatment in dentistry treatment. Good knowledge of local and general indications and contraindications of implant insertion.
7.2 Specific objectives: Theoretical knowledge of common insertion metthods for different types of implants in oral cavity. Theoretical knowledge of bone grafting. Postoperator treatment, hospitalization for implant patients, implant hygiene

8. Learning outcomes

8.1 Knowledge: Cunoaterea terminologiei in implantologie, identificarea tipului de implant, Notiuni legate de tipul de os , oferta osoasa, Indicatii, accidente si complicatii in implantologie. Elemente de baza in augmentarea osoasa. La final studentul trebuie sa cunoasca si sa explice etapele inserarii implantelor, rolul instrumentarului
8.2 Skills: Studentul poate identifica elementele compponente, tipul de implant, oferta osoasa. Poate evalua oferta osoasa si alege tipul de implant, Studentul poate enumera indicatiile, contraindicatiile, accidentel ,complicatiile in implantologie
8.3 Responsibility and autonomy: Studentul poate evalua preoperator pacientul(statuslocal+sistemic) -Studentul poate manipula trusa de implante in conditii de aseăpsie si antisepsie Poate selecta tipul de implant, dimensiunea lui si pozitia de inserare recu oaste precoce complicatiile intraoperatorii simulate si poate actiona corespunzator

9. Specific competencies acquired

9.1 professional competencies: Correct local and general examination of the patient, in order to establish the indication for dental implants placement. Theoretical knowledge of local and general contraindications for implants placement. Theoretical knowledge of the insertion techniques of different types of implants; improving the bone offer; accidents, complications that occur and ultimately lead to the removal of the implant. Knowing how to assure a correct follow-up of patients with implants.
9.2 transversal competencies: -Additional competence Compliance with the rules of asepsis and antisepsis, of labor protection and of the lead practitioner. Effective teamwork.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The historical development of dental implants. Anatomy of the maxillary and mandibular bone. Implant clasification	Oral presentation + multimedia, Discussions	2	-	-
2	Patient examination in cases of implant insertion. Bone supply	Oral presentation + multimedia, Discussions	2	-	-
3	Indications, contraindications in implantology	Oral presentation + multimedia, Discussions	2	-	-
4	Surgical principles in implantology Osseointegration	Oral presentation + multimedia, Discussions	2	-	-
5	Biomaterials used for bone i mprovement	Oral presentation + multimedia, Discussions	2	-	-

6	Bone grafting for implant placement	Oral presentation + multimedia, Discussions	2	-	-
7	Accidents and complications in implantology	Oral presentation + multimedia, Discussions	2	-	-

Bibliography
Arung K. Garg, Implant Dentistry- A practical Approach,2010, Mosby, Elsevier
Pankaj P. Singh, A. Norman Cranin, Atlas of Oral Implantology, Third Edition, 2010, Mosby, Elsevier
Fourth Edition Misch's Contemorary Implant dentistry , Randolph Resnik 2021

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Implant clasification Implant sistem / components Clasificarea implantelor/ Terminologia in implantologie	prezentari orale,	2	-	-
2	Patient examination in implantology Examinarea pacientului in implantologie	Multimedia and oral presentation, discussions	2	-	-
3	Implant insertion technique	Multimedia and oral presentation, discussions	2	-	-
4	Implant insertion technique on 3D model	CBL	2	CBL 1	-
5	Biomaterials used in implantologi	Multimedia and oral presentation, discussions	2	-	-
6	Bone augmentation	Multimedia and oral presentation, discussions	2	-	-
7	Accidente and complicatiions in implantologi	Multimedia and oral presentation, discussions	2	-	-

Bibliography
Arun K. Garg, Implant Dentistry, a practical aproach , 2010, Mosby, Elsevier
Pankaj P. Singh, A. Norman Cranin, Atlas of oral implantolgy, Third edition, 2010, Mosby, Elsevier
Randolph R. Resnic Misch's Contemporary Implant Dentistry Fourth Edition

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

-

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	According to the Department of Oral and maxillofacial surgery	CBL	30
- lecture	According to the Department of Oral and maxillofacial surgery	-	0
Final evaluation			
- practical final exam	According to the Department of Oral and maxillofacial surgery	oral test	30
- theoretical final exam	According to the Department of Oral and maxillofacial surgery	Written test - multiple choise questions UNIX	40

Minimal performance standards:
Final lecture exam grade – minim 5; notă < 5 = failed;
Final pa exam grade – minim 5; notă < 5 = failed;
Final grade – minim 5; notă < 5 = failed
Attendence : mandatory for practical activities. 20% of motivated (with the dean's office accept) absences can be recuperated- further details are decided by the course/practical activities coordinator/s

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Coșarcă Adina-Simona	Dupa ora de curs

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Aesthetics in orthodontics			
2.2 Course coordinator: Conf dr Bud Eugen-Silviu			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Projector, computer - laptop, flipchart
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline contributes to the formation of ESCO competencies such as: -assessment of dento-facial aesthetics and recognition of aesthetic deviations; -understanding the principles of facial and dental harmony in orthodontic diagnosis and treatment planning; -application of aesthetic criteria in selecting appropriate orthodontic treatment options;

-communication with patients regarding aesthetic expectations and treatment outcomes;
-integration of aesthetic considerations into interdisciplinary dental treatment.
Thus, the discipline Orthodontic Aesthetics ensures alignment between academic training and labor market requirements at the European level, in accordance with the ESCO classification.

7. Objectives of the discipline

7.1 General objective:
Complex orthodontic diagnosis, establishment of a treatment plan, identification of therapeutic objectives taking into account the aesthetics of the face

7.2 Specific objectives:
Knowledge of the parameters responsible for facial harmony (photo analysis, X-ray evaluation)
Optimal timing of treatment of dental disorders. Establishment of a complex orthodontic treatment plan depending on the age and general condition of the patient, depending on the type of disorder.

8. Learning outcomes

8.1 Knowledge:
Understanding the principles of dento-facial aesthetics; knowledge of the relationships between facial and dental components; identification of factors influencing smile aesthetics; knowledge of aesthetic analysis methods used in orthodontics.

8.2 Skills:
Application of aesthetic principles in clinical analysis and orthodontic treatment planning; evaluation of facial and dental aesthetics using clinical and digital methods; effective communication with patients regarding aesthetic goals and treatment outcomes.

8.3 Responsibility and autonomy:
Taking responsibility in aesthetic assessment and therapeutic decision-making; integration of ethical principles in patient management; development of autonomous learning skills and continuous professional improvement in orthodontic aesthetics.

9. Specific competencies acquired

9.1 professional competencies:
Development of Advanced and personalized treatment plan clinical study (Model analysis, X-ray evaluations additional studies (OPG,TELERX), photo test, static and functional
. Occlusion, Anthropometric measurements
. Complex morphology, etiology and functional orthodontic diagnosis establishment of the use of aesthetic diagnosis in filling in the orthodontic form
Assessing the harmony of the face based on photographic examination and radiographic evaluation
Mastering the exact technique of photography
Precise knowledge of the development and growth processes of the dento-maxillary apparatus
Assessing the need for orthodontic treatment using IOTN indices

9.2 transversal competencies:
Getting to know the goals to be achieved, the steps of treatment, their deadlines and possible risk factors
Finding an individual role as a member of a pluridisciplinary team
Orthodontic screening in communities of different ages, conducting pathological surveys. Timely diagnosis of skeletal disorders, disorders causing aesthetic disorders management of half of specialist clinics . Writing and presenting dissertations in Romanian and international languages using the information source material effectively, knowing the principles of communication Objectives, work phases, available source

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	History of facial esthetics evaluation. The role of the anthropoletric measurements in establishing the general development of the human body. Cunoașterea principiilor esteticii.	Lecture, projection	2	-	-
2	TBL Facial macroesthetics. Photostatic evaluation. Facial proprortions and profile analysis.	Lecture, projection	2	-	-

3	Profile changes during somatic growth. Facial harmony: lips, eyes, nose and forehead evaluation.	Lecture, projection	2	-	-
4	Facial miniesthetics. Smile analysis. Orthodontic approach of the gummy smile.	Lecture, projection	2	-	-
5	TBL Facial microesthetics. Lips- teeth proportion. The tooth morphology (black triangles).	Lecture, projection	2	-	-
6	Cephalometric measurements for facial esthetics evaluation, Ricketts E line, the Z angle.	Lecture, projection	2	-	-
7	Ortho- esthetic treatment options, The advantages of the lingual technique. The role of the ceramic brackets.	Lecture, projection	2	-	-

Bibliography

V Graber: Orthodontics current principles and techniques, Mosby, Elsevier 2011M Fradeani:Esthetic Analysis, Quintessence publishing, 2004
W. Proffit: Orthodontics. Editura Mosby Philadelphia, 2005
E.Ionescu: Manual pentru rezidentiat vol 1,2, ed. Univ. Caro Davila, București 2021

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the course is in accordance with the dental employers needs.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	Evaluate on entire semestre TBL 10%. assigment 20%	Discussing complex cases in individual and group activities	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	The theoretical acquisition of the subject in question according to the material of the lectures	Written survey / test - with one or more hit test questions, descriptive parts	70
Minimal performance standards: Final ticket - achievement of a minimum rating of 5			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Bud Eugen-Silviu	30 de minute dupa fiecare curs.

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Pediatric dentistry (2)			
2.2 Course coordinator: Conf dr Eșian Daniela-Elena			
2.3 Practical activities coordinator(s): Assoc. Prof. Daniela Eșian - PhD, Lecturer Anamaria Bud - PhD, Asist. Prof. Oana Stoica - PhD, Asist. Prof. Laura Conțac - PhD student, Asist. Prof. Galfi Esztella - PhD student			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4/12	3.2 lecture: 0/4	3.3 practical activities: 4/8	
3.4 Total hours in curriculum: 112	3.2 lectures: 28	3.6 practical activities: 84	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			15
- supplemental documentation at the library, from specialized information portals and in the field			14
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			14
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			44
3.9 Total hours			156
3.10 Credits			6

4. Prerequisites (where applicable)

4.1 curricular: Students passed the relevant clinical disciplines: Orthodontics 1, Oral and Dento-Maxillary Surgery 1
4.2 competency: 1. Knowledge of the anatomy of dental structures, primary and secondary dental anomalies, emergencies in pediatric dentistry, dental pain, prevention in dentistry; 2. Basic skills in clinical examination of the patient; 3. Familiarity with the workflow in the dental office.

5. Conditions

5.1 for lectures: Amphitheater equipped with multimedia infrastructure (projector, audio-video system).
5.2 for practical activities: Pedodontics clinic and offices appropriately equipped for the treatment of pediatric patients.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline of Pedodontics contributes to the development of ESCO competencies in the area of professional biomedical competencies and transversal competencies (critical thinking, professional communication, lifelong learning), through teaching activities and clinical applications specific to the field.
Specifically, the discipline contributes to the formation of ESCO competencies such as:
- diagnosis and treatment of oral diseases in children, in accordance with the dentist's role to examine, diagnose and treat dento-maxillary pathology, oral health education and prevention of dental diseases, by training the pediatric patient and their relatives;
- application of the principles of evidence-based medicine in clinical decision-making and adapting treatment to the needs of the pediatric patient;
- teamwork and interdisciplinary collaboration, essential in the management of the pediatric patient;
- solving clinical problems and making decisions, by integrating clinical and paraclinical data.
Thus, the discipline of Pedodontics ensures the correlation between university training and the requirements of the labor market at the European level, according to the ESCO classification.

7. Objectives of the discipline

7.1 General objective:
Knowledge of dental anomalies, muco-periodontal pathology and dental traumatology in children and adolescents.

7.2 Specific objectives:
-Acquiring the particularities of the odontogenetic disorders in the form of different primary and secondary dental anomalies;
-Knowledge of clinical and therapeutic aspects of temporary teeth traumatic injuries;
-Knowledge of clinical and therapeutic aspects of traumatic injuries in immature permanent teeth;
-Knowledge of clinical and therapeutic aspects of partial and total edentations in children and adolescents;
-Conceiving a complex pedodontic treatment plan based on the child's age and general health status.

8. Learning outcomes

8.1 Knowledge:
Recognizes the anatomical, physiological and psychological particularities of the child in relation to the dental act;
- Identifies the main oro-dental conditions specific to the young temporary and permanent dentition;
- Lists the stages of the clinical examination and dental treatment planning in children;
- Explains the etiology, evolution and therapeutic principles of dystrophic lesions and traumatic injuries in pediatric patients;
- Classifies relevant dental emergencies and anomalies encountered in pediatric and adolescent patients;
- Compares prevention and treatment techniques according to the patient's age and the specifics of the dentition;
- Distinguishes between therapeutic approaches applied to children versus adults, in the context of dento-maxillary development.

8.2 Skills:
Apply theoretical knowledge in planning and carrying out treatment in pediatric patients;
- Identify solutions and propose a therapeutic plan for clinical situations with different levels of child cooperation;
- Select and use appropriate instrumentation and materials for conservative and pulp treatments in the young primary and permanent dentition;
- Anticipate the stages of clinical intervention and adapt techniques to the individual characteristics of the patient;
- Interpret causal relationships between caries risk factors, child behavior and the evolution of dental disease;
- Design and apply personalized prevention measures, based on risk assessment;
- Formulate points of view and conclusions on the procedures performed, based on critical reflection and clinical argumentation.

8.3 Responsibility and autonomy:
Respects the principles of ethics and professional deontology in the relationship with the child patient and the parent;
- Prioritizes the clinical needs of the pediatric patient according to urgency, severity and level of cooperation;
- Formulates reasoned clinical conclusions and verifies the correctness of therapeutic decisions together with the teaching staff;
- Demonstrates autonomy in organizing clinical activity and documenting treated cases;
- Demonstrates effective collaboration with the medical team, recognizing the limits of one's own competence and requesting support when necessary;
- Identifies strengths and weaknesses of one's own practical skills;
- Adapts therapeutic approaches to increase patient safety and comfort.

9. Specific competencies acquired

9.1 professional competencies:
After passing the subject, the student will be able to:
-Perform a description of the physiological and pathological aspects regarding
the occurrence of dental anomalies based on the knowledge of anatomy, embryology and oral pathology;
-Recognize and make a diagnostic of muco-periodontal pathology in children and adolescents based on clinical

and complementary examinations; -Apply basic knowledge to develop a complex diagnosis and establish a therapeutic plan.
9.2 transversal competencies: At the end of the module, the student will demonstrate: -Ability to realize the importance of an efficient work in a multidisciplinary team - Understanding of the importance of a good doctor- patient relation, such as treatment should meet the patient's expectations.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Theory of psychology in pediatric dentistry practice	Oral presentation and multimedia	2	-	-
2	Primary dental anomalies	Oral presentation and multimedia	2	-	-
3	Secondary dental anomalies	Oral presentation and multimedia	2	-	-
4	Amelogenesis imperfecta.Dentinogenesis imperfecta	Oral presentation and multimedia	2	-	-
5	Traumatic dental injuries in temporary teeth	Oral presentation and multimedia	2	-	-
6	Traumatic dental injuries in permanent teeth	Oral presentation and multimedia	2	-	-
7	Traumatic avulsion.Possibilities of replanting and immobilization	Oral presentation and multimedia	2	-	-
8	Oral lesions in childhood and adolescence I. Oral manifestations of systemic diseases	Oral presentation and multimedia	2	-	-
9	Oral lesions in childhood and adolescence II. Oral manifestations of systemic diseases	Oral presentation and multimedia	2	-	-
10	Prosthetic treatment in pediatric dentistry	Oral presentation and multimedia	2	-	-
11	Techniques for surgical treatment in pediatric dentistry	Oral presentation and multimedia	2	-	-
12	The pedodontic approach of patients with cleft lip and palate	Oral presentation and multimedia	2	-	-
13	Methods of sedation in pediatric dentistry	Oral presentation and multimedia	2	-	-
14	Permanent first molar pathology	Oral presentation and multimedia	2	-	-

Bibliography

Bibliography
- Cristina Bica - Pedodonţie-diagnostic şi tratament. Ed. University Press Tg.Mureş, 2013
- Cameron A, Widmer RP - Handbook of Pediatric Dentistry. 3rd edition, Mosby Elsevier, 2008
- Elisabeta Bratu, Florica Glăvan – Practica Pedodontică. Ed. Orizonturi Universitare, Timișoara, 2005
Optional bibliography:
- Duggal M, Cameron A, Toumba J- Paediatric Dentistry at a Glance, Wiley-Blackwell, 2013
- Masthan KMK- Textbook of pediatric oral pathology, First edition, Jaypee , 2011
- Pinkham JR - Pediatric Dentistry. Infancy through Adolescence. 4rd edition, Elsevier Saunders, St. Louis, 2005

10.2 Content of workout, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Tehnici de tratament în caria simpla și complicata la dintii temporari-recapitulare	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	4	-	-

2	Tehnici de tratament în caria simpla și complicata la dintii permanenți tineri-recapitulare	Case Based Learning	4	Studenţii vor aborda un caz clinic complex	-
3	Diagnostic și tratament în fracturi coronare și radiculare la dintii temporari	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	4	-	-
4	Diagnostic și tratament în fracturi coronare și radiculare la dinții permanenți tineri	Case Based Learning	4	Studenţii vor aborda un caz clinic complex	-
5	Metode de imobilizare în traumatisme dentare	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	4	-	-
6	Posibilități de tratament în distrofii dentare	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	4	-	-
7	Tratamentul protetic la copii și adolescenți. Măsuri terapeutice interceptive	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	4	-	-
8	Diagnosticul și tratamentul leziunilor orale în bolile copilăriei	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	8	-	-
9	Diagnosticul și tratamentul leziunilor orale în boli sistemice	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	8	-	.
10	Abordarea copilului cu despicături labio-maxilo-palatine	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	8	-	-
11	Evaluarea statusului psihologic la pacientul pedodontic	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	8	-	-
12	Diagnosticul complex în pedodonţie.Prezentări de caz	Case Based Learning	8	Studenţii vor evalua un caz clinic complex	-
13	Profilaxia molarului de 6 ani	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	8	-	-
14	Tratamentul medicamentos în pedodonție (tratament antibiotic, antiinflamator, antialgic)	Prezentarea temei, demonstraţii clinice şi practice, discuţii interactive	8	-	-

Bibliography

Bibliography
Cristina Bică - Pedodonţie-diagnostic şi tratament. Ed. University Press Tg.Mureş, 2013
Eșian D, Păcurar M, Jurcă A, Bud E, Bică C - Pedodonție. Îndrumător de lucrări practice. Editura University Press Tîrgu Mureş, 2014
Bica C, Eșian D. Urgențe în practica pedodontică. În: Manual pentru rezidențiat. Vol. II (sub redacția Ionescu E), Editura Universitară “Carol Davila” București, 2021, 15 pg. 427-441, ISBN 978-606-011-171-9
Cameron AC, Widmer RP. Handbook of Pediatric Dentistry. Fifth Edition, Mosby Elsevier, 2022

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

-The contents of the discipline are aligned with the current requirements of the medical community and the dental profession, taking into account:
- Recommendations of national and European professional organizations (College of Dentists of Romania, European Academy of Pediatric Dentistry), regarding training standards in treating pediatric patients;
- Expectations of employers in public and private dental clinics, which require the formation of solid clinical skills in the treatment of children's oral diseases from the study period;
- The needs of the community, especially in the context of the high prevalence of dental caries in children in Romania, which is why the emphasis is on prevention, health education and caries risk management;
- The need for communication and interdisciplinary collaboration skills, essential in the treatment of pediatric patients with general conditions or special needs;
- Adaptation to recent developments in dental technology and materials.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent

			of final grade
Evaluation during the semester			
- practical activities	Practical skills acquired during practical activities	CBL sessions	25
- lecture	Knowledge and skills acquirement	Test	15
Final evaluation			
- practical final exam	Practical skills acquired during practical activities	Practical examination	20
- theoretical final exam	Knowledge and skills acquirement	Written MCQ	40

Minimal performance standards:
Minimal performance standards:
- Minimal grade required for the promotion of the exam is 5 (the final grade being a result of the evaluations during the semester and the final exam)
- The student has to attend the evaluation during the semester (TBL and CBL sessions)
- The final practical exam is mandatory, the minimal grade required for promotion being 5
- In case of absence at the TBL sessions, the student will receive the grade 1; there is no possibility to repeat this evaluation but the student will be allowed to attend the final exam
Must seen clinical situation list :
1.Severe early childhood caries
2.Clinical forms of pulpitis in temporary teeth
3.Necrosis in primary teeth (periapical pathology)
4.Clinical forms of reversible pulpitis of young permanent teeth 5.Complicated necrosis of permanent immature teeth
6.Assessment of a case with dental trauma in emergency
7.Crown and root fractures of primary teeth
8.Luxations in primary teeth
9.Crown and root fractures of permanent teeth
10.Luxations in permanent teeth
11.Avulsion in permanent teeth
12.Dental anomalies of size, shape, number and structure
13.Oral pathology in children

13. Must seen clinical situation list

1.Severe early childhood caries
2.Clinical forms of pulpitis in temporary teeth
3.Necrosis in primary teeth (periapical pathology)
4.Clinical forms of reversible pulpitis of young permanent teeth 5.Complicated necrosis of permanent immature teeth
6.Assessment of a case with dental trauma in emergency
7.Crown and root fractures of primary teeth
8.Luxations in primary teeth
9.Crown and root fractures of permanent teeth
10.Luxations in permanent teeth
11.Avulsion in permanent teeth
12.Dental anomalies of size, shape, number and structure
13.Oral pathology in children

14. Clinical / practical abilities

Treatment of simple and complicated decay in deciduous and permanent teeth 3
Dental trauma injuries of deciduous teeth.Treatment plan 2
Dental trauma injuries of permanent teeth.Treatment plan 2
Primary and secondary dental anomalies.Treatment plan/Restorative treatment 2
Complex diagnosis and treatment plan in temporary and mixed dentition (clinical cases) 1
Complex diagnosis and treatment plan in temporary and mixed dentition(OPG)2
Pediatric emergencies in dental office 1

15. Appointment timetable (for students)

Conf dr Eșian Daniela-Elena	Monday 9-11

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Digital orthodontics			
2.2 Course coordinator: Prof dr Păcurar Mariana			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: V	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: no
4.2 competency: no

5. Conditions

5.1 for lectures: projector
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Perform dental diagnostic imaging Interpret medical imaging Use e-health and digital technologies

7. Objectives of the discipline

7.1 General objective: Elaboration of an orthodontic complex diagnosis by modern techniques
7.2 Specific objectives: Acquiring the computational analysis features of lateral cephalometry - Knowing the optimal moment to establish an orthodontic treatment based on the assessment of skeletal age using the CVM method - Designing a complex orthodontic treatment plan based on child's age, general health status, with emphasis on the nature of the anomaly (functional, anatomical) - The role of CBCT in the diagnosis of anomalies (retained canine).

8. Learning outcomes

8.1 Knowledge: Ability to analyse Tele Rx by Dolphin software
8.2 Skills: -transversal skills -critical thinking -teamwork in healthcare settings -continuous professional development
8.3 Responsibility and autonomy: Demonstrates receptivity to new learning contexts. Demonstrates collaboration with other colleagues and teachers in carrying out teaching activities. Demonstrates autonomy in organizing the learning situation/context or the problem situation to be solved.

9. Specific competencies acquired

9.1 professional competencies: Computer aid complex ethiologic, morphological and functional complex orthodontic diagnosis
9.2 transversal competencies: Identification of serious skeletal anomalies, affecting facial harmony and guidance to specialized services (orthodontics, OMF surgery)Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Orthodontic programming and storage software.Finite element method FEM, method of evaluation of dental movements in orthodontic biomechanics	Power Point Presentation	2	-	-
2	Growth assessment on profile teleradiography, VTO method in orthodontic diagnosis.Use of Dolphin software in measurements on profile cephalogram	Power Point Presentation	2	-	-
3	Diagnostic set-up, advantages and limitations of the Invisalign technique	Power Point Presentation	2	-	-
4	My dent digital application, possibilities for online communication with patients	TBL	2	-	-
5	Scanning and storing models on computer. The advantages of the digital method.Digital photography. Means of assessing facial asymmetries	Power Point Presentation	2	-	-

6	The advantages of Easy Dent radiological software in detecting root resorption following orthodontic therapy. Total space analysis. Cephalometric correction after growth prediction	Power Point Presentation	2	-	-
7	CVM method of bone age analysis compared to dental and chronological age.Transversal expansion assessment. (Pennsylvania CBCT Analysis)3D facial recognition software. Evaluation of craniofacial parameters in digital orthodontics	Power Point Presentation	2	-	-

Bibliography

1. Mártha Krisztina, Cristina Bică: OrthoAtlas, Ed. University Press Tg. Mureș, 2015, ISBN: 978-973-169-329-3
2. Cristina Bică, Ligia Brezeanu: Deplasarea dentară ortodontică. Modele, simulări si aplicatii. Ed. University Press Tirgu Mures, 2012
3. Păcurar, M , Mahmoud El Saafin. - Clinical aspects of dento-maxillary anomalies Târgu Mureş : University Press, 2021 , ISBN 978-973-169-717-8

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Assessing the optimal time to start an orthodontic treatment, assessing facial growth patterns with computerized radiographic techniques

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	TBL	information aquired	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	final exam	multiple choice test	70

Minimal performance standards:
Minimum 5 grade in order to promote the exam

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Păcurar Mariana	Prof.Univ.Dr. Pacurar Mariana- 30 minutes after each course

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Gerodontology			
2.2 Course coordinator: Conf dr Bechir Edwin-Sever			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: V+VI	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular:
4.2 competency:

5. Conditions

5.1 for lectures:
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective:
7.2 Specific objectives:

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies:
9.2 transversal competencies:
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture			0
Final evaluation			
- practical final exam			0
- theoretical final exam			0
Minimal performance standards:			

15. Appointment timetable (for students)

Conf dr Bechir Edwin-Sever	

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Implanto-prosthetic therapy			
2.2 Course coordinator: Conf dr Bechir Edwin-Sever			
2.3 Practical activities coordinator(s):			
2.4 Year of study: V	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4		3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 28		3.2 lectures: 14	3.6 practical activities: 14
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			25
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			25
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			76
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Multimedia Equipment
5.2 for practical activities: Practical demonstrations, case studies / multimedia equipment, documentary support for clinical cases.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: Knowledge of overdenture concepts, indications, contraindications, overdenture variants on implants.
7.2 Specific objectives: Learning the methods of examining patients. Understanding the importance of the concept of implanto-prosthetic oral rehabilitation. Acquiring the necessary knowledge to develop an individualized implant-prosthetic treatment plan.

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: Technical or professional skills: Acquiring the necessary knowledge to develop an implant-prosthetic treatment plan. Acquiring the theoretical knowledge that involves choosing the implant according to the future prosthetic work. The ability to acquire knowledge about choosing the ideal candidate for implant overdenture.
9.2 transversal competencies: Notions about the concepts of prosthetic implant therapies Notions related to paraclinical investigations useful in formulating effective diagnoses and treatment plans. Affective-value skills: Communication with the patient. Communication with the dental technician.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The candidate for implant prosthetics.	Multimedia presentation	1	-	-
2	Anatomical consequences of edentulousness.	Multimedia presentation	1	-	-
3	The advantages of prosthetic restorations on implants.	Multimedia presentation	1	-	-
4	General terminology of implants and prosthetic attachments.	Multimedia presentation	1	-	-
5	Establishing the prosthetic treatment plan.	Multimedia presentation	1	TBL	-
6	Impression taking and fabrication of prostheses in implantology.	Multimedia presentation	1	-	-
7	Prosthetic considerations.	Multimedia presentation	1	-	-
8	Prosthetic principles of edentulous restoration by dental implants.	Multimedia presentation	1	-	-
9	9 Clinical situations for different types of edentulousness and their treatment with dental implants.	Multimedia presentation	1	-	-
10	Clinical situations for different types of edentulousness and their treatment with dental implants.	Multimedia presentation	1	-	-
11	Clinical variants of implant treatment.	Multimedia presentation	1	TBL	-
12	Temporary prosthesis on implants.	Multimedia presentation	1	-	-

13	Definitive prosthesis on implants.	Multimedia presentation	1	-	-
14	Dispensing patients with prosthetic works on implants.	Multimedia presentation	1	-	-

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1. Lecture Notes
2. Marco Rinaldi, Implants and Oral Rehabilitation of the Atrophic Maxilla, Springer, 2024.
3. Randolph Resnik, Misch's Contemporary Implant Dentistry, Elsevier Mosby, 2020.
4. Jensen, The sinus bone graft, Quintessence Publishing, 2006.
5. Davarpanah, Szmukler-Moncler. Immediate loading of dental implants, Quintessence International 2008.
6. Misch, Contemporary implant dentistry, Elsevier Mosby 2005.
7. Misch C.E., Dental Implant Prosthetics, Elsevier Mosby, 2005.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Prosthetic components used in implantology.	Presentation	1	-	-
2	OPG examination in implantology - indications, contraindications, advantages, disadvantages, limits.	OPG Examination	1	-	-
3	The use of CBCT examination in the exploration of the pre-implant bone substrate.	CBCT Examination	1	-	-
4	CBCT - applications, advantages and disadvantages.	CBCT Interpretation	1	-	-
5	CBCT-guided implant treatment – planning and execution techniques.	CBCT implant insertion simulation.	1	-	-
6	Preparation of the treatment plan in implantology.	Presentation	1	-	-
7	CBL	CBL	1	-	-
8	Preliminary impression, preliminary model, individual tray.	Practical demonstration.	1	-	-
9	The final impression. Realization of the working model.	Practical demonstration.	1	-	-
10	Realization of the mesostructure. The choice of calcinable abutments.	Practical demonstration.	1	-	-
11	CBL	CBL	1	-	-
12	Realization of the prosthesis model with implant anchorage.	Practical demonstration.	1	-	-
13	Making the finished prosthetic piece.	Practical demonstration.	1	-	-
14	Evaluation of finished parts. Appreciation and criticism.	Presentation	1	-	-

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1. Lecture Notes
2. Marco Rinaldi, Implants and Oral Rehabilitation of the Atrophic Maxilla, Springer, 2024.
3. Randolph Resnik, Misch's Contemporary Implant Dentistry, Elsevier Mosby, 2020.
4. Davarpanah,Szmukler-Moncler. Immediate loading of dental implants, Quintessence International 2008
5. Khoury, Antoun, Missika, Bone augmentation in oral implantology, Quintessence Publishing, 2007
6. Misch CE, Contemporary implant dentistry, Elsevier Mosby 2005
7. Misch CE, Dental Implant Prosthetics, Elsevier Mosby, 2005

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is relevant and up-to-date to the demands of the practical activity, the correct application of the notions of dental prosthetics, periodontology, implantology, and those of general pathology, pharmacology, physiopathology and psychology being essential in restoring the functionality of the dentomaxillary apparatus, within the framework of prosthetic implant therapies.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Knowledge of the theoretical and practical aspects of the subject of practical works.	CBL(Average)	20

- lecture	Knowledge of the theoretical aspects of the course topic.	TBL (Average)	20
Final evaluation			
- practical final exam	Knowledge of the theoretical and practical aspects of the subject of practical works	Interpretation of paraclinical examinations in the context of a given clinical situation.	20
- theoretical final exam	Knowledge of the theoretical aspects of the course topic.	Multiple Choice Examination	40

Minimal performance standards:
Obtaining the minimum grade of 5 (five) for each component of the evaluation:
Course:
- to know the basic concepts related to prosthetic implant therapy,
- to participate in the debate groups in the TBL system, on the mentioned topics
Practical work*:
- to carry out at least one documented case presentation CBL 1,
-to interpret a CT/CBCT CBL 2 in order to formulate the diagnosis and the treatment plan.
*meeting the minimum practical performance criteria allows the student to take the theoretical exam

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Bechir Edwin-Sever

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Periodontology (1)			
2.2 Course coordinator: Șef l dr Vlasa Alexandru			
2.3 Practical activities coordinator(s): Vlasa Alexandru, Buka Imola, Benedek Csilla			
2.4 Year of study: V	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 10		3.2 lecture: 4	3.3 practical activities: 6
3.4 Total hours in curriculum: 70		3.2 lectures: 28	3.6 practical activities: 42
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			46
- supplemental documentation at the library, from specialized information portals and in the field			46
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			45
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			138
3.9 Total hours			208
3.10 Credits			8

4. Prerequisites (where applicable)

4.1 curricular: - Students promoted pre-clinical disciplines
4.2 competency: - Knowledge of tooth anatomy, preventive dentistry measures - Clinical examination of the patients: basic knowledge - Working environment of the dental practice

5. Conditions

5.1 for lectures: Amphiteatre, Video projector, audio system, PC, flipchart
5.2 for practical activities: Periodontology department, periodontal examination instruments, periodontal charts

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Clinical / technical skills: -diagnose periodontal diseases

-erform scaling and root planing
-conduct periodontal surgery
-interpret dental radiographs
-manage oral infections

General healthcare competences:
-maintain patient records
-apply infection control measures
-communicate with patients

Follow ethical and legal standards:
-transversal skills
-critical thinking
-teamwork in healthcare settings
-continuous professional development

Course Learning Outcome ESCO Skill

Diagnose gingivitis and periodontitis Diagnose oral health conditions
Perform non-surgical periodontal therapy Provide dental treatment
Develop treatment plans Plan healthcare treatment
Educate patients on oral hygiene Advise on healthcare

7. Objectives of the discipline

7.1 General objective: Knowledge of the anatomical elements of the periodontal tissue and of the areas with its maximum vulnerability, in order to be able to understand the periodontal pathology and the applied therapeutic means
7.2 Specific objectives: Acquiring the morphological features of periodontal tissues in different pathological conditions. Knowledge of clinical signs and optimal treatment methods in gingivitis and periodontitis. Designing a complex periodontal treatment plan, adapted to the age and general health of the patient.

8. Learning outcomes

8.1 Knowledge: Establish correct diagnosis, causes and treatment planning of periodontal patients
8.2 Skills: Demonstrate receptiveness to new learning contexts, respects ethics demands and patients care
8.3 Responsibility and autonomy: Applies profesional ethics, develops real live situation skills

9. Specific competencies acquired

9.1 professional competencies: Correct diagnosis of different forms of periodontal disease, knowledge of methods for recording odonto-periodontal status in specific files. Correct use of means of clinical examination (periodontal probes, CPITN) and radiographic examination of periodontal patients. Recognition of the correlations between systemic diseases and supporting tissues of the teeth. Learning the treatment methods applicable in the initial phase of periodontal therapy (root scaling, sub-gingival curettage).
9.2 transversal competencies: Training in interdisciplinary collaboration skills with related medical specialties (microbiology, immunology, histopathology, dental-alveolar surgery) in order to achieve a complex treatment of periodontal disease. Knowledge of working methodologies in medium and long-term studies on the results of periodontal therapy in different groups of patients
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Anatomy of periodontium, structure of the superficial periodontium	PC, video projector, oral presentation and discussions	2	-	-
2	Structure of the deep (supporting) periodontium	PC, video projector, oral presentation and discussions	2	-	-
3	Aging and the periodontium	PC, video projector, oral presentation and discussions	2	-	-
4	Fundamental in the methods of periodontal disease epidemiology	Pc, video projector, oral presentation and discussions	2	-	-
5	Clinical diagnosis of periodontal patients	PC, video projector, oral presentation	2	-	-
6	Periodontal pathogenesis, etiology of periodontal diseases	PC, video projector, oral presentation	2	-	-
7	Periodontal pathogenesis, biologic bases of Periodontology	PC, video projector, oral presentation	2	-	-
8	Biofilm and periodontal microbiology	PC, video projector, oral presentation	2	-	-
9	The role of calculus and other local predisposing factors	PC, video projector, oral presentation	2	-	-
10	Influence of systemic conditions	PC, video projector, oral presentation	2	-	-
11	Classification of disease and conditions affecting the periodontium	PC, video projector, oral presentation	2	-	-
12	The periodontal pocket	PC, Video projector, oral presentation	2	-	-
13	Bone loss and patterns of bone destruction	PC, Video projector, oral presentation	2	-	-
14	Molecular biology and host-microbe interactions	PC, video projector,oral presentation	2	-	-

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1.Newman MG, Takei H, Klokkevold PR, Carranza FA. Newman and Carranza's Clinical Periodontology.13th Edition. Elsevier Health Sciences. 2019

2. Dumitriu H: Parodontologie, Ed.Medicală Bucureşti, 2009

3.Roman A, Lazăr L, Șurlin P, Stratul ȘI. Parodontologie 1 Noțiuni de bază. Editura Medicală Universitară Iuliu Hațieganu Cluj-Napoca,
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1. Lazăr L, Monea Al. Chiuretajul subgingival în practica ambulatorie de parodontologie. Editura University Press Tg. Mureş, 2009
2. Lazăr L. Elemente de parodontologie clinică. Editura University Press Tg. Mureş, 2015,
3. Newman MG, Takei H, Klokkevold PR, Carranza FA. Newman and Carranza's Clinical Periodontology.13th Edition. Elsevier Health Sciences. 2019
4. Ionescu E. Manual pentru rezidentiat. Ed. Univ Carol Davila, Bucuresti, 2021

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Presentation of the consultation instrumentation, of the manual and ultrasonic scaling instrumentation	Multimedia presentation, practical demonstrations and clinical cases	3	-	-
2	Presentation of instruments for periodontal surgical treatment	Multimedia presentation, practical demonstrations and clinical cases.	3	-	-
3	Presentation of the periodontal chart	Multimedia presentation, practical demonstrations and clinical cases.	3	-	-
4	.Determination of periodontal health indices (plaque index, tartar index, PBI, CPITN	CBL	3	The students receive the material in time, so they have the possibility to make individual study	-

5	Performing specific measurements in periodontal therapy (periodontal pocket depth, attachment loss, tooth mobility).	Multimedia presentation, practical demonstrations and clinical cases	3	-	-
6	Knowledge of Periodontal indices and periodontal chart completion	CBL	3	The students receive the material in time, so they have the possibility to make individual study	-
7	Completion of the periodontal chart	Multimedia presentation, practical demonstrations and clinical cases	3	-	-
8	Completion of the periodontal chart	Multimedia presentation, practical demonstrations and clinical cases	3	-	-
9	Learning the correct methods of manual and ultrasonic scaling	-	3	The students receive the material in time, so they have the possibility to make individual study	-
10	Completion of the periodontal chart	Multimedia presentation, practical demonstrations and clinical cases	3	-	-
11	Realization of practical treatment included in the minimum scale of practical knowledge - manual and ultrasonic scaling.	Multimedia presentation, practical demonstrations and clinical cases	3	-	-
12	Ultrasonic scaling and manual debridement, Correct dental brushing techniques. Adjunctive methods of maintaining the oral hygiene	CBL	3	The students receive the material in time, so they have the possibility to make individual study	-
13	Realisation of practical treatment included in the minimum scale of practical knowledge - manual and ultrasonic scaling.	Multimedia presentation, practical demonstrations and clinical cases	3	-	-
14	Realisation of practical treatment included in the minimum scale of practical knowledge - manual and ultrasonic scaling.	Multimedia presentation, practical demonstrations and clinical cases	3	-	-

Bibliography

Bibliography:

1.Newman MG, Takei H, Klokkevold PR, Carranza FA. Carranza's Clinical Periodontology.13th Edition. Elsevier Health Sciences. 2019

2. Dumitriu H: Parodontologie, Ed.Medicală Bucureşti, 2009

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2. Lazăr L. Elemente de parodontologie clinică. Editura University Press Tg. Mureş, 2015,
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4. Ionescu E. Manual pentru rezidentiat. Ed. Univ. Carol Davila, Bucuresti, 2021

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is corroborated with the need of employers in the fields of health, health management, medical education, drug companies, research in dentistry.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			

- practical activities	The practical works attendance, fulfilling the minimum scale/ therapeutical treatments during the practical activity: patient examination and completing 1 periodontal chart and performing 1 therapeutic activity of non–surgical causative periodontal therapy (scaling).	Average of the grades obtained during CBLs; (10 %) Average of the grades obtained during the module regarding the minimum scale for treatment performed (10%)	20
- lecture	Active participation at courses	Knowledge testing- one single correct answer 10 theoretical questions	10
Final evaluation			
- practical final exam	Oral examination regarding student's ability to properly examine a patient with periodontal disease, to complete a periodontal file, to put a correct diagnosis, to be able to make properly the initial treatment	Oral examination	20
- theoretical final exam	Final theoretical exam Knowledge of the anatomical elements of the periodontal tissue and the areas with maximum vulnerability. Acquisition of the knowledge necessary for the examination of the periodontal patient and the elaboration of a complete diagnosis of periodontal disease. 50 % presence at courses mandatory in order to be able to attend the theoretical exam, a minimum 5 grade at the written exam is mandatory to consider the exam passed	Written exam, theoretical exam with one or multiple (MCQ) answers at UNIX examination center	50

Minimal performance standards:
The accumulation of more than 3 absences on the practical part results in students being forbidden to access the final exam. The motivated absences will be recovered after a schedule established at level of the discipline.
Over 2 unmotivated absences, the recovery will be made for a fee.

- Evaluation during semester:
1. Practical works:
Fulfilling minimum scale of activity: patient examination and completing 1 periodontal file and performing 1 therapeutic activity of non–surgical causative periodontal therapy (scaling).

2. Course:
Theoretical exam (50 % presence at courses mandatory in order to be able to attend the theoretical exam)

- The final evaluation:
Minimum promotion grade is 5 in both practical and theoretical exams.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Vlasa Alexandru	30 minutes after every course

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Removable prosthodontics			
2.2 Course coordinator: Șef l dr Hănțoiu Liana-Georgiana			
2.3 Practical activities coordinator(s): Asist. Univ. Dr. Muică Adrian			
2.4 Year of study: V	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 13/9	3.2 lecture: 3	3.3 practical activities: 10/6	
3.4 Total hours in curriculum: 154	3.2 lectures: 42	3.6 practical activities: 112	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			18
- supplemental documentation at the library, from specialized information portals and in the field			18
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			17
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			54
3.9 Total hours			208
3.10 Credits			8

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -course room with projection system
5.2 for practical activities: Prior theoretical preparation of the clinical stage to be carried out

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline “Removable Prosthodontics” contributes to the development of competences defined within ESCO for the occupation of Dentist, by fostering the acquisition of knowledge, skills, and professional autonomy specific to the field of dental medicine.

7. Objectives of the discipline

7.1 General objective:
The discipline addresses the problem of prosthetic treatment of
total edentation by means of classical total mobile prostheses
and with implant support (over-denture).

7.2 Specific objectives:
Presentation of the clinical and therapeutic aspects of total edentation and its prosthetic management through complete removable dentures and implant-supported overdentures.
Description of the epidemiological and etiological characteristics of total edentation, including clinical manifestations, evolution, and associated complications.
Characterization of the morphological and functional features of the edentulous prosthetic field relevant to prosthetic treatment.
Explanation of the biomechanical principles of complete dentures and their implications for stability, support, and retention.
Outline of the clinical and paraclinical examination of the totally edentulous patient.
Presentation of the sequence of clinical, technical, and technological stages involved in complete denture fabrication.
Description of the principles and techniques of preliminary and final impressions, recording of intermaxillary relationships, and denture insertion.
Presentation of methods for maintenance, adjustment, relining, and repair of complete dentures.
Introduction to contemporary therapeutic approaches for total edentation, including implant-supported overdentures and unconventional clinical-technical procedures. acquiring elements related to clinical and therapeutic
aspects of prosthetic treatment of total edentation by mobile
prostheses.
Knowledge of the epidemiology and etiology elements of the
total edentation, its clinical forms, specific symptoms and
complications. Student acquiring the morphology and physiology
elements of the total edentrial prosthetic field and the
biodynamic elements of the total prostheses, correlated with the
diagnostic and therapeutic peculiarities. Transmitting the
knowledge necessary for the sequential sequence of the clinicaltechnical
and technological stages imposed by the classical
prosthesis and the modern prosthetic treatment of the total
edentation.

8. Learning outcomes

8.1 Knowledge:
Describe the etiopathogenic mechanisms involved in total edentation and associated morphological and functional changes of the orofacial system.
Explain the relationships between etiological factors, anatomical changes of the edentulous prosthetic field, and clinical manifestations in totally edentulous patients.
Classify the clinical forms of total edentation according to anatomical, functional, and prosthetic criteria relevant to treatment planning.
Describe the morphophysiological characteristics of the edentulous maxillary and mandibular prosthetic fields in the context of complete denture therapy.
Explain the biomechanical principles of complete dentures in relation to support, stability, and retention under functional conditions.
Describe the clinical and paraclinical examination methods of the totally edentulous patient in the context of prosthetic diagnosis.
Explain the relationships between impression techniques, prosthetic field characteristics, and the accuracy of complete denture fabrication.
Describe the stages of the clinical and laboratory workflow for complete denture treatment in the context of prosthetic rehabilitation.
Explain the principles of intermaxillary relationship recording and their role in achieving functional occlusion in edentulous patients.
Classify the types of complications and prosthetic stomatopathies associated with complete dentures based on etiological and clinical criteria.
Describe the therapeutic approaches for maintenance, relining, and repair of complete dentures in the context of long-term patient adaptation.
Explain the principles and indications of implant-supported overdentures in the context of modern prosthetic rehabilitation of total edentation. student should be able to restore the bimaxillary total edentation
and some unimaxillary edentations by means of classical prostheses
in a form, function and aesthetics acceptable to patients of all ages.
He must have the necessary knowledge and experience regarding
the design and realization of the prosthetic and prosthetic preparation

stages of the total edentationl prosthetic field, as well as elements
related to the procedures of the dental technician laboratory
performed in the process of obtaining total prosthetics.
To possess the knowledge necessary for the clinical and paraclinical
examination of total edentation.
The student should be familiar with the potential and limitations of the
various clinical and technological dental procedures involved in the
prosthetic restorations of the total edentation and be able to explain
to the patient the indications and contraindications of the various
methods of prosthetic solving of the total edentation (including overimplantation).Describe the etiopathogenesis of total edentation and the associated morphological and functional changes of the orofacial system.
Explain the biomechanical principles of complete dentures in relation to support, stability, and retention under functional conditions.
Identify the clinical and paraclinical features of the edentulous prosthetic field relevant to diagnosis and treatment planning.

8.2 Skills:
Analyze clinical and paraclinical data of totally edentulous patients in relation to the morphological and functional characteristics of the prosthetic field.
Interpret the relationships between etiological factors, structural changes of the edentulous ridges, and clinical manifestations relevant to prosthetic treatment.
Analyze the influence of biomechanical factors on the stability, support, and retention of complete dentures in different clinical contexts.
Interpret the relationships between impression techniques, prosthetic field conditions, and the functional outcome of complete dentures.
Integrate prosthodontic concepts in the analysis of clinical cases of total edentation and in the selection of appropriate treatment approaches.
Utilize clinical and paraclinical examination data in the development of prosthetic treatment strategies for edentulous patients.
Integrate the principles of intermaxillary relationships and occlusion in the assessment of functional rehabilitation outcomes.
Formulate reasoned conclusions regarding diagnosis, treatment planning, and prognosis in cases of total edentation.
Analyze complications associated with complete dentures in relation to their etiological and functional determinants.
Interpret the indications and limitations of implant-supported overdentures in relation to clinical conditions of the edentulous patientAnalyze clinical and paraclinical data of totally edentulous patients in the context of prosthetic diagnosis and treatment planning.
Apply the clinical and technical stages of complete denture therapy, including impression techniques, intermaxillary relationship recording, and denture insertion.
Evaluate the functional and clinical outcomes of complete dentures and propose appropriate adjustments or maintenance procedures.

8.3 Responsibility and autonomy:
Demonstrate autonomy in the use of scientific and professional resources for deepening knowledge in complete denture prosthodontics and total edentation.
Evaluate critically specialized prosthodontic information and personal performance in the context of clinical and practical training activities.
Respect ethical principles and standards of academic integrity in all clinical, practical, and academic activities related to removable prosthodontics.
Utilize scientific literature and clinical guidelines in the context of case analysis and prosthetic treatment planning for edentulous patients.
Integrate self-directed learning strategies in the continuous development of professional knowledge in complete denture therapy.Demonstrate autonomous clinical decision-making in the management of total edentation cases within the scope of removable prosthodontics.
Evaluate critically prosthodontic information and clinical results in the context of evidence-based practice.
Apply ethical principles and professional standards in patient care, ensuring confidentiality and safe clinical practice.

9. Specific competencies acquired

9.1 professional competencies:
The student should be able to restore the bimaxillary total edentation
and some unimaxillary edentations by means of classical prostheses
in a form, function and aesthetics acceptable to patients of all ages.
He must have the necessary knowledge and experience regarding
the design and realization of the prosthetic and prosthetic preparation
stages of the total edentationl prosthetic field, as well as elements
related to the procedures of the dental technician laboratory

performed in the process of obtaining total prosthetics.
To possess the knowledge necessary for the clinical and paraclinical examination of total edentation.
The student should be familiar with the potential and limitations of the various clinical and technological dental procedures involved in the prosthetic restorations of the total edentation and be able to explain to the patient the indications and contraindications of the various methods of prosthetic solving of the total edentation (including overimplantation)
Capacity to perform the clinical and technical stages of complete denture therapy, including impression techniques, recording intermaxillary relationships, and denture insertion, in the management of total edentation cases.
Capacity to analyze and interpret the morphological and functional characteristics of the edentulous prosthetic field, in order to establish an appropriate prosthetic diagnosis and treatment plan.
Capacity to apply the biomechanical principles of complete dentures (support, stability, and retention), in the optimization of functional and clinical outcomes of prosthetic treatment.
Capacity to evaluate and manage complications associated with complete dentures, including prosthetic stomatopathies and functional disturbances, in the context of long-term prosthetic rehabilitation.

9.2 transversal competencies:
The student must be competent to ensure safety at work. He must have knowledge of understanding the importance of her own health and of the impact she may have in pursuing her profession. It must have the power to impose the principles of health and safety at work on other colleagues.
Be competent in recognizing one's own limits and in acknowledging the value of continuous study, self-improvement, and critical thinking in maintaining a high degree of professional competence.
Have the knowledge and understanding necessary for the ethical and moral responsibilities involved in providing dental services to the patient as an individual and to the population level.
Establish a physician-patient relationship that allows him / her to carry out his / her activity at the internship.
Be competent to protect the confidential aspect of patient data.
Be competent to team up with colleagues, teachers and dental technicians.The student is able to communicate professionally with patients and colleagues in the context of clinical and practical activities of the discipline.
The student is able to collaborate effectively within a multidisciplinary team during clinical training and case-based learning activities.
The student is able to evaluate critically information and personal performance in the context of academic and clinical learning activities.
The student is able to apply ethical principles and standards of professional conduct in all activities related to the discipline.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Total Edentation - Concept, Etiology, Symptomatology, Evolution, Complications. Morphological and functional changes of the orofacial system in the total edentation	Oral and multimedia presentation	3	-	-
2	Morphophysiology of the edentulous maxillary and mandibular fields	Oral and multimedia presentation	3	-	-
3	Biomechanics of total prostheses. Principles of Clinical Examination of Total Edentated Patient	Oral and multimedia presentation	3	-	-

4	Impression of the total edentated prosthetic field - general principles, preliminary impression	Oral and multimedia presentation	3	-	-
5	Final impression of the total edentated field: principles, objectives, method and techniques of final impression	Oral and multimedia presentation	3	-	-
6	Determination and recording of intermaxillary relationships in the treatment of total edentation	Oral and multimedia presentation	3	Test	-
7	Selecting and arranging prosthetic teeth. Occlusion for the edentulous patient	Oral and multimedia presentation	3	-	-
8	Clinical try-in appointment	Oral and multimedia presentation	3	-	-
9	Applying total dentures in the oral cavity and adaptation of the patient with dentures	Oral and multimedia presentation	3	-	-
10	Relining and rebasing of complete dentures. Total prosthesis repairs	Oral and multimedia presentation	3	-	-
11	Prosthetic stomatopathies	Oral and multimedia presentation	3	-	-
12	Combination syndrome and implantoprosthetic treatment of total edentation	Oral and multimedia presentation	3	-	-
13	Immediate dentures	Oral and multimedia presentation	3	-	-
14	Unconventional clinical-technical procedures for total prosthesis. Overdenture on implants. Prosthetic rehabilitation of maxillo-facial defects of total edentated patient.	Oral and multimedia presentation	3	-	-

Bibliography

YASEMIN K. OZKAN. Complete Denture Prosthodontics, 1st ed., Springer 2019
ZARB G., HOBKIRK JA, ECKERT SE, JACOB RF. Prosthodontic treatment for edentulous pacients. Complete dentures and implant-supported prostheses, 13th ed, Elsevier 2012, Biblioteca UMFST- IV 2937

10.2 Content of workout, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-

	presentation				
2	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-
3	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-
4	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-
5	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee	8	-	-

	prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	leader in the topic of the total edentation.			
6	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	CBL	-
7	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	CBL	-
8	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-
9	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before	6	-	-

	impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.			
10	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	2	CBL	-
11	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	CBL	-
12	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-

	presentation				
13	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-
14	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-
15	Performing the clinical phases of at least a total maxillary prosthesis and total mandibular prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesys. Performing or participating in a total prosthesis relining. Realization of a report based on scientific literature. Patient examination and clinical case presentation	Clinical examination of the total edentulous patient -presentation and practical demonstration of specific clinical maneuvers for the examination of the total edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the total edentation.	8	-	-
Bibliography Zarb et.al. Prosthodontic treatment for edentulous pacients. Elsevier-Mosby, 2013					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is relevant and accordingly with the requirements of the mobile prosthodontic treatment in the dental office

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent

			of final grade
Evaluation during the semester			
- practical activities	Semestrial activity (attendance, grades during the semester, fulfillment of practical activity scale)	CBL	15
- lecture	Knowledge of the theoretical aspects of the course	Test	15
Final evaluation			
- practical final exam	Assessment of the student's applied knowledge Paraclinical analysis of study and diagnostic models.	Performing a clinical phase of treatment, or a diagnostic procedure	30
- theoretical final exam	Acquiring theoretical knowledge according to the bibliography and the contents of the university lectures	MCQ Test	40
Minimal performance standards: A case presentation, diagnosis and therapeutic plan 2. Treatment of an edentation by total prosthesis 3. Adaptation of the individual tray and acceptable final impression of the edentulous field 4. Paraclinical analysis of study and diagnostic models. 5. Presentation of the report based on the literature 6. Attendance to activities (accumulating a number of unmotivated absences of more than 7 does not allow the student to enter the final exam			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Hănțoiu Liana-Georgiana	30 min după fiecare curs

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Endodontics (2)			
2.2 Course coordinator: Șef l dr Kovács-Ivacson Andrea-Csinszka			
2.3 Practical activities coordinator(s): Kovacs-Ivacson Andrea-Csinszka			
2.4 Year of study: V	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 20	3.2 lecture: 4	3.3 practical activities: 16	
3.4 Total hours in curriculum: 140	3.2 lectures: 28	3.6 practical activities: 112	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			23
- supplemental documentation at the library, from specialized information portals and in the field			22
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			22
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			68
3.9 Total hours			208
3.10 Credits			8

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Lectures are held in an amphitheater equipped with multimedia projection systems, laptop support, and access to digital teaching materials.
5.2 for practical activities: Practical activities take place in clinics equipped with dental units, instruments needed for consultation, burs and specific endodontic instruments, obturation materials and dental radiology equipment. Students are required to wear appropriate medical protective equipment (coat, gloves, mask, protective glasses). Necessary materials and equipment include: • Rubber dam system • Manual and rotary endodontic instruments • Irrigation and disinfection solutions

• Apex locator
• Root canal obturation materials
• Coronal restoration materials

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline Endodontics II contributes to the development of ESCO competencies specific to dental medicine, particularly in the areas of endodontic treatment, clinical and radiological diagnosis, and management of odontogenic infections.
It supports the development of:
• professional biomedical competencies (diagnosis, treatment, prognosis)
• transversal competencies (interdisciplinary teamwork, critical thinking, professional communication, lifelong learning)

7. Objectives of the discipline

7.1 General objective:
To provide the theoretical and practical foundation of diagnostic and therapeutic principles in pulpal and periapical pathology, supporting the development of clinical competencies in endodontics.

7.2 Specific objectives:
• Definition of biological and therapeutic principles of endodontic treatment
• Presentation of clinical and radiological diagnostic methods in pulpal and periapical pathology
• Emphasis on root canal disinfection and obturation techniques
• Identification and management of complications in endodontic treatment
• Correlation between endodontic pathology and general systemic health

8. Learning outcomes

8.1 Knowledge:
• Describes the etiopathogenic mechanisms of pulp necrosis and apical periodontitis
• Explains the relationship between endodontic infection and clinical and radiological manifestations
• Classifies pulpal and periapical pathologies according to clinical and biological criteria

8.2 Skills:
• Analyzes clinical and radiological data in diagnosing endodontic conditions
• Interprets periapical changes in relation to dental infection
• Integrates endodontic treatment principles into clinical case management

8.3 Responsibility and autonomy:
• Demonstrates autonomy in using scientific resources in endodontics
• Critically evaluates therapeutic options depending on clinical cases
• Respects ethical and professional standards in patient care

9. Specific competencies acquired

9.1 professional competencies:
• Capacity to establish the diagnosis of pulpal and periapical diseases in order to determine appropriate treatment
• Capacity to apply techniques of cleaning, shaping, and obturation of root canal systems
• Capacity to use radiological methods for evaluation and follow-up of endodontic treatments
• Capacity to manage complications arising during endodontic procedures

9.2 transversal competencies:
• The student is able to communicate effectively within an interdisciplinary medical team in the context of endodontic treatment
• The student is able to critically analyze clinical and scientific information relevant to the field
• The student is able to work in a team in managing complex clinical cases
• The student is able to respect ethical and professional principles in clinical activity

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Pulp necrosis	Oral presentation	2	-	-

2	Pulp gangrene	Oral presentation	2	-	-
3	Acute apical periodontitis	Oral presentation	2	-	-
4	Chronic apical periodontitis	Oral presentation	2	-	-
5	Cleaning and shaping of root canals	Oral presentation	2	-	-
6	Root canal disinfection	Oral presentation	2	-	-
7	Calcium-hydroxide in endododntics	Oral presentation	2	-	-
8	Treatment of acute apical periodontitis	Oral presentation	2	-	-
9	Treatment of chronic apical periodontitis	Oral presentation	2	-	-
10	Root canal obturation	Oral presentation	2	-	-
11	Thermoplastic obturation techniques	Oral presentation	2	-	-
12	External root resorption	Oral presentation	2	-	-
13	Focal infections	Oral presentation	2	-	-
14	Accidents and complications during root canal treatment	Oral presentation	2	-	-

Bibliography

1.Berman LH, Hargreaves KM. Cohen's Pathways of the pulp, 12th Edition, Elsevier, 2020
2. Castellucci A. Endodontics, Vol 1 and 2, 1st Ed, Edra, 2022
3. Rotstein I, Ingle JI. Ingle's Endodontics, 7th Ed., Pmph USA Ltd., 2019
4. Torabinejad M, Fouad A, Shabahang S. Endodontics: Principles and Practice, 6th Ed., Elsevier, 2020

10.2 Content of workout, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Diagnosis and treatment in pulp necrosis	Clinical training, case presentation	8	-	-
2	Diagnosis and treatment in pulp gangrena	Clinical training, case presentation	8	-	-
3	Internal anatomy of teeth	CBL	8	-	-
4	Interpretation of retroalveolar and panoramic dental radiographs	Clinical training, case presentation on Rx	8	-	-
5	Diagnosis and treatment in acute apical periodontitis	Clinical training, case presentation	8	-	-
6	Diagnosis and treatment in chronic apical periodontitis	Clinical training, case presentation	8	-	-
7	Root canal preparation	Clinical training, case presentation	8	-	-
8	Working lenght determination	Clinical training, case presentation	8	-	-
9	Case presentations	CBL	8	-	-
10	RCT of upper monoradicular teeth	Clinical training on extracted teeth/patient	8	-	-
11	RCT of upper pluriradicular teeth	Clinical training on extracted teeth/patient	8	-	-
12	RCT of lower monoradicular teeth	Clinical training on extracted teeth/patient	8	-	-
13	RCT of lower pluriradicular teeth	Clinical training on extracted teeth/patient	8	-	-
14	Management of complications	Clinical training, case presentation	8	-	-

Bibliography

1.Berman LH, Hargreaves KM. Cohen's Pathways of the pulp, 12th Edition, Elsevier, 2020
2. Castellucci A. Endodontics, Vol 1 and 2, 1st Ed, Edra, 2022
3. Rotstein I, Ingle JI. Ingle's Endodontics, 7th Ed., Pmph USA Ltd., 2019
4. Torabinejad M, Fouad A, Shabahang S. Endodontics: Principles and Practice, 6th Ed., Elsevier, 2020

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The discipline addresses the high prevalence of acute and chronic periapical lesions and their impact on oral and systemic health.
Through the acquired knowledge, students will be able to:
• ensure correct diagnosis and treatment of endodontic infections
• contribute to tooth preservation and prevention

• collaborate with oral and maxillofacial surgeons in complex cases

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Active participation, max 3 absences allowed	Case presentations RCT treatments on extracted teeth/ patient (2 monoradicular, 1 pluriradicular) CBL	30
- lecture	Active participation, min 50% presence required	Active participation	0
Final evaluation			
- practical final exam	Internal anatomy of teeth Clinical case presentation Endodontic instruments	Oral examination	20
- theoretical final exam	Basic knowledge of endodontic treatment, complications and prognosis in different pulpal and periapical inflammation	Test with single (25%) and multiple choice questions (75%)	50
Minimal performance standards: Minimum performance standards: • Minimum passing grade: 5.00 (PE and TE) • Correct diagnosis of pulpal and periapical diseases • Knowledge of treatment methods and prognosis evaluation Minimum practical requirements: • Detailed knowledge of internal anatomy of teeth • Performed RCT on single and multirooted teeth • Correct Rx evaluation			

13. Must seen clinical situation list

Gangrenae Acute apical periodontitis Chronic apical periodontitis

14. Clinical / practical abilities

Treatment of simple or complicated gangrene (1); Pulpectomies (1 mono- and 1 pluriradicular teeth).

15. Appointment timetable (for students)

Şef l dr Kovács-Ivacson Andrea-Csinszka	30 minutes after each course

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Professional organisation and legislation			
2.2 Course coordinator: Conf dr Gasparik Andrea-Ildikó			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: VI	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: in accordance with the UMFST and PHHM discipl. regulations
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline of Dental Office Management contributes to the development of the competencies defined within the ESCO framework for the occupations relevant to the study program, by developing knowledge, skills and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective: The aim of the discipline is to give students the basics of legislative and organizational issues of the health system in the field of dentistry.
7.2 Specific objectives: To be able to analyze a legislative act; To identify the place occupied by a dentist within the healthcare providers system; To be familiar and apply the rights of patients; To know all the aspects related to the practice of dentistry; To be familiar with the administrative stages of opening a dental practice.

8. Learning outcomes

8.1 Knowledge: Students will understand the legal and organisational framework of dental practice, including professional regulations, patient rights, and ethical standards.
8.2 Skills: Make informed decisions respecting patient safety, rights, and professional regulations.
8.3 Responsibility and autonomy: Exercise autonomy and practice within legal and ethical boundaries, demonstrate accountability for professional actions

9. Specific competencies acquired

9.1 professional competencies: To be able to understand the concept and legislative aspects of normative acts at EU level To be able to get involved in making decisions on the legislative framework; To be familiar with the patient's rights; To know the legislation specific to the profession of dentist;
9.2 transversal competencies: To contribute to the professional progress and development; To get involved in multidisciplinary work; To participate in solving health problems, as part of the health system, in its area of competence. Involvement in the development of legislation in the field.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Legislative acts EU	presentation (multimedia), discussion	1	-	-
2	Legislative acts EU	presentation (multimedia), discussion	1	-	-
3	Practicing of dentistry. Professional organizations (dental associations)	presentation (multimedia), discussion	1	-	-
4	Practicing of dentistry. Professional organizations (dental associations)	presentation (multimedia), discussion	1	-	-
5	Establishing a dental practice	presentation (multimedia), discussion	1	-	HIV
6	Establishing a dental practice	presentation (multimedia), discussion	1	-	tiredness
7	Quality and Patient Safety	presentation (multimedia), discussion	1	-	HIV
8	Quality and Patient Safety	presentation (multimedia), discussion	1	-	hypertension
9	Organization of the health system - providers of dental health services	presentation (multimedia), discussion	1	-	septicaemia

10	Organization of the health system - providers of dental health services	presentation (multimedia), discussion	1	-	-
11	Promoting dental health	discussions, presentation	1	-	-
12	Promoting dental health	presentation (multimedia), discussion	1	-	pain management
13	Test	multiply choice questions	1	-	-
14	Test	multiply choice questions	1	-	-

Bibliography

Electronic lecture notes (Gasparik A.I.)
EU https://www.cedentists.eu/ pdf

Standards and their guidance, General Dental Council, UK https://standards.gdc-uk.org/

ADA (American Dental Association)
https://www.ada.org/en/about-the-ada/principles-of-ethics-code-of-professional-conduct/preamble
STEP-UP to USMLE STEP 2 CK, 5th Edition

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Through the knowledge gained, students will be able to adapt to the
labor market requirements in the field and to meet the expectations of the community. Beyond the clinical part, a dentist should be familiar, from a legislative point of view, with their rights and obligations, the level of responsibilities. They will will be able to deal with possible unexpected situations arising during their professional activity.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	ability to effectively use and adapt the aquired knowledge in a new / complex contexts	discussions, project based assessment	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	the ability to explain and apply concepts, principles and processes	exam. Multiple choice questions test	70
Minimal performance standards: test performance at least 5o%			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Gasparik Andrea-Ildikó	joi 11-12

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: M2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Dental office management			
2.2 Course coordinator: Conf dr Gasparik Andrea-Ildikó			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: VI	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: CS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: Analiza şi sinteza dispozitivelor numerice, Programarea calculatoarelor
4.2 competency: --

5. Conditions

5.1 for lectures: On-site Sala trebuie să fie dotată cu tablă şi videoproiector Studenţii se vor prezenta la prelegeri, seminarii/laboratoare cu telefoanele mobile închise Nu va fi acceptată întârzierea studenţilor la curs şi seminar/laborator On-line Studenții trebuie să aibă acces la un calculator dotat cu microfon, camera web și internet Studenţii trebuie să aibă acces la platformele informatice ale universității (Blackboard, Teams, Office 365)
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline of Dental Office Management contributes to the development of the competencies defined within the ESCO framework for the occupations relevant to the study program, by developing knowledge, skills and professional autonomy specific to the field.

7. Objectives of the discipline

7.1 General objective: Familiarizarea studenților cu funcţiile ce stau la baza proiectării şi implementării unui sistem de calcul.
7.2 Specific objectives: Evaluarea caracteristicilor funcţionale şi nefuncţionale ale componentelor hardware. Evaluarea comparativă, inclusiv experimentală, a alternativelor de rezolvare, pentru optimizarea performanţelor. Temele de laborator încurajează studenţii să proiecteze diferite componente hardware utilizând arii reconfigurabile şi să dezvolte aplicaţii care vor accesa direct componentele hardware al unui microsistem.

8. Learning outcomes

8.1 Knowledge: Understand the principles of management, leadership, and organisational structures Recognise the role of strategic planning, financial management, human resources. Particularities of a dental office management.
8.2 Skills: Apply leadership and decision-making frameworks in dental health care settings Develop strategic plans, budgets, and resource allocation strategies Manage human resources effectively, resolve team conflicts, and coordinate multi-disciplinary teams
8.3 Responsibility and autonomy: Demonstrate professional behavior in leadership, policy, and operational contexts Make informed and ethical management decisions under simulated real-world constraints

9. Specific competencies acquired

9.1 professional competencies: Students will be able to understand - how to apply the principles and functions of management at a dental practice level. - to assess and improve/efficientize the functioning of a dental office. To be aware of the role and place of the dental office as a provider of medical services within the public health system. To apply the decision theory at the level of the dental office or any provider of dental medical services.
9.2 transversal competencies: Acquiring knowledge of Dental office Management discipline, students will be able - to coordinate the activity of a dental office - to efficiently collaborate with other suppliers or partners (IH) - to ensure a correct coordination of the activity of a DO - to establish collaborations and contracts with other suppliers or Insurance Company/Agencies.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Health management. Key concepts. Theories and functions	Presentation, discussions	2	-	tiredness
2	Management functions applied in DM	Presentation, discussions	2	-	sleep disturbance
3	Strategical planning. SWOT analysis. Setting objectives	TBL	2	-	tiredness
4	Managerial authority and responsibility. Decision analysis in the dental office	Presentation, discussions	2	-	sleep disturbance

5	Human resource management in dental practice	Presentation, discussions	2	-	tiredness
6	Understanding of health care systems. Basic concepts. Key components of a well functioning HS	Presentation, discussions	2	-	depression
7	Test	multiply choice questions	2	-	tiredness

Bibliography
1. AI Gasparik. Electronic course material
2. Lamkin. C. Dental Office Management Cengage Learning 2nd Edition 2014
3. O Hokwerda,J. A. J.Wouters et al Ergonomic requirements for dental equipment. Guidelines and recommendations for
designing, constructing and selecting dental equipment.
3. Ira B. Lamster, Kayleigh Eaves. 2011 A Model for Dental Practice in the 21st Century. Am J Public Health.
4. https://www.slideshare.net/aashnadhingra/dental-practice-management

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Reprezintă un curs de bază conform recomandării curicului ACM și IEEE pentru studiile de informatică industrială, oferind cunoștințele de bază despre funcționarea sistemelor de calcul.
Orice companie de profil cere însușirea acestor competențe, care permit învățarea continuă a noilor tehnologii și utilizarea noilor componente hardware.
Standarde ocupaţionale/Cod COR: Inginer automatist 215202; Proiectant inginer de sisteme și calculatoare 215214; Inginer de cercetare în automatică 215239

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	Evaluarea cunoștințelor acumulate la curs Teste parțiale constând din rezolvarea unor probleme specifice de proiectare a componentelor sistemelor de calcul: - conectarea memoriilor - conectarea porturilor de intrare-ieșire și programarea acestora	2 teste parțiale pe parcurs constând din probleme de proiectare individuală	30
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Însuşirea şi înţelegerea problematicii tratate la curs. Interpretarea rezultatelor.	Examen sumativ	70

Minimal performance standards:
Standard minim de performanță:
Îndeplinirea obligațiilor privind activitatea de laborator, (nota minim 5) și al evaluării pe parcursul semestrului la curs (nota minim 5).
Cunoașterea componentelor de bază ale sistemelor de calcul
Capacitatea de a realiza o aplicație de conectare a memoriilor și de a determina corect semnalele de selecție
Capacitatea de a conecta și utiliza porturile de intrare-ieșire
Capacitatea de a realiza corect circuite HDL care trec cu succes testele de funcționare

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Gasparik Andrea-Ildikó	joi 11-12

Head of departament	Course coordinator	Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Oral pathology			
2.2 Course coordinator: Șef l dr Monea Adriana-Maria			
2.3 Practical activities coordinator(s): Monea Adriana, Stoica Alexandra, Hantoiu Tudor			
2.4 Year of study: VI	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			16
- supplemental documentation at the library, from specialized information portals and in the field			16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			15
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			48
3.9 Total hours			104
3.10 Credits			4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: The classroom must be equipped with a blackboard and a projector. Students are required to attend lectures with their mobile phones turned off. Late arrivals will not be accepted.
5.2 for practical activities: The classroom must be equipped with a blackboard and a projector. Students are required to attend lectures with their mobile phones turned off. Late arrivals will not be accepted.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline of Oral Pathology contributes to the development of competencies defined within the ESCO framework for occupations relevant to the study program, by fostering domain-specific knowledge, skills, and

professional autonomy.

7. Objectives of the discipline

7.1 General objective:
The general objective of the discipline is to present and substantiate the concepts and principles specific to the field, in order to support professional training within the study program. Particular emphasis is placed on the diagnosis of the most common conditions affecting the oral cavity.

7.2 Specific objectives:
Epidemiological and histopathological aspects of diseases affecting the oral cavity, as well as the specific local and systemic treatments for these conditions.

8. Learning outcomes

8.1 Knowledge:
Describes the etiopathogenic mechanisms involved in the principal conditions within the field of oral medicine.
Explains the relationships between risk factors, pathophysiological changes, and the clinical manifestations of the diseases studied.
Classifies pathologies specific to oral medicine according to etiological, pathophysiological, and clinical criteria.

8.2 Skills:
Analyzes clinical and paraclinical data in relation to underlying pathophysiological mechanisms.
Interprets the relationships between functional alterations and clinical manifestations.
Integrates pathophysiological concepts into the analysis of case studies.

8.3 Responsibility and autonomy:
Demonstrates autonomy in the use of academic and scientific resources specific to the discipline of Oral Pathology.
Critically evaluates information relevant to the discipline and effectively manages their own learning process.
Adheres to ethical norms and standards of academic integrity in all academic activities.

9. Specific competencies acquired

9.1 professional competencies:
To recognise different forms of oral lesions in systemic diseases. To know the changes in the oral mucosa and the correct diagnosis of the conditions. To dentify cases requiring complex therapy in other medical units (hematological disorders, dermatological or infectious diseases). To apply proper treatment methods indicated in each clinical situation

9.2 transversal competencies:
To develop the ability to identify pathological changes and collaborate with other disciplines in establishing the correct treatment plan.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Oral biology	oral and ppt presentation	2	-	-
2	Elementary lesions. Histopathological changes of oral mucosa. Plaque induced gingivitis	oral and ppt presentation	2	TBL	-
3	Necrositing ulcerative gingivitis	oral and ppt presentation	2	-	-
4	Specific stomatitis. Oral tuberculosis. Oral syphilis	oral and ppt presentation	2	-	-
5	Viral herpetic infections of oral cavity	oral and ppt presentation	2	-	-
6	Candidal infections of oral cavity	oral and ppt presentation	2	TBL	-
7	Aphta	oral and ppt presentation	2	-	-

8	Keratotic lesions. Lichen planus. Leukoplakia	oral and ppt presentation	2	-	-
9	Tongue disease	oral and ppt presentation	2	-	-
10	Acute and chronic leukemia	oral and ppt presentation	2	-	-
11	Anemias	oral and ppt presentation	2	-	-
12	Oral manifestations in AIDS	oral and ppt presentation	2	-	-
13	Erithema multiformis	oral and ppt presentation	2	-	-
14	Pemphigus	oral and ppt presentation	2	-	-
Bibliography Brad Neville Douglas D. Damm Carl Allen Angela Chi: Oral and Maxillofacial Pathology 4th Edition, 2015					

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Patient examination	PPT presentation, practical part	2	-	-
2	Oral biopsy	PPT presentation, practical part	2	-	-
3	Other complementary diagnosis methods	PPT presentation, practical part	2	-	-
4	Elementary lesions	PPT presentation	2	-	-
5	Bacterial infections	PPT presentation	2	-	-
6	Viral infections	PPT presentation	2	-	-
7	Aphta	PPT presentation	2	-	-
8	Fungal infections	PPT presentation	2	CBL	-
9	Hyperkeratotic lesions	PPT presentation	2	CBL	-
10	Tongues diseases	PPT presentation	2	-	-
11	Anemia. Leukemia	PPT presentation	2	-	-
12	Oral lesions in AIDS	PPT presentation	2	-	-
13	Erithema multiformis.Pemphigus	PPT presentation	2	-	-
14	Medication in Oral Pathology	PPT presentation	2	-	-
Bibliography Brad Neville Douglas D. Damm Carl Allen Angela Chi: Oral and Maxillofacial Pathology 4th Edition, 2015					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the course is aligned with the needs of employers in the fields of health, healthcare management, medical education, pharmaceutical companies, and dental research

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Knowledge of the signs and symptoms, as well as the treatment plan.	CBL	20
- lecture	Understanding the changes in the oral mucosa in various conditions.	2XTBL	10
Final evaluation			
- practical final exam	Recognition of the specific primary lesions for each condition, criteria for positive and differential diagnosis, and establishment of a treatment plan.	oral presentation	20
- theoretical final exam	Recognition of the various manifestations of systemic diseases in the oral cavity. Understanding the changes in the oral mucosa and the correct diagnosis of conditions. Identification of cases requiring complex therapy in other medical facilities (hematological, infectious, dermatological, surgical conditions). Application of the treatment methods indicated for each condition.	summative evaluation UNIX	50

Minimal performance standards:
Minimum criteria for validating assessments during the semester (in correlation with the Course Regulations).
Minimum conditions for admission to the final examination—recognition of oral mucosal lesions: criteria for positive and differential diagnosis, treatment indications.
Minimum requirements to pass the final summative assessment (practical + theoretical exam)—achieving a grade of 5.00 in both the practical and theoretical exams. Recognition of pathological changes in the oral mucosa and the oral manifestations of severe systemic conditions.
Ability to formulate treatment protocols and collaborate with other medical specialties.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Monea Adriana-Maria	30 MIN AFTER EACH LECTURE/PA

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Medical and surgical emergencies in dental medicine			
2.2 Course coordinator: Șef l dr Iacob Alina			
2.3 Practical activities coordinator(s): Sef Lucr Dr Iacob Alina, Sef lucr Dr. Bereczki-Temistocle Despina, Sef lucr, Cosarca Adina, Sef lucr Dr Golu Vlad, Sef lucr Dr Petrovan Cecilia			
2.4 Year of study: VI	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 10	3.2 lecture: 4	3.3 practical activities: 6	
3.4 Total hours in curriculum: 70	3.2 lectures: 28	3.6 practical activities: 42	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			20
- supplemental documentation at the library, from specialized information portals and in the field			20
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			19
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			60
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: Communication skills in English language. Basic knowledge of General medicine

5. Conditions

5.1 for lectures: Lecture room with internet access and projector
5.2 for practical activities: Room with internet access emergency kit Access to the Simulation Center for practical activities in order to practice different injections (i.m, i.v, i.d.)

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Based on standards for dental practitioners, the requirements for managing general medical emergencies in

dental medicine focus on prevention, staff training, and immediate access to emergency equipment.
Key ESCO and related professional requirements include:
Mandatory Staff Training and Skills
Resuscitation Training: All dental staff must be trained in Cardiopulmonary Resuscitation (CPR), including basic airway management and the use of an Automated External Defibrillator (AED).
Frequency: Resuscitation training must be updated at least annually.
Emergency Roles: Every staff member must know their specific role during an emergency, and regular, simulated practice must occur.
Competence: Staff must be competent in recognizing a patient in distress and using emergency drugs.
Mandatory Emergency Equipment and Drugs
Prevention and Planning Requirements
Medical History: A concise, updated medical history must be taken, including current conditions, medications, and allergies.
Written Emergency Plan: Each office must have a written policy defining how to summon assistance, which typically includes calling for an ambulance (e.g., 999 or 112).
Access Assessment: Dental teams must identify potential patient risk and be prepared to treat anaphylaxis, severe asthma, epilepsy, or cardiac issues.

7. Objectives of the discipline

7.1 General objective: Prevention and management of various emergency situations dental office.
7.2 Specific objectives: Preparing students to approach and treat patients with different systemic diseases from dental medicine point of view.

8. Learning outcomes

8.1 Knowledge: Ability to recognize possible emergency situations that might become dangerous, prevent general medical emergencies and to know what to do to treat them in case of any unexpected situation.
8.2 Skills: ability to perform different injections in case of emergency situation, to use emergency kit if necessary, to identify patients at risk to develop different emergency situations.
8.3 Responsibility and autonomy: ability to recognize possible emergency situations that might become dangerous and prevent them

9. Specific competencies acquired

9.1 professional competencies: The ability to obtain a correct, complete medical history of patients with different general disorders, to recognize situations that could become possible emergency situations that may occur during dental treatments, to prevent and guide the patient for further specialized health care.
9.2 transversal competencies: Effective collaboration with other specialties for a fair, efficient interdisciplinary treatment.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Classification of dental procedures according to general conditions	Oral and multimedia presentation	2	discussion	oral disorders
2	The importance of medical history and general clinical examination for prevention of medical emergency situations	Oral and multimedia presentation	2	discussion	pre-operative care
3	Risk factors for systemic side effects of loco-regional anesthesia	Oral and multimedia presentation	2	discussion	pre-operative care
4	Management of the patient with cardiovascular diseases (part I)	Oral and multimedia presentation	2	discussion	ischemic heart disease

5	Management of the patient with cardiovascular diseases (part II)	Oral and multimedia presentation	2	discussion	coagulation disease
6	Management of the patient with cardiovascular diseases (part III)	Oral and multimedia presentation	2	discussion	endocarditis
7	Management of the patient with endocrine disorders	Oral and multimedia presentation	2	discussion	diabetes mellitus
8	Management of the patient with liver disorders	Oral and multimedia presentation	2	discussion	chronic liver disease
9	Management of the patient with allergic or neuropsychiatric disorders	Oral and multimedia presentation	2	discussion	allergic disorders
10	Management of the patient with infectious disorders	Oral and multimedia presentation	2	discussion	HIV
11	Management of the patient with kidney or lung disorders	Oral and multimedia presentation	2	discussion	asthma
12	Treatment of medical emergencies in the dental office	Oral and multimedia presentation	2	discussion	shock
13	Emergency kit	Oral and multimedia presentation	2	discussion	drug reactions
14	Management of surgical emergencies in dental office	Oral and multimedia presentation	2	discussion	oral disorders

Bibliography

1. Iacob A., Ormenișan A.: Prevenirea și tratmentul urgențelor medicale în cabinetul de medicină dentară, curs pentru studenții anului VI MD, University Press, Tg-Mureș, 2015
2. Naftali Gh., Puskas A.: Prevenirea urgentelor medicale in cabinetele stomatologice. Curs pentru studenti, Litografia UMF Tg-Mures, 2004
3. Voroneanu M., Bucur A., Iordache N., Balan H.: Urgente medico-chirurgicale in cabinetul de medicina dentara. Ghid practic de diagnostic si tratament prespitalicesc, Ed. Medicala. Bucuresti 2014
4. Scully C., Kalantzis A.: Oxford Handbook of Dental Patient Care, Second edition, Oxford University Press, 2005

10.2 Content of laboratory, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Măsurarea pulsului și a TA	Prezentare de caz, discuții, exemplificare	3	exerciții	hipertensiune arterială
2	Exersarea diferitelor scheme de antibio-profilaxie. Prescrierea rețetelor medicale	Prezentare de caz, discuții, exemplificare	3	exerciții	endocardită
3	Determinarea glicemiei cu glucometrul	Prezentare de caz, discuții, exemplificare	3	exerciții	Diabet zaharat
4	Efectuarea testării prin injectie intradermică la diferiți alergeni specifici, și interpretarea reacției obținute	Prezentare de caz, discuții, exemplificare	3	exerciții	alergii
5	Interpretarea rezultatelor analizelor de laborator	CBL	3	Prezentare de caz, discuții, exemplificare	pre-operative care
6	Efectuarea injecției intramusculare	Prezentare de caz, discuții, exemplificare	3	exerciții	epilepsie
7	Efectuarea injecției intravenoase	Prezentare de caz, discuții, exemplificare	3	exerciții	Stop Cardio-vascular
8	Efectuarea injecției subcutanate	Prezentare de caz, discuții, exemplificare	3	exerciții	hipoglicemie
9	Atitudinea medicului dentist în cazul pacienților cu tratament anticoagulant oral	Prezentare de caz, discuții, exemplificare	3	exerciții	tulburări de coagulare
10	Anamneza specifică a pacienților cu afecțiuni generale	Prezentare de caz, discuții, exemplificare	3	exerciții	ingrijiri preoperatorii

11	Completarea chestionarelor (documentelor) medicale	CBL	3	Prezentare de caz, discuții, exemplificare	ingrijiri preoperatorii
12	Familiarizarea cu conținutul trusei de urgență	Prezentare de caz, discuții, exemplificare	3	Exerciții	soc
13	Utilizarea diferitelor medicamente din trusa de urgență	Prezentare de caz, discuții, exemplificare	3	exerciții	reactii medicamentoase
14	Recapitularea cunoștințelor acumulate	Prezentare de caz, discuții, exemplificare	3	exerciții	ingrijiri preoperatorii

Bibliography

1. Iacob A., Ormenișan A.: Prevenirea și tratmentul urgențelor medicale în cabinetul de medicină dentară, curs pentru studenții anului VI MD, University Press, Tg-Mureș, 2015
2. Scully C, Kalantzis A.: Oxford Handbook of Dental Patient Care, Second edition, Oxford University Press, 2005

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Each dentist must be able to recognize, prevent and provide basic management for common emergency situations in dental office.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	case scenario study	CBL	30
- lecture	--	-	0
Final evaluation			
- practical final exam	According to the specific features of the discipline	Oral evaluation based on clinical case scenario	30
- theoretical final exam	According to the specific features of the discipline	Written (summative) evaluation at UNIX examination center - multiple choice question test (MCQ)	40

Minimal performance standards:
minimum grade of 5.0 obtained at the theoretical examination
minimum grade of 5.0 obtained at the practical examination
The attendance - mandatory for practical sessions; 20% unmotivated absences are allowed (6 hours PA = 2 PAs). 50% for lectures (mandatory)

13. Must seen clinical situation list

-

14. Clinical / practical abilities

Students should be able to take a good medical history of the patient, to prevent possible medical emergencies. If they occur, the students must be able to start basic treatment in each situation, call ambulance and send patient to Emergency Unit.

15. Appointment timetable (for students)

Șef l dr Iacob Alina	30 de minute după ora de curs

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Removable prosthodontics			
2.2 Course coordinator: Șef l dr Dobreci Liana-Claudia			
2.3 Practical activities coordinator(s): Șef l dr Dobreci Liana-Claudia			
2.4 Year of study: VI	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12/8	3.2 lecture: 2	3.3 practical activities: 10/6	
3.4 Total hours in curriculum: 140	3.2 lectures: 28	3.6 practical activities: 112	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			23
- supplemental documentation at the library, from specialized information portals and in the field			22
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			22
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			68
3.9 Total hours			208
3.10 Credits			8

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: Theoretical knowledge of the clinical step that will be performed at the practical activity.

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

nu este cazul

7. Objectives of the discipline

7.1 General objective:

The discipline addresses the problem of prosthetic treatment of partial edentulism by means of classical acrylic mobile prostheses and removable partial dentures.

7.2 Specific objectives:
Student acquiring elements related to clinical and therapeutic aspects of prosthetic treatment of partial edentulism by removable prostheses.
Knowledge of the epidemiology and etiology elements of the partial edentulism, its clinical forms, specific symptoms and complications. Student acquiring the morphology and physiology elements of the partial edentulous prosthetic field and the biodynamic elements of the partial prostheses, correlated with the diagnostic and therapeutic peculiarities. Transmitting the knowledge necessary for the sequence of the clinical and technological stages imposed by the classical partial acrylic prosthesis and the modern removable prosthetic treatment of the partial edentulism.

8. Learning outcomes

8.1 Knowledge:
The student must be able to prosthetically restore extended and subtotal partial edentulism using classical acrylic plate partial dentures, in a manner acceptable in terms of form, function and aesthetics in patients of all ages. They must be familiar with the basic concepts of designing the therapeutic plan and treatment of partial edentulism using partial skeletal dentures. They must possess the necessary knowledge and experience regarding the design and execution of pre-prosthetic and prosthetic preparation stages of the partially edentulous prosthetic field, as well as elements related to the specific dental laboratory procedures carried out in the process of obtaining partial dentures. They must possess the necessary knowledge for the clinical and paraclinical examination of the partially edentulous patient, with identification of positive and negative factors for prosthetic treatment. The student must be familiar with the potential and limitations of the various clinical and dental technological procedures involved in prosthetic restorations of partial edentulism, and must be able to explain to the patient the indications and contraindications of the various prosthetic solutions for partial edentulism (including skeletal dentures, overdentures on natural teeth or implants).

8.2 Skills:
The student should be able to: examine and diagnose edentulous patients, design and plan prosthetic treatment, take clinical impressions, handle and select dental materials, fabricate or prescribe biomechanically sound removable prostheses, and manage patients throughout the treatment process.

8.3 Responsibility and autonomy:
The student should be able to autonomously and responsibly formulate opinions on a clinical case of partial edentulism. To be able to analyze data from the specialized literature regarding the issues of partial edentulism and to compile corresponding scientific reports. To respect the principles of academic ethics, to collaborate with fellow colleagues and teaching staff.

9. Specific competencies acquired

9.1 professional competencies:
The student should be able to restore the extended partial edentulism by means of classical prostheses in a form, function and aesthetics acceptable to patients of all ages.
He must have the necessary knowledge and experience regarding the design and realisation of the prosthetic plan and prosthetic preparation stages of the partial edentulous prosthetic field, as well as elements related to the procedures of the dental technician laboratory performed in the process of obtaining partial prosthesis.
To possess the knowledge necessary for the clinical and paraclinical examination of partial edentulism.
The student should be familiar with the potential and limitations of the various clinical and technological dental procedures involved in the prosthetic restorations of the partial edentulism and be able to explain to the patient the indications and contraindications of the various
methods of prosthetic solving of the partial edentulism (including removable partial dentures and implantat over dentures).

9.2 transversal competencies:
The student must be competent to ensure safety at work. He must have knowledge of understanding the importance of his own health and of the impact he may have in pursuing his profession. It must have the power to impose the principles of health and safety at work
on other colleagues.
Be competent in recognizing one's own limits and in acknowledging the value of continuous study, self-improvement, and critical thinking in maintaining a high degree of professional competence.
Have the knowledge and understanding necessary for the ethical and moral responsibilities involved in providing dental services to the patient as an individual and to the population level.
Establish a physician-patient relationship that allows him / her to carry out his / her activity at the internship.
Be competent to protect the confidential aspect of patient data.
Be competent to team up with colleagues, teachers and dental technicians.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.

Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Partial edentulism: concept, ethology, clinical forms, classification, symptoms and complications.	Oral and multimedia presentations.	2	-	-
2	Partial edentulous prosthetic field: particularities of dento-periodontal support and muco-periostal support, positive and negative biological indices.	Oral and multimedia presentations.	2	-	-
3	Indications of removable partial prosthetic treatment, clinical examination, methods for surveying partial edentulous field.	Oral and multimedia presentations.	2	-	-
4	Unspecific and specific pre prosthetic treatment using partial acrylic prosthesis and removable partial dentures.	Oral and multimedia presentations.	2	-	-
5	Acrylic partial prosthesis: concept, classifications, composing elements, clinical and technical phases in acrylic partial prosthesis fabrication.	Oral and multimedia presentations.	2	-	-
6	Composing elements of removable partial dentures: principal connectors, secondary connectors, means of retention, support and stabilisation, prosthetic saddles.	Oral and multimedia presentations.	2	-	-
7	Retention, support and stabilisation means for partial dentures. Wire clasps, metal clasps, mixed clasps.Clasp Retained removable partial dentures.	Oral and multimedia presentations.	2	-	-
8	Rigid mixed support and articulated support in removable partial dentures. Advanced retention and support auxiliaries for removable partial dentures: attachments and double crown systems.	Oral and multimedia presentations.	2	-	-
9	Biomechanics of removable partial dentures.	Oral and multimedia presentations.	2	-	-
10	Impression of partial edentulous field for removable partial denture fabrication.	Oral and multimedia presentations.	2	-	-
11	Inter-maxillary relation in a partial edentulous field. Establishing occlusal relationships.	Oral and multimedia presentations.	2	-	-
12	Initial placement and adjustments of removable partial denture.	Oral and multimedia presentations.	2	-	-
13	Maintenance and post insertion problems of removable partial dentures.	Oral and multimedia presentations.	2	-	-
14	Re-stablishing normal stomatognathis function in partial edentulous patients.	Oral and multimedia presentations.	2	-	-

Bibliography

Șakar Olkay. Removable Partial Dentures. A Practitioner s Manual. Springer International Switzerland, 2016
Alan B. Carr,David T. Brown. McCracken's Removable Partial Prosthodontics, Elsevier, 13th Edition, 2015

10.2 Content of workout, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the	10	-	-

	Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.			
2	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	10	-	-
3	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	10	-	-
4	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	10	-	-
5	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	10	-	-
6	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the	10	-	-

		trainee leader in the topic of the partial edentation.			
7	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	10	-	-
8	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	6	-	-
9	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	6	-	-
10	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	6	-	-
11	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	6	-	-
12	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical	6	-	-

	adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.			
13	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	6	-	-
14	Performing the clinical phases of at least a partial prosthesis. Preliminary impression. Try-in and adaptation of the individual tray. Final impression. Determination and recording of the intermaxillary relationship. Try-in appointment and insertion of the prosthesis. Patient examination and clinical case presentation.	Clinical examination of the partial edentulous patient -presentation and practical demonstration of specific clinical manoeuvres for the examination of the partial edentulous patient. Before completing the clinical phase, the student is required to study the characteristics of the phase and is interviewed by the trainee manager. Presentation by students in front of the group of a report established by the trainee leader in the topic of the partial edentation.	6	-	-

Bibliography

Șakar Olkay. Removable Partial Dentures. A Practitioner s Manual. Springer International Switzerland, 2016

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

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12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Semestrial activity (attendance, grades during the semester, fulfillment of practical activity scale)	CBL	15
- lecture	Knowledge of the theoretical aspects of the course	Test	15
Final evaluation			
- practical final exam	Assessment of the student's applied knowledge Paraclinical analysis of study and diagnostic models.	Performing a clinical phase of treatment, or a diagnostic procedure	30
- theoretical final exam	Acquiring theoretical knowledge according to the bibliography and the contents of the university lectures	MCQ	40

Minimal performance standards:
A case presentation, diagnosis and therapeutic plan
Treatment of an partial edentation by partial prosthesis, participation in a clinical phase: adaptation of the individual tray final impression of the partial edentulous field, establishing the occlusal relationship.
Paraclinical analysis of study and diagnostic models.
Presentation of the report based on the literature
Attendance to activities (accumulating a number of unmotivated absences of more than 7 does not allow the student to enter the final exam)

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Dobreci Liana-Claudia	30 minute dupa fiecare curs

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Periodontology (2)			
2.2 Course coordinator: Șef l dr Benedek Csilla			
2.3 Practical activities coordinator(s): Șef lucr dr Benedek Csilla, șef lucr dr Vlasa Alexandru, asist univ dr Buka Imola			
2.4 Year of study: VI	2.5 Semester: 1	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4/12	3.2 lecture: 0/4	3.3 practical activities: 4/8	
3.4 Total hours in curriculum: 112	3.2 lectures: 28	3.6 practical activities: 84	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			23
- supplemental documentation at the library, from specialized information portals and in the field			23
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			23
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			70
3.9 Total hours			182
3.10 Credits			7

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Video projector, computer (PC)
5.2 for practical activities: Treatment room, dental unit, periodontal kit, video projector, computer (PC)

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The Periodontology discipline contributes to the development of ESCO in the area of transversal competencies (continuous learning, critical thinking, professional communication), through teaching activities and practical applications specific to the field.

Specifically, the discipline contributes to the formation of ESCO competencies such as:
-diagnosis of periodontal diseases (gingivitis, periodontitis);
-clinical and radiological evaluation of the patient with periodontal disease;
-establishment of the treatment plan;
-communication with the patient (oral hygiene education);
-multidisciplinary teamwork;
-risk management and disease control;
-respect of the principles of professional ethics.

7. Objectives of the discipline

7.1 General objective:
Knowledge of data related to the etiology, pathogenesis and treatment of various forms of periodontal disease, because the dentist cannot avoid the responsibility in examining, treating or counseling all periodontal problems of patients

7.2 Specific objectives:
Acquiring knowledge related to the etiology, diagnosis, prognosis and treatment of periodontal diseases

8. Learning outcomes

8.1 Knowledge:
Know the stages of establishing the diagnosis of periodontal disease.
Recognize the different clinical forms of periodontal disease.
List the main stages of periodontal therapy.

8.2 Skills:
Establishes the diagnose of periodontal disease.
Administers initial periodontal therapy.
Performs various types of incisions, flaps, and sutures used in periodontal surgery.
Immobilizes periodontally affected teeth.

8.3 Responsibility and autonomy:
Demonstrates receptivity to new learning contexts.
Demonstrates collaboration with other colleagues and teachers in carrying out teaching activities.
Demonstrates autonomy in organizing the learning situation/context or the problem situation to be solved.

9. Specific competencies acquired

9.1 professional competencies:
Knowledge of the methods used in formulating the complete diagnosis of periodontal diseases (clinical, radiological, laboratory examination). Acquisition of methods for evaluating the depth of periodontal pockets and the possibility of medicinal and surgical treatment of different forms of inflammation in the supporting tissues of the tooth. Knowledge of the types of surgery that are part of the complex treatment of these forms of disease.

9.2 transversal competencies:
Formation of interdisciplinary collaboration skills with related medical specialties (microbiology, immunology, histopathology, dento-alveolar surgery) in order to achieve a complex treatment of periodontal disease. The knowledge of the working methodologies in the medium and long term studies regarding the results of the periodontal therapy in different groups of patients.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	1.Diagnosis of gingival-periodontal diseases. Classification of the diseases of the marginal periodontium.	Oral and multimedia presentation	2	-	-
2	2.Gingivitis. Clinical forms.	Oral and multimedia presentation	2	-	-
3	3.Periodontitis. Clinical forms.	Oral and multimedia presentation	2	-	-

4	4.The treatment of gingivitis and periodontitis. Initial therapy.	Oral and multimedia presentation	2	-	-
5	5.Systemic anti-infective therapy for periodontal diseases.	Oral and multimedia presentation	2	-	-
6	6.Surgical treatment – subgingival curettage, gingivectomy.	Oral and multimedia presentation	2	-	-
7	7.Surgical treatment – flap surgery, gingival recession coverage methods	Oral and multimedia presentation	2	-	-
8	8.Surgical treatment – mucogingival surgery.	Oral and multimedia presentation	2	-	-
9	9.Surgical treatment – periodontal regeneration and reconstructive surgery	Oral and multimedia presentation	2	-	-
10	10.Surgical treatment – guided tissue regeneration	Oral and multimedia presentation	2	-	-
11	11.Occlusal adjustment.	Oral and multimedia presentation	2	-	-
12	12.Periodontal splinting.	Oral and multimedia presentation	2	-	-
13	13.Treatment schemes in periodontal diseases.	Oral and multimedia presentation	2	-	-
14	14.The maintenance therapy.	Oral and multimedia presentation	2	-	-

Bibliography

Bibliography:
1. Dumitriu H. – Periodontology, Ed. Medicala, Bucuresti, 2009
2. Gera I. – Periodontology, Ed. Semmelweis, Budapest, 2009
3. Newman MG, Takei H, Klokkevold PR, Carranza FA. – Newman and Carranza`s Clinical Periodontology, 13th Edition, Elsevier Health Sciences, 2019

Facultative bibliography:
1.Roman A, Lazăr L, Șurlin P, Stratul ȘI. Parodontologie 1 Noţiuni de bază. Editura Medicală Universitară Iuliu Haţieganu Cluj-Napoca, 2019
2.Lazăr L, Monea Al. Chiuretajul subgingival în practica ambulatorie de parodontologie. Editura University Press Tg.
Mureș, 2009
3.Lazăr L. Elemente de parodontologie clinică. Editura University Press Tg. Mureș, 2015
4. Ionescu E. Manual pentru rezidentiat. Ed. Univ. Carol Davila, Bucuresti, 2021
5. Vlasa A., Bud E., Pacurar M., et al: Noțiuni practice de parodontologie și ortodonție la pacientul parodontopat. Editura University Press, Tg Mureș, 2021.

10.2 Content of workout, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The algorithm of the diagnosis in periodontal diseases.	Multimedia presentation, practical demonstrations and clinical cases.	6	-	-
2	Completion of periodontal file.	CBL	6	The students receive the material in time, so they can make individual study	-
3	Methods of correct determination of periodontal pocket depth.	Multimedia presentation, practical demonstrations and clinical cases.	6	-	-
4	Methods of evaluation of the clinical attachment loss.	Multimedia presentation, practical demonstrations and clinical cases.	5	-	-
5	The instruments used in subgingival curettage.	CBL	5	The students receive the material in time, so they can make individual study	-
6	Completion of periodontal file.	Multimedia presentation, practical demonstrations and clinical cases.	7	-	-

7	Periodontal surgery instrumentation.	Multimedia presentation, practical demonstrations and clinical cases.	7	-	-
8	The antimicrobial therapy in periodontology.	Multimedia presentation, practical demonstrations and clinical cases.	6	-	-
9	Periodontal emergencies.	CBL	6	The students receive the material in time, so they can make individual study	-
10	Case presentation.	Multimedia presentation, practical demonstrations and clinical cases.	6	-	-
11	Realization of practical maneuvers included in the minimum scale of practical knowledge: - non-surgical causal periodontal therapy.	Multimedia presentation, practical demonstrations and clinical cases.	6	-	-
12	Realization of practical maneuvers included in the minimum scale of practical knowledge: - non-surgical causal periodontal therapy	Multimedia presentation, practical demonstrations and clinical cases.	6	-	-
13	Realization of practical maneuvers included in the minimum scale of practical knowledge: - non-surgical causal periodontal therapy	Multimedia presentation, practical demonstrations and clinical cases.	6	-	-
14	Periodontal splinting	CBL	6	The students receive the material in time, so they can make individual study	-

Bibliography

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1. Dumitriu H. – Periodontology, Ed. Medicala, Bucuresti, 2009
2. Gera I. – Periodontology, Ed. Semmelweis, Budapest, 2009
3. Newman MG, Takei H, Klokkevold PR, Carranza FA. – Newman and Carranza`s Clinical Periodontology, 13th Edition, Elsevier Health Sciences, 2019

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2.Lazăr L, Monea Al. Chiuretajul subgingival în prac ca ambulatorie de parodontologie. Editura University Press Tg.
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4. Ionescu E. Manual pentru rezidentiat. Ed. Univ. Carol Davila, Bucuresti, 2021
5. Vlasa A., Bud E., Pacurar M., et al: Noțiuni practice de parodontologie și ortodonție loa pacientul parodontopat. Editura University Press, Tg Mureș, 2021.

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is corroborated with the need of employers in the fields of health, health management, medical education, drug companies, research in dental medicine.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Attendance at PA, fulfilling the minimum scale of activity The qualifications obtained during the CBL sessions	Arithmetic average of the grades obtained when assessing the fulfillment of the evaluation criteria	20
- lecture	Attendance; individual active participation at the courses through debates, explanations, ideas related to the topic of the course	The qualifications obtained during the fulfilling of the minimum standards of the evaluation criteria	10

Final evaluation			
- practical final exam	The student's ability to examine a patient with periodontal disease, to complete a periodontal chart, to make a correct diagnosis, to carry out the initial treatment	Oral examination	20
- theoretical final exam	Acquiring the necessary knowledge to examine the periodontal patient and develop a complete diagnosis of periodontal disease. Knowledge of treatment schemes in the different clinical forms of periodontal disease	Test	50

Minimal performance standards:
- The accumulation of more than 3 absences, either in the course or in PA, attracts the student's non-acceptance to the final exam. Reasoned (motivated) absences will be made up according to a schedule established at the discipline level.
- Evaluation during the semester
1. At Internships (PA)
Fulfilling the minimum level of activity: - examining the patient and completing 2 periodontal sheets and performing 2 non-surgical causal periodontal therapy procedures

2. Final evaluation
The minimum passing grade is 5 in both the practical and the theoretical exam.

13. Must seen clinical situation list

- MUST SEEN CLINICAL SITUATIONS LIST:
1. Gingivitis induced by dental biofilm
2. Hyperplastic gingivitis by microbial inflammation (by bacterial plaque)
3. Gingivitis in the course of some physiological conditions
4. Gingivitis in the course of systemic diseases (diabetes, hematological diseases)
5. Hyperplastic gingivitis as a side effect of some drugs
6. Necrotic ulcerative gingivitis and periodontitis
7. Gingivitis and herpetic gingivostomatitis
8. Recurrent aphthous gingivitis and gingivostomatitis
9. Mycotic gingivitis and gingivostomatitis
10. Periodontitis stage I
11. Periodontitis stage II
12. Periodontitis stage III
13. Periodontitis stage IV
14. Periodontal abscess

14. Clinical / practical abilities

To recognize the previously listed diseases

15. Appointment timetable (for students)

Șef l dr Benedek Csilla	30 minutes after each course

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Regenerative medicine			
2.2 Course coordinator: Șef l dr Benedek Csilla			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: VI	2.5 Semester: 1	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular:
4.2 competency:

5. Conditions

5.1 for lectures:
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective:
7.2 Specific objectives:

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies:
9.2 transversal competencies:
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 1

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture			0
Final evaluation			
- practical final exam			0
- theoretical final exam			0
Minimal performance standards:			

15. Appointment timetable (for students)

Șef l dr Benedek Csilla	

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Orthodontics and dento-facial orthopedics (2)			
2.2 Course coordinator: Conf dr Pop Silvia-Izabella			
2.3 Practical activities coordinator(s): Sef lucrari El Saafim Mahmoud			
2.4 Year of study: VI	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12		3.2 lecture: 4	3.3 practical activities: 8
3.4 Total hours in curriculum: 84		3.2 lectures: 28	3.6 practical activities: 56
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			24
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			23
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			72
3.9 Total hours			156
3.10 Credits			6

4. Prerequisites (where applicable)

4.1 curricular: Establish complex orthodontic diagnosis and knowledge of therapeutical goals
4.2 competency: --

5. Conditions

5.1 for lectures: Amphitheater equipped with video projector, PC, flipchart.
5.2 for practical activities: Laboratories and treatment rooms equipped with dental units, negatoscope, and specific orthodontic instruments. Students must wear appropriate clinical equipment

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline Orthodontics (2) contributes to the development of ESCO-defined competencies for dental medicine professions by integrating theoretical and practical knowledge related to diagnosis and treatment of dento-maxillary anomalies.

It supports the development of biomedical professional competencies and transversal competencies such as critical thinking, professional communication, and lifelong learning through specific orthodontic teaching and clinical activities.

7. Objectives of the discipline

7.1 General objective:
To provide the theoretical and practical foundation for the classification, design, and clinical use of orthodontic appliances in the management of dento-maxillary anomalies.

7.2 Specific objectives:
The student is able to communicate effectively in presenting orthodontic appliance design and clinical cases
The student is able to collaborate within a multidisciplinary team in appliance-based treatment planning
The student is able to critically analyze scientific data related to orthodontic appliances
The student is able to independently develop knowledge regarding modern orthodontic appliances

8. Learning outcomes

8.1 Knowledge:
Describes the types of orthodontic appliances and their structural components
Explains the biomechanical principles of action of removable, functional, and fixed appliances
Classifies orthodontic appliances according to their clinical indications and mode of action

8.2 Skills:
Analyzes clinical cases to determine the appropriate orthodontic appliance
Designs removable orthodontic appliances including base, clasps, and active elements
Applies techniques for the activation and adjustment of orthodontic appliances

8.3 Responsibility and autonomy:
Demonstrates autonomy in selecting appropriate orthodontic appliances based on clinical data
Critically evaluates the effectiveness of different orthodontic appliances in treatment planning
Respects clinical protocols and ethical standards in the use of orthodontic appliances

9. Specific competencies acquired

9.1 professional competencies:
Ability to classify and describe orthodontic appliances based on structure and mechanism of action
Ability to design and construct removable orthodontic appliances, including retention and active elements
Ability to select appropriate orthodontic appliances according to diagnosis and treatment objectives
Ability to apply biomechanical principles in the clinical use of orthodontic appliances

9.2 transversal competencies:
Identifying the objectives to be achieved, the working steps, the implementation deadlines, the available resources, the risks and the conditions for completion in the projects under coordination;
Identifying role and responsibility in a multidisciplinary team;
Performing orthodontic screenings in different age groups t o identify the epidemiological aspects of dento-maxillary anomalies;
Early identification of serious skeletal abnormalities, with harmony of facial harmony and orientation towards specialist surgery.
Effective use of information sources, communication a nd training resources both in Romanian, Hungarian and in an international language, in order to elaborate and present a specialized work;
Identifying objectives, work phases, available resources, risk f actors in targeted work.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Classification of orthodontic appliances. Biomechanical principles	Oral, multimedia presentation	2	-	-

2	Removable orthodontic appliances. The acrylic basis, clasps, acrylic splints	Oral, multimedia presentation	2	-	-
3	Removable orthodontic appliances. Active elements: springs, orthodontic screw	Oral, multimedia presentation	2	-	-
4	Removable orthodontic appliances: functional elements. Types of appliances. Appliance wearing.	Oral, multimedia presentation	2	-	-
5	Classic functional orthodontic appliances. The principle of the inclined plane. Activator - monobloc. Indications and contraindications	Oral, multimedia presentation	2	-	-
6	Modern functional orthodontic appliances. The Frankel appliance. Balters bionator	Oral, multimedia presentation	2	-	-
7	Passive orthodontic appliances. Removable and fixed space maintainers.	TBL	2	-	-
8	Fixed orthodontic appliances. Advantages, actions, and indications. Orthodontic bands, tubes, ligatures, and brackets.	Oral, multimedia presentation	2	-	-
9	Fixed orthodontic appliances. Wires: selection and action. Elastics: types of elastics	Oral, multimedia presentation	2	-	-
10	Fixed orthodontic appliances. Anchorage control: transpalatal arch - Goshgarian, lingual arch, Quad helix, Nance appliance	Oral, multimedia presentation	2	-	-
11	Intra-extraoral orthodontic devices. Headgear, Delaire mask	Oral, multimedia presentation	2	-	-
12	Rapid palatal expansion. Distalizers. Types of devices and actions	Oral, multimedia presentation	2	-	-
13	Relapse after orthodontic treatment. Cause and prevention. Retainers	Oral, multimedia presentation	2	-	-
14	Miniimplants and skeletally anchored appliances	Oral, multimedia presentation	2	-	-

Bibliography
References
1.Proffit, William R., et al. Contemporary Orthodontics, 7th edition, Elsevier Health Sciences, 2025.
2.Lee W. Graber, Katherine W. L. Vig, Greg J. Huang și Pádhraig S. Fleming. Current principles and techniques. Orthodontic Book, USA (2022), 7th edition

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Monomaxilar and bimaxillary static examination on casts. Resume	Practical demonstartion, individual work	4	-	-
2	Complementary orthodontic examination. Resume.	Practical demonstartion, individual work	4	-	-
3	Design of removable orthodontic appliances	Practical demonstartion, individual work	4	-	-
4	Section possibilities of the basis of removable orthodontic appliances	CBL	4	-	-
5	Working bite determination: indirect method. Demonstration	Practical demonstration, individual work	4	-	-
6	Clasps manufacturing on work casts. Practical demonstration.	Practical demonstration, individual work	4	-	-
7	Springs manufacturing on work casts. Practical demonstration	Practical demonstration, individual work	4	-	-
8	Activation of inclined planes on functional appliances. Demonstration	Practical demonstartion, individual work	4	-	-
9	Functional components manufacturing on working casts.	CBL	4	-	-
10	Orthodontic chart. Demonstration of direct bonding technique	Practical demonstration, individual work	4	-	-
11	Fixed appliance control. Demonstration	Practical demonstration, individual work	4	-	-
12	Anchorage improving devices: Quad helix, lip-bumper, Nance appliance	Practical demonstartion, individual work	4	-	-

13	Interceptive orthodontics: trainers and labial plate.	CBL	4	-	-
14	Case presentation	Practical demonstartion, individual work	4	-	-

Bibliography

1. Martha Krisztina, Bică Cristina: Ortho-Atlas, Ed. University Press Tg.Mureş, 2015.
2. Proffit, William R., et al. Contemporary Orthodontics, Elsevier Health Sciences, 2025.
3. Pop Silvia Izabella, Bratu Dana Cristina, Păcurar Mariana:Aparate ortodontice,Editura University Press, Tg.Mures, 2018
4.Graber, T. M., R. L. Vanarsdall, and K. Vig. 'Current principles and techniques.' Orthodontic Book, USA 2022

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The discipline content is aligned with clinical practice requirements, focusing on diagnostic skills and treatment planning relevant to dental professionals..

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Removable appliances (design of an orthodontic plate) 2 Making the orthodontic plate anchor elements - Stahl clas p (demonstration) 1 Making the active elements of the orthodontic plate - auxiliary springs (demon stration) 2 Functional devices. Corrected occlusion on model 2 Fixed orthodontic appliances: bonding (demonstratio n) 1	CBL	20
- lecture	Case presentation (complex orthodontic diagnosis)	TBL	10
Final evaluation			
- practical final exam	Establishing orthodontic diagnosis Functional devices. Corrected occlusion on model Fixed and removable orthodontic appliances: recognizing components, biomechanical principles, usage Anchorage auxiliaries: adapting a lingual / trans palatal arch to the study model (demonstration) Preparation of the orthodontic treatment sheet Preparation of the Laboratory Sheet	Practical exam	20
- theoretical final exam	The final theoretical examination is conducted in written format and consists of multiple-choice questions (MCQs) with single or multiple correct answers.	Multiple choice questions	50

Minimal performance standards:
The final mark of promotion is 5 (five) and consists of the semesters of the assessments during the semester (TBL, CBL) respectively the final examinations. The student is required to attend all the evaluations throughout the year.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Pop Silvia-Izabella	Tuesday 10-11

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Dentofacial cosmetics			
2.2 Course coordinator: Șef l dr Stoica Alexandra-Mihaela			
2.3 Practical activities coordinator(s): Prof.Dr.Monea Monica, Șef.Lucr. Dr. Monea Adriana, Șef. Lucr..Dr. Sita Dan Dragoș, Șef.Lucr. Dr.Kovacs Monika			
2.4 Year of study: VI	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 6	3.2 lecture: 2	3.3 practical activities: 4
3.4 Total hours in curriculum: 42	3.2 lectures: 14	3.6 practical activities: 28
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		21
- supplemental documentation at the library, from specialized information portals and in the field		20
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		20
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		62
3.9 Total hours		104
3.10 Credits		4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

The discipline contributes to the development of professional competencies specific to the dental profession, in accordance with ESCO recommendations, by enhancing skills in diagnosis, the use of dental instruments and materials, and the application of clinical protocols in dental practice.

7. Objectives of the discipline

7.1 General objective: To provide students with fundamental knowledge and clinical principles of cosmetic dentistry, focusing on aesthetic diagnosis, treatment planning, and minimally invasive therapeutic approaches. To develop the ability to integrate functional and aesthetic considerations in the management of dental and dento-facial conditions. To familiarize students with modern materials, techniques, and digital technologies used in contemporary cosmetic dental practice.
7.2 Specific objectives: To perform comprehensive aesthetic evaluation of dental and dento-facial structures using clinical and photographic examination methods. To develop individualized cosmetic dental treatment plans based on functional, biological, and aesthetic principles. To apply the principles of colour science and shade selection in direct and indirect aesthetic restorations. To use contemporary composite materials and minimally invasive techniques in aesthetic dental restorations.

8. Learning outcomes

8.1 Knowledge: Acquisition of theoretical knowledge regarding the principles of dento-facial aesthetics, methods for evaluating dento-facial harmony, the indications and limitations of aesthetic procedures, as well as the materials and techniques used in dental and facial aesthetic treatments.
8.2 Skills: Development of skills in analyzing dento-facial aesthetics, planning aesthetic treatments, and correctly applying techniques and materials specific to dento-facial cosmetic procedures, while adhering to principles of safety and quality in medical practice.
8.3 Responsibility and autonomy: Assumption of professional responsibility in performing dento-facial aesthetic procedures and the autonomous application of specific techniques, while respecting ethical principles and safety standards in dental practice.

9. Specific competencies acquired

9.1 professional competencies: Development of the treatment plan in accordance with the principles of cosmetic odontotherapy, applied both individually at the level of each tooth and comprehensively at the level of the dental arches. Knowledge of the application of colour characteristics, relevant both for dental structures and for composite materials used in direct dental restorations. Acquisition of the necessary knowledge for performing tooth whitening of both vital teeth and endodontically treated teeth.
9.2 transversal competencies: Use of photographic examination and modern digital methods for visualizing the final post-treatment aesthetic outcome, in order to support a comprehensive approach to cosmetic dental treatment planning.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The concept of dental aesthetics. Development of the treatment plan.	Oral and multimedia-based presentation.	2	-	-
2	Optical properties of hard dental tissues.	Oral and multimedia-based presentation.	2	-	-
3	Non-carious dental lesions.	Oral and multimedia-based presentation.	2	-	-
4	Direct composite dental restorations.	Oral and multimedia-based presentation.	2	-	-
5	Aesthetic tooth recontouring.	Oral and multimedia-based presentation.	2	-	-

6	Fundamental principles of tooth whitening techniques.	Oral and multimedia-based presentation.	2	-	-
7	Application of cosmetic techniques in the aesthetic restoration of endodontically treated teeth.	Oral and multimedia-based presentation.	2	-	-
Bibliography Bibliography 1.George Freedman: Contemporary esthetic dentistry. Elsevier. Ed. 2012					

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Patient examination. Establishing the diagnosis and developing the treatment plan.	Multimedia presentations, case-based learning, and practical demonstrations.	4	-	-
2	Examination of hard dental tissues. Use of magnification for the evaluation of enamel and dentin.	Multimedia presentations, case-based learning, and practical demonstrations.	4	-	-
3	Performing direct dental restorations in the anterior teeth.	Multimedia presentations, case-based learning, and practical demonstrations.	4	-	-
4	Performing direct dental restorations in the posterior teeth group.	Multimedia presentations, case-based learning, and practical demonstrations.	4	CBL	-
5	Vital tooth whitening techniques. Internal bleaching of non-vital teeth.	Multimedia presentations, case-based learning, and practical demonstrations.	4	-	-
6	Aesthetic reshaping of composite restorations.	Multimedia presentations, case-based learning, and practical demonstrations.	4	-	-
7	Reconstruction of incisal angles and edges using composite materials.	Multimedia presentations, case-based learning, and practical demonstrations.	4	-	-
Bibliography Freedman, George. Contemporary Esthetic Dentistry. St. Louis, MO: Elsevier, 2012.					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline is aligned with the expectations of the professional community, dental associations, and employers in the field, focusing on the development of competencies required for modern dental practice, including aesthetic diagnosis, treatment planning, the use of contemporary materials and technologies, and adherence to professional, ethical, and safety standards in cosmetic dental care.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Continuous assessment of practical activities is carried out through direct observation of clinical performance, evaluation of manual skills, adherence to clinical protocols, and active participation during practical sessions.	Written examination (multiple-choice test), evaluation of clinical skills and case-based performance and assessment of participation during practical sessions.	30
- lecture	--	-	0
Final evaluation			
- practical final exam	Assessment Criteria: Accuracy and completeness of theoretical knowledge. Correct application of clinical protocols and treatment planning principles. Practical skills and manual dexterity in performing dental procedures.	Evaluation of clinical skills and case-based performance and assessment of participation during practical sessions.	20

- theoretical final exam	Assessment Criteria: Accuracy and completeness of theoretical knowledge. Correct application of clinical protocols and treatment planning principles. Practical skills and manual dexterity in performing dental procedures. Ability to analyze clinical cases and make appropriate clinical decisions. Compliance with safety, hygiene, and professional standards in dental practice. Active participation and professional behavior during practical sessions.	Final theoretical examination comprising multiple-choice questions and written (open-ended) responses.	50
Minimal performance standards: Să citească fără prea multe greşeli de pronunţie, să înţeleagă ideile principale ale unui text sau mesaj audio, să răspundă la întrebări simple pe baza lor, folosind un vocabular satisfăcător şi fără greşeli mari la nivelul organizării discursului şi al folosirii structurilor gramaticale necesare comunicării, să cunoască anumiţi termeni specifici domeniului			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Stoica Alexandra-Mihaela	30 minute după fiecare curs

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Oral and maxillo-facial surgery (2)			
2.2 Course coordinator: Șef l dr Coșarcă Adina-Simona			
2.3 Practical activities coordinator(s): Sef. Lucr. Cosarca Adina, Sef. Lucr.Petrovan Cecilia, Sef. Lucr Bereczki Despina, Sef. Lucr. Iacob Alina, Sef. Lucr.Golu Vlad			
2.4 Year of study: VI	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 8		3.2 lecture: 4	3.3 practical activities: 4
3.4 Total hours in curriculum: 56		3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			25
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			24
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			74
3.9 Total hours			130
3.10 Credits			5

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: -
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Disciplina este corelata cu Clasidicarea europeana ESCO contribuind la dezvoltarea competentelor specifice de medic stomatolog .

7. Objectives of the discipline

7.1 General objective: 7.1 General objective The correct attitude of the dentist towards premalignant lesions, respectively towards benign and malignant tumoral lesions in the oro-maxillo-facial sphere, salivary gland pathology, TMJ pathology, complex dento-maxillary anomalies and congenital labio-maxillo-palatine clefts, that appear on the face and oral cavity.
7.2 Specific objectives: Carrying out the anamnesis, the complete and correct clinical examination as well as some basic diagnostic procedures, requesting the appropriate complementary examinations, formulating a positive and differential diagnosis. Realization of an individualized therapeutic plan and the performance of basic therapeutic procedures, including those aimed at qualified first aid. Familiarization of students with some precancerous conditions and benign, malignant conditions encountered in the oro-maxillo-facial sphere that they may encounter in dental practice. The therapeutic attitude in the dental office towards the oncological patient and the drug treatments that could complicate the dental treatments.

8. Learning outcomes

8.1 Knowledge: Studentii pot recunoaste leziunile premaligne, leziunile benigne si maligne si pot lua decizii terapeutice
8.2 Skills: identifica solutii si planuri de tratament
8.3 Responsibility and autonomy: manifesta colaborare cu cadrele didactiec si cu ceilalti colegi

9. Specific competencies acquired

9.1 professional competencies: Description of concepts, theories and fundamental notions regarding the appearance of tumors, the signs and symptoms characteristic of each disease, important for the orientation of clinical diagnosis. Identification of resuscitation maneuvers in first aid conditions. Correct interpretation of clinical and paraclinical signs, symptoms in order to develop a presumptive diagnosis. The use of therapeutic resources to formulate the treatment plan as well as the correct interpretation of clinical and paraclinical data. The application of the acquired clinical techniques and knowledge to be integrated with the paraclinical data with the aim of establishing the positive, differential diagnosis, as well as establishing the prognosis. Realization of a treatment plan in accordance with the stage of the disease and its individualized adaptation to the particularities of the patient. Finally, the correct performance of the complete and complex clinical examination, which allows the recognition of benign and malignant oral and maxillofacial lesions as well as the therapeutic attitude in these cases, in order to correctly guide patients in surgical services where they are treated.
9.2 transversal competencies: Identification of the objectives to be achieved, the available resources, the conditions for their completion, work stages, working times, related risks. Identifying roles and responsibilities in a multidisciplinary team and applying communication techniques and effective work within the team and in relation to the patient. Effective use of communication resources and assisted professional training. Knowing and respecting the principles of safety at work, protection of work and the individual.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Cysts and soft tissue fislullae	Oral presentation + multimedia, discussions	2	-	-
2	Benigne tumors of the face and mouth	Oral presentation + multimedia, discussions	2	-	-
3	Nonodontogenic benigne tumors of the jaws	Oral presentation + multimedia, discussions	2	-	-

4	Benign Maxillary odontogenic tumors	Oral presentation + multimedia, discussions	2	-	-
5	Precancerous lesions in oro-maxillo-facial territory	Oral presentation + multimedia, discussions	2	-	-
6	Etio-pathogenesis of cancers in the oro-maxilo-facial area Oral presentation + multimedia, discussions	Oral presentation + multimedia, discussions	2	-	-
7	Paraclinic examination for the malignant tumors of the maxillo -facial area	Oral presentation + multimedia, discussions	2	-	-
8	Malignant tumors of the soft tissue located in the maxillo facial area-1	Oral presentation + multimedia, discussions	2	-	-
9	Malignant tumors of the soft tissue located in the maxillo facial area-2	Oral presentation + multimedia, discussions	2	-	-
10	Maxillary malignant tumors	Oral presentation + multimedia, discussions	2	-	-
11	Salivary glands pathology	Oral presentation + multimedia, discussions	2	-	-
12	TMJ Pathology	Oral presentation + multimedia, discussions	2	-	-
13	Congenital labio-maxilo-palatine cleft - Etiopathogenesis, clinical aspects and surgical treatment in multidisciplinary therapy	Oral presentation + multimedia, discussions	2	-	-
14	Complex congenital malformations. Surgical orthognatic treatment	Oral presentation + multimedia, discussions	2	-	-

Bibliography

1. Bucur A., Navarro C.V., Lowry J., Acero J.: Compendiu de chirurgie oro-maxilo-facială, vol. 1 și 2 Editura Q Med Publishing Bucureşti 2009
2.Textbook of Oral and Maxillofacial Surgery, JAYPEE BROTHERS MEDICAL PUBLISHERS (P) LTD.
3.Principles of oral and maxillo facial surgery, Six edition, UJ MOORE
4. Contemporary Oral and Maxillo Facial Surgery, James R Hupp, Eduard Ellis III, Myron R Tuker 2014, Elsevier

10.2 Content of workout, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Soft tissue cyst and tumors	Oral presentation, discussion, power point presentation, case presentation	2	-	-
2	Benigne tumors of the face and mouth	Oral presentation, discussion, power point presentation, case presentation	2	-	-
3	Benigne tumors of the jaws nonodontogenic	Oral presentation, discussion, power point presentation, case presentation	2	-	-
4	Maxillary odontogenic tumors	Oral presentation, discussion, power point presentation, case presentation	2	-	-
5	Premalignant lessions	Oral presentation, discussion, power point presentation, case presentation	2	-	-
6	OMF soft tissue malignant tumors	Oral presentation, discussion, power point presentation, case presentation	2	CBL 1	-
7	OMF soft tissue malignant tumors	Oral presentation, discussion, power point presentation, case presentation	2	-	-
8	OMF soft tissue malignant tumors	Oral presentation, discussion, power point presentation, case presentation	2	-	-
9	OMF soft tissue malignant tumors	Oral presentation, discussion, power point presentation, case presentation	2	-	-

10	Salivary glands pathology	Oral presentation, discussion, power point presentation, case presentation	2	-	-
11	TMJ pathology	Oral presentation, discussion, power point presentation, case presentation	2	*	-
12	Clefts	Oral presentation, discussion, power point presentation, case presentation	2	CBL2	-
13	Dentomaxillary anomalies	Oral presentation, discussion, power point presentation, case presentation	2	-	-
14	Revision	Oral presentation, discussion, power point presentation, case presentation	2	-	-

Bibliography

1. Bucur A., Navarro C.V., Lowry J., Acero J.: Compendiu de chirurgie oro-maxilo-facială, vol. 1 și 2, Editura 2009 Q Med Publishing Bucureşti
2.Textbook of Oral and Maxillofacial Surgery, JAYPEE BROTHERS MEDICAL PUBLISHERS (P) LTD.
3.Principles of oral and maxillo facial surgery, Six edition,

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

At the end of the sixth year, students must recognize premalignant lesions, namely benign and malignant oral and maxillofacial tumors, as well as the therapeutic attitude in these cases, in order to correctly guide patients in surgical services where they are treated. To make a preliminary diagnosis in patients with pathology of the salivary glands, the temporomandibular joint, with dentomaxillary anomalies and congenital labio-maxillo-palatine clefts and refer them to the Oro-Maxillo-Facial Surgery service.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	According to the department of Oral and Maxillofacial Surgery	CBL	30
- lecture	According to the department of Oral and Maxillofacial Surgery	-	0
Final evaluation			
- practical final exam	According to the department of Oral and Maxillofacial Surgery - Verification	Oral /written revision on pathology studied in the course of the semester	30
- theoretical final exam	Theoretical final exam According to the department of Oral and Maxillofacial Surgery	Written evaluation - multiple choice test - UNIX	40

Minimal performance standards:
Carrying out the anamnesis, the complete and correct clinical examination - the recognition and careful examination of areas of high oncological risk, the establishment of basic diagnoses, the request for appropriate complementary examinations, the formulation of a positive and differential diagnosis.
Creating an individualized therapeutic plan and performing basic therapeutic procedures, including those aimed at qualified first aid.Attendance to lectures and practical activities of the discipline is mandatory. Unexcused absences from classes will not give the student the right to participate in the semester examination session.
- 20% of motivated abcences can be recuperated according to the decision of the Course/Practical activities lecturer
- The grade for written test – minimum 5; less than 5 = failed exam;
- The grade for semestrial activities – minimum 5; less than 5 = failed exam;
- Final grade – minimum 5; less than 5 = failed exam.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Coșarcă Adina-Simona	Dupa ora de curs

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Interdisciplinary confluences in orthodontics			
2.2 Course coordinator: Prof dr Păcurar Mariana			
2.3 Practical activities coordinator(s): -			
2.4 Year of study: VI	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Opt

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 2		3.2 lecture: 2	3.3 practical activities: 0
3.4 Total hours in curriculum: 14		3.2 lectures: 14	3.6 practical activities: 0
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			13
- supplemental documentation at the library, from specialized information portals and in the field			12
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			12
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			38
3.9 Total hours			52
3.10 Credits			2

4. Prerequisites (where applicable)

4.1 curricular: Complex orthodontic diagnosis and individualized treatment plan
4.2 competency: Basic knowledge of dental morphology, dental occlusion

5. Conditions

5.1 for lectures: Computerized presentation, prohjector, flipchart
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Perform dental diagnostic imaging Interpret medical imaging Use e-health and digital technologies

7. Objectives of the discipline

7.1 General objective: Elaboration of an orthodontic complex diagnosis and identification of the therapeutic objectives.
7.2 Specific objectives: Acquiring skills for interdisciplinary case analysis

8. Learning outcomes

8.1 Knowledge: -transversal skills -critical thinking -teamwork in healthcare settings -continuous professional development
8.2 Skills: Demonstrates receptivity to new learning contexts. Demonstrates collaboration with other colleagues and teachers in carrying out teaching activities.
8.3 Responsibility and autonomy: Perform dental diagnosis and ability to recognize differents maxillary anomalies

9. Specific competencies acquired

9.1 professional competencies: Elaboration of a complex and individualized treatment plan by clinical examination, complementary examinations (model analysis, radiography examination (OPG and teleradiography), photostatic exam, static and dynamic occlusion examination, anthropometric measurements) Establishing a morphological, etiological, and functional orthodontic complex diagnosis. Establishing therapeutic goals. Preparing the patient for the orthodontic therapy Knowing the stages of ADM growth and development, the importance of space management in mixed and permanent dentition Knowledge of methods to combat malfunctions and dysfunctions of dento-maxillary apparatus. Selective drilling, stripping, exercises of myogymnastics.
9.2 transversal competencies: Identifying the objectives to be achieved, the working steps, the implementation deadlines, the available resources, the risks and the conditions for completion a stabile and functional occlusion; Identifying the role and responsibility of a multidisciplinary team; Performing orthodontic screenings in different age groups to identify the epidemiological aspects of different types of malocclusion; Early identification of serious skeletal disorders, of facial harmony and orientation towards specialist surgery. Effective use of information resources, communication and training resources both in Romanian, Hungarian and in an international language, in order to elaborate and present a specialized paper; Identifying objectives, work phases, available resources, risk factors in targeted work.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	The reaction of pulpal structures to orthodontic force. The advantages of the pulpotest	Power point presentation	2	-	There are correlations between the content of the topics and the diagnostic skills of the future dentist
2	Tthe effects of orthodontic force on periodontal structures	Power point presentation	2	-	There are correlations between the content of the topics and the diagnostic skills of the future dentist
3	Methods of preventing gingival recession	Power point presentation	2	-	There are correlations between the content of the topics and the diagnostic skills of the future dentist
4	Methods of prevention of root resorption	Power point presentation	2	-	There are correlations between the content of the topics and the diagnostic skills of the future dentist

5	Molar uprighting preprosthetic orthodontic therapy	Power point presentation	2	-	There are correlations between the content of the topics and the diagnostic skills of the future dentist
6	Surgical methods in diastema prevention.	Power point presentation	2	-	There are correlations between the content of the topics and the diagnostic skills of the future dentist
7	White spot leasions	Power point presentation	2	-	There are correlations between the content of the topics and the diagnostic skills of the future dentist

Bibliography

1. Păcurar M, Draşovean A – Anomaliile dento-maxilare – curs, Universitatea de Medicină şi Farmacie Tg.Mureş, 2015,194
2. Ecaterina Ionescu - Anomaliile dentare, Editura Cartea Universitară, Bucureşti, 2005
3. Graber T.Orthodontics: Current Principles and Tehniques. Fourth Edition. Mosby Elsevier, 2005

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The content of the discipline provides students with an overview of the correlations between Orthodontics and other dental specialties for a holistic approach to the patient.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	-	-	0
- lecture	TBL	Mean grade of the 2 TBL modules	20
Final evaluation			
- practical final exam	-	-	0
- theoretical final exam	Test	Multiple choice test	80

Minimal performance standards:

The final mark for promotion is 5 (five) and is made up of the assessments during the semester (TBL, CBL) respectively the final examinations. The student is required to attend all the evaluations throughout the academic year.

If absent from a TBL module, the mark will be 1; there is no possibility of repeating this assessment, but it will still be possible to support the final exam. In the case of absences at TBL sessions for extremely justified reasons, the student has the possibility to draw up a review on the topic

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Prof dr Păcurar Mariana	Prof.Univ.Dr. Pacurar Mariana- 30 minutes after each course

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Oral rehabilitation			
2.2 Course coordinator: Conf dr Bechir Edwin-Sever			
2.3 Practical activities coordinator(s):			
2.4 Year of study: VI	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: RS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 4	3.2 lecture: 2	3.3 practical activities: 2
3.4 Total hours in curriculum: 56	3.2 lectures: 28	3.6 practical activities: 28
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		16
- supplemental documentation at the library, from specialized information portals and in the field		16
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		15
- tutorial activities		0
- examinations		1
- other activities		0
3.8 Total hours of individual study		48
3.9 Total hours		104
3.10 Credits		4

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: Multimedia Equipment
5.2 for practical activities: Multimedia Equipment

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective: Students' acquisition of general notions about oral rehabilitation concepts.
7.2 Specific objectives: To know and understand the principles that govern the concepts of oral rehabilitation. To use the specialized terms. To know basic medical notions from general pathology that influence oral health. To know the medication that can affect the oral health status, the diagnosis or the treatment plan. To know and explain the therapeutic principles/manipulations used in oral rehabilitation. To know the stages of the complete and complex clinical examination of the patient. To know the paraclinical investigations and their role in the documentation and formulation of the diagnosis and the treatment plan. To know the types of diagnoses that are formulated after examining the patient. To know the operations/procedures that must be applied for the oral rehabilitation of clinical cases. To adopt the behavior of the future dentist. To work in a team, developing the ability to collaborate with specialties from different fields of dentistry or general medicine.

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies: Carrying out a complete and complex clinical examination of the patient. The ability to correlate the concepts of general medicine with those of dentistry and establish mutual interdependence. The ability to request and use critical paraclinical investigations in establishing the diagnosis. The ability to formulate a suite of correct diagnoses. Establishing an individualized treatment plan, formulated in a logical, coherent and effective sequence The ability to predict the prognosis and evolution of the disease. The ability to offer the patient several treatment solutions in accordance with the various concepts of oral rehabilitation.
9.2 transversal competencies: Cognitive skills: Notions about the concepts that define complex oral rehabilitation. Notions about signs, symptoms or diseases within general medical pathology reflected in dental medicine. Notions about diseases of the dento-maxillary apparatus that influence the general state of health. Notions related to paraclinical investigations useful in formulating effective diagnoses. Notions regarding oral rehabilitation therapy. Affective-value skills: Relationship with the patient and the medical staff. Communication with the patient. Communication with the dental technician.
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Introduction to oral rehabilitation. Current concepts in complex oral rehabilitation. Patient management.	Multimedia presentation	2	-	-
2	Specifics of patient examination in dentistry. Anamnestic questionnaires. Functional disturbances of the body in systemic diseases. Functional disorders of the orofacial system (SOF). Clinical record of oral rehabilitation.	Multimedia presentation	2	-	-

3	Elements of physiopathology of the oral cavity. Age-specific changes. The oral cavity as an ecosystem-relevant aspects in oral rehabilitation	Multimedia presentation	2	-	-
4	Pre- and pro-prosthetic treatments in oral rehabilitation. Periodontal, orthodontic and orthognathic aspects. Principles of rehabilitation of endodontically treated teeth.	Multimedia presentation	2	TBL	-
5	Intrinsic and extrinsic value of abutment teeth. Criteria for choosing abutment teeth. Paraclinical and complementary examinations. Criteria for establishing the diagnosis.	Multimedia presentation	2	-	-
6	Aesthetics in oral rehabilitation. Dento-facial and dento-alveolar harmony. Color selection criteria.	Multimedia presentation	2	-	-
7	The therapeutic algorithm in the oral rehabilitation of the patient with coronary destruction. Clinical cases.	Multimedia presentation	2	-	-
8	The therapeutic algorithm in the oral rehabilitation of the partially edentulous patient through fixed prostheses. Clinical cases.	Multimedia presentation	2	-	-
9	The therapeutic algorithm in the oral rehabilitation of the partially edentulous patient through partial dentures. Clinical cases.	Multimedia presentation	2	-	-
10	Oral rehabilitation of the partially edentulous patient through total dentures. Clinical cases.	Multimedia presentation	2	TBL	-
11	Dental implants. Opportunities and clinical considerations.	Multimedia presentation	2	-	-
12	Implanto-prosthetic oral rehabilitation. Single implant restorations. Implantology with immediate loading. Clinical cases.	Multimedia presentation	2	-	-
13	Craniomandibular dysfunction. Concept. Etiology. Clinical features and signs. Therapeutic principles.	Multimedia presentation	2	-	-
14	Prosthetic rehabilitation of congenital and acquired maxillofacial defects.	Multimedia presentation	2	-	-

Bibliography

1. Lecture Notes.
2. Manjima Khandelwal, Punit Raj Singh Khurana, Full Mouth Rehabilitation, Lambert Academic Publishing, 2022.
3. Devang Patel, A Practical Step By Step Guide to Full Mouth Reconstruction for General Dental Practitioners: How to Progress From Single Tooth Dentistry To Direct Adhesive Full Mouth Reconstruction, Addea Media, 2022.
4. Mersel Alexandre, Oral Rehabilitation for Compromised and Elderly Patients, Springer, 2019.
5. Preti G. Prosthetic Rehabilitation. Part I, II, Quintessence Publishing, 2008.
6. Jacobs S.H., O`Connell B.C.: Dental Implant Restoration. Principles and Procedures, Ed. Quintessence Publishing, 2011.
7. Zinner I.D., Panno F.V., Small S.A., Landa L.S.:Implant Dentistry: From Failure to Success, Ed. Quintessence Publishing, 2004.

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Presentation of the discipline, of the dental equipment. Training on occupational safety in the dental office. Introductory notions of patient examination.	Multimedia presentation	2	-	-
2	The role of medical and dental history in establishing the diagnosis. The importance of the patient's chronic medication in establishing the treatment plan. Clinical activity.	Clinical and multimedia presentation	2	-	-
3	The role of paraclinical investigations in establishing the diagnosis and treatment plan. OPT, CT, CBCT investigations. Clinical activity.	Clinical activity	2	-	-
4	Documentation of clinical cases based on data from the literature. Clinical activity.	Practical activity. Querying databases.	2	-	-

5	Documentation of a clinical case. Clinical activity	Clinical activity	2	Elaboration of a diagnosis and treatment plan based on the clinical file, paraclinical investigations and data from the literature.	-
6	Case presentation. Clinical activity.	Multimedia presentation	2	-	-
7	Case presentation. Clinical activity.	Multimedia presentation	2	-	-
8	Case presentation. Clinical activity.	Multimedia presentation	2	-	-
9	Case presentation. Clinical activity.	Multimedia presentation	2	-	-
10	Case presentation. Clinical activity.	Multimedia presentation	2	Each student makes a case presentation, according to the rules of these presentations, which is then discussed and argued in front of colleagues. Equivalent to CBL 1.	-
11	Case presentation. Clinical activity.	Multimedia presentation	2	-	-
12	Case presentation. Clinical activity.	Multimedia presentation	2	-	-
13	Case presentation. Clinical activity.	Multimedia presentation	2	-	-
14	Case presentation. Clinical activity.	Multimedia presentation	2	Each student makes a case presentation, according to the rules of these presentations, which is then discussed and argued in front of colleagues. Equivalent to CBL 2	-

Bibliography

1. Manjima Khandelwal, Punit Raj Singh Khurana, Full Mouth Rehabilitation, Lambert Academic Publishing, 2022
2. Devang Patel, A Practical Step By Step Guide to Full Mouth Reconstruction for General Dental Practitioners: How to Progress From Single Tooth Dentistry To Direct Adhesive Full Mouth Reconstruction, Addea Media, 2022.
3. Mersel Alexandre, Oral Rehabilitation for Compromised and Elderly Patients, Springer, 2019.
4. Preti G. Prosthetic Rehabilitation. Part I, II, Quintessence Publishing Co. Ltd., 2008
5. Jacobs S.H., O`Connell B.C.: Dental Implant Restoration. Principles and Procedures, Ed. QuintessencePublishing, 2011
6. Zinner I.D., Panno F.V., Small S.A., Landa L.S.:Implant Dentistry: From Failure to Success, Ed. QuintessencePublishing, 2004
7. PA notes

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

The acquisition of the concepts presented and the stimulation of active, logical thinking contribute to the formation of competitive specialists on the labor market, capable of performing complex treatments.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Knowledge of the theoretical and practicalaspects within the topic of practical works.	CBL average	30
- lecture	Knowledge of the theoretical aspects withinthe course topic.	TBL average	20
Final evaluation			
- practical final exam	Knowledge of the theoretical and practicalaspects within the topic of practical works.	Interpretation of paraclinical examinations inthe context of a given clinical situation.	10
- theoretical final exam	Knowledge of the theoretical aspects withinthe course topic.	Multiple choice test	40

Minimal performance standards:
Minimal performance standards: Minimum performance standard: Obtaining a minimum grade of 5 (five) foreach component of the assessment:
course:
- to know the basic notions regarding oral rehabilitation,
- to participate in the discussion groups in the TBL system, on the mentioned topics
Practical works*:
-to perform the complete and complex examination of the patient,
-present at least one CBL 1 documented case presentation,
-to interpret a CT / CBCT in order to formulate the diagnosis and the treatment plan.
- treat and document a patient's treatment plan for CBL 2 clinical activity.

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Conf dr Bechir Edwin-Sever	

Head of departament | Course coordinator | Practical activities coordinator(s)

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Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD1
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Community dentistry			
2.2 Course coordinator: Șef l dr Tohati Adrian-Roland			
2.3 Practical activities coordinator(s): Conf dr Beresescu Liana, Sef l dr Tohati Adrian, Sef l dr Petcu Blanka, Sef l dr Bechir Farah			
2.4 Year of study: VI	2.5 Semester: 2	2.6 Type of evaluation: E	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week: 12	3.2 lecture: 4	3.3 practical activities: 8	
3.4 Total hours in curriculum: 84	3.2 lectures: 28	3.6 practical activities: 56	
3.7 Distribution of time pool			
- study of books, lecture materials, bibliography, notes			24
- supplemental documentation at the library, from specialized information portals and in the field			24
- preparation for seminaries / laboratories, homework, reports, portfolios and essays			23
- tutorial activities			0
- examinations			1
- other activities			0
3.8 Total hours of individual study			72
3.9 Total hours			156
3.10 Credits			6

4. Prerequisites (where applicable)

4.1 curricular: --
4.2 competency: --

5. Conditions

5.1 for lectures: multimedia equipment
5.2 for practical activities: -

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

Clinical and practical competencies: Identification of primary and secondary prophylaxis needs; interpretation of epidemiological survey results.

General competencies:
Effective communication with the patient; implementation of dental prophylactic education measures.

Respect for legal and ethical standards:
Transversal competencies including teamwork skills and commitment to continuous professional development.

ESCO competencies:
Development of a preventive treatment plan and implementation of a program to enhance the level of oral and dental health among various population groups.

7. Objectives of the discipline

7.1 General objective:
Students' acquisition of general notions about community dentistry concepts.

7.2 Specific objectives:
To evaluate and research oral health conditions in the studied communities
To develop the ability to analyze the effectiveness of a program promoting oral health.
To use the specialized medical and statistical terms.
To know basic medical notions from general pathology that influence oral health.
To know the medication and substances that can affect the oral health status, the diagnosis and the treatment plan.
To work in a team, developing the ability to collaborate with specialties from different fields of dentistry or general medicine.
To develop public speaking skills adapted to the audience
To create awareness regarding the importance of oral health, to promote dental health, to prevent and control dental diseases in communities adressed.
To improve the public's oral health related quality of life and to commit to ethical and responsible leadership in patient care and research.

8. Learning outcomes

8.1 Knowledge:
The student identifies, recognizes, and distinguishes the different treatment and prevention needs of community groups.

8.2 Skills:
The student applies the knowledge acquired to the practical resolution of issues related to group prophylaxis.

8.3 Responsibility and autonomy:
The learner independently and responsibly applies their knowledge and skills in developing community prevention plans

9. Specific competencies acquired

9.1 professional competencies:
professional competencies:
The student must be able to know the main methods and procedures for conducting an epidemiological investigation as well as the main techniques for developing projects for analysis and optimization of oral hygiene in different communities. The student will be competent in explaining the risks of exposure to various drugs and vices of various population groups, as well as exposing various measures to prevent the spread of these vices among the population.

9.2 transversal competencies:
transversal competencies:
The student will acquire the ability to detect and correlate interdisciplinary oral health issues as an integral aspect in the general system of human health and society.

9.3 related to the study program:
Disease state identification and accurately diagnosing dental condition(s).
Conservative treatment of dento-periodontal structures.
Diagnosis and interceptive treatment of dentomaxillary anomalies.
Prosthetic restoration of dental arches.
Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions.
Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of lecture, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	History and introductory elements	Oral and multimedia presentation	2	-	-

2	Primary, secondary and tertiary health care	Oral and multimedia presentation	2	-	-
3	Family health	Oral and multimedia presentation	2	-	-
4	WHO indices of epidemiological surveys	Oral and multimedia presentation	2	-	-
5	Epidemiological inquiry: definition, aim, methodology	Oral and multimedia presentation	2	-	-
6	Epidemiological inquiry: training of medical staff, data collection	Oral and multimedia presentation	2	-	-
7	Epidemiological inquiry: interpretation and reporting of collected data	Oral and multimedia presentation	2	-	-
8	Compilation of statistics and verification of the feasibility of epidemiological surveys	Oral and multimedia presentation	2	-	-
9	Community oral health education: generalities, objectives, principles	Oral and multimedia presentation	2	-	-
10	Community oral health education: methods, techniques for transmitting information	Oral and multimedia presentation	2	-	-
11	Alcohol	Oral and multimedia presentation	2	-	-
12	Smoking	Oral and multimedia presentation	2	-	-
13	Drugs: Social issues and terminological clarifications	Oral and multimedia presentation	2	-	-
14	Actual Drugs	Oral and multimedia presentation	2	-	-

Bibliography

Tohati Adrian. Elements of community dentistry Curs Lito UMF Tg.Mures 2018
Tohati Adrian, Bechir Farah. Concepts in Preventive Dentistry UMFST Tg. Mures 2019

10.2 Content of laboratory, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
1	Practical establishment of the epidemiological investigation strategy	Practical demonstrations	4	-	-
2	Scheduling, detailing and management of trips in preschool communities	Practical demonstrations	4	-	-
3	Presentation to preschool communities	Practical demonstrations	4	-	-
4	Presentation to preschool communities	Practical demonstrations	4	-	-
5	Scheduling, detailing and managing trips in school groups I-IV	Practical demonstrations	4	-	-
6	Presentation to school groups grades I-IV	CBL session	4	-	-
7	Presentation to school groups grades I-IV	Practical demonstrations	4	-I	-
8	Scheduling, detailing and management of trips in groups of students grades V-VIII	CBL session	4	-	-
9	Presentation to school groups V-VIII	Practical demonstrations	4	-	-
10	Presentation to school groups V-VIII	Practical demonstrations	4	-	-
11	Scheduling, detailing and managing travel in college level communities	Practical demonstrations	4	-	-
12	Presentation to community at the college level communities	Practical demonstrations	4	-	-
13	Scheduling, detailing and managing travel in communities with special needs	Practical demonstrations	4	-	-
14	Presentation to communities with special needs	Practical demonstrations	4	-	-

Bibliography

Tohati Adrian. Elements of community dentistry Curs Lito UMF Tg.Mures 2018
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11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

Notions and abilities accumulated during theoretical and practical activities complete general notions of epidemiology and research and help improve community oral health.

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities	Practical activity, tests answers	Practical activity CBL	15
- lecture	TBL	Single/multiple choice test	15
Final evaluation			
- practical final exam	The accuracy of performing practical procedures	Practical procedures	20
- theoretical final exam	Notions accumulated through individual study and the ability to synthesize problems	Single/multiple choice examination	50
Minimal performance standards: To be able to understand the main ideas of a text or audio message, to answer simple questions based on them, using a satisfactory vocabulary and without major mistakes at the level of speech organization and the use of grammatical structures necessary for communication, to know certain terms specific to the field. Correct answers to at least 50% of the questions.			

13. Must seen clinical situation list

-

14. Clinical / practical abilities

-

15. Appointment timetable (for students)

Șef l dr Tohati Adrian-Roland	vineri 17-18

Head of departament | Course coordinator | Practical activities coordinator(s)

MINISTERUL EDUCAȚIEI ȘI CERCETĂRII
ROMÂNIA
UNIVERSITATEA DE MEDICINĂ, FARMACIE, ȘTIINȚE ȘI TEHNOLOGIE „GEORGE EMIL PALADE" DIN TÂRGU MUREȘ

Syllabus

academic year: 2025 - 2026

1. Data regarding the program

1.1 Higher education institution: 'George Emil Palade' University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș
1.2 Facultaty of: Dental medicine
1.3 Department: MD2
1.4 Field of study: Health, level of regulation: sectorial
1.5 Cycle of study: licence
1.6 Program of study: Dental medicine

2. Data regarding the discipline

2.1 Name of discipline: Annual specialty practice			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Prof dr Suciu Mircea			
2.2 Course coordinator: -			
2.3 Practical activities coordinator(s): Conf dr Bechir Edwin-Sever			
2.4 Year of study: VI	2.5 Semester: 2	2.6 Type of evaluation: C	2.7 Type of discipline formative category: SS status: Obl

3. Total estimated time (hours per semester of didactic activities)

3.1 Hours per week:	3.2 lecture:	3.3 practical activities:
3.4 Total hours in curriculum:	3.2 lectures:	3.6 practical activities:
3.7 Distribution of time pool		
- study of books, lecture materials, bibliography, notes		
- supplemental documentation at the library, from specialized information portals and in the field		
- preparation for seminaries / laboratories, homework, reports, portfolios and essays		
- tutorial activities		
- examinations		
- other activities		
3.8 Total hours of individual study		
3.9 Total hours		
3.10 Credits		

4. Prerequisites (where applicable)

4.1 curricular:
4.2 competency:

5. Conditions

5.1 for lectures: -
5.2 for practical activities:

6. Correlation of the discipline with ESCO (European Skills, Competences, Qualifications and Occupations)

7. Objectives of the discipline

7.1 General objective:
7.2 Specific objectives:

8. Learning outcomes

8.1 Knowledge:
8.2 Skills:
8.3 Responsibility and autonomy:

9. Specific competencies acquired

9.1 professional competencies:
9.2 transversal competencies:
9.3 related to the study program: Disease state identification and accurately diagnosing dental condition(s). Conservative treatment of dento-periodontal structures. Diagnosis and interceptive treatment of dentomaxillary anomalies. Prosthetic restoration of dental arches. Diagnosis,evolution and clinical examination of patients with maxillofacial surgical conditions. Managing the theoretical and legislative bases of the health care systems operating in Romania, as well as the managerial ones regarding the dental offices.

10.1 Content of practice, semester 2

No	Subject	Teaching methods	Hours	Observations	ICS correlation
Bibliography					

11. Correlations between the contents of the discipline and the expectations of the community representatives, professional associations and representative employers in the domain

12. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Percent of final grade
Evaluation during the semester			
- practical activities			0
- lecture	-	-	0
Final evaluation			
- practical final exam			0
- theoretical final exam			0
Minimal performance standards:			

15. Appointment timetable (for students)

Prof dr Suciu Mircea	
Conf dr Bechir Edwin-Sever	

Head of departament | Course coordinator | Practical activities coordinator(s)