

List of course descriptions – DENTISTRY

1. Compulsory subjects

AI-assisted learning strategies and limits of AI applications (Assoc.Prof. Thurzo,MD)

Anatomy 1 (Prof. Polák, MD, PhD.)

Anatomy 2 (Prof. Polák, MD, PhD.)

Biochemistry (Prof. Turecký, MD, CSc.)

Biology, Genetics and Regenerative Medicine 1 (Prof. Repiská, RNDr., PhD., MPH.)

Biology, Genetics and Regenerative Medicine 2 (Prof. Repiská, RNDr., PhD., MPH.)

Chemistry (Assoc. Prof. Muchová, RNDr., PhD.)

Cytology, Histology and Embryology (Prof. Varga, RNDr., PhD., PhD.)

Dental Practice Management, AI, Cybersecurity and Forensic Aspects (doc.MUDr.Thurzo,PhD.,MPH)

Dental materials, instruments and simulations 1 (MUDr. Csicsayová CSc., MDDr.Lifková. PhD)

Dental materials, instruments and simulations 2 (MUDr. Csicsayová CSc., MDDr.Lifková. PhD)

Dental materials, instruments and simulations 3 (MUDr. Csicsayová CSc., MDDr.Lifková. PhD)

Dental materials, instruments and simulations 4 (MUDr. Csicsayová CSc., MDDr.Lifková. PhD)

Dermatovenereology (Prof. Šimaljaková, MD, PhD., MPH, MHA)

Digital Technologies and 3D Printing in Dentistry (Assoc. Prof. Thurzo, MD, PhD., MPH, MHA.)

Diploma Thesis 1 / Final Professional Internship 1 (Prof. Stanko, MD, PhD.; Lifková, DMD, PhD.)

Diploma Thesis 2 / Final Professional Internship 2 (Prof. Stanko, MD, PhD.; Lifková, DMD, PhD.)

Diploma Thesis 3 / Final Professional Internship 3 (Prof. Stanko, MD, PhD.; Lifková, DMD, PhD.)

Diploma Thesis 4 / Final Professional Internship 4 (Prof. Stanko, MD, PhD.; Lifková, DMD, PhD.)

Diploma Thesis 5 / Final Professional Internship 5 (Prof. Stanko, MD, PhD.; Lifková, DMD, PhD.)

Diploma Thesis 6 / Final Professional Internship 6 (Prof. Stanko, MD, PhD.; Lifková, DMD, PhD.)

First Aid (Assoc. Prof. Záhorec, MD, CSc.)

Fundamentals of Clinical Medicine, Ethics and Communication (Hnilicová, MD, PhD.)

General and Dental Radiology (Prof. Lehotská, MD, PhD.; Javorka, MD, PhD.)

General Anesthesiology and Anesthetics and Sedatives in Dentistry (Assoc. Prof. Záhorec, MD, CSc.)

General Pathology and Pathophysiology (Prof. Šimko, MD, CSc.)

General psychology, psychopathology, neuropathology and fundamentals of communication
(Assoc. Prof. Izáková, MD, PhD.)

General Surgery 1 (Prof. Durdík, MD, PhD., MHA, MPH, Dr. h. c.)

General Surgery 2 (Prof. Durdík, MD, PhD., MHA, MPH, Dr. h. c.)

Gnathology and Basics of Prosthetics (occlusion and jaw function) (Prof. Stanko, MD, PhD.; Lifková, PhD.)

Immunology (Assoc. Prof. Imrich, MD, DrSc.)

Internal Medicine and Pediatrics 1 (Assoc. Prof. Sabaka, MD, PhD.; Assoc. Prof. Dallos, MD, PhD.)

Internal Medicine and Pediatrics 2 (Assoc. Prof. Sabaka, MD, PhD.; Assoc. Prof. Dallos, MD, PhD.)

Medical Microbiology (Assoc. Prof. Liptáková, PhD.)

Oral Implantology (Prof. Hirjak, MD, PhD.)

Orthodontics 1 (Assoc. Prof. Thurzo, MD, PhD., MPH, MHA.)

Orthodontics 2 (Assoc. Prof. Thurzo, MD, PhD., MPH, MHA.)

Otorhinolaryngology – Head and Neck Surgery (Prof. Tedla, MD, PhD., MPH.)

Pathological anatomy (Prof. Babál, MD, PhD.)

Pediatric Dentistry (Nováková, MD, PhD.)

Periodontology 1 (Edelstein, MD, PhD.)

Periodontology 2 (Edelstein, MD, PhD.)

Periodontology 3 (Edelstein, MD, PhD.)

Pharmacology (Prof. Kyselovič, PharmDr., CSc.)

Physiology and Physics 1 (Prof. Babinská, MD, PhD.)

Physiology and Physics 2 (Prof. Babinská, MD, PhD.)

Physiotherapy (Slezáková, MD, PhD.)

Preventive Medicine, Hygiene and Dental Public Health

(Prof. Bražínová, MD, PhD., MPH; Prof. Argalášová, MD, PhD., MPH.)

Professionalism, Ethics and Legislation (Prof. Števček, JUDr., DrSc.)

Prosthetic Dentistry 1 (Prof. Stanko, MD, PhD.; Ližková, DMD, PhD.)

Prosthetic Dentistry 2 (Prof. Stanko, MD, PhD.; Ližková, DMD, PhD.)

Prosthetic Dentistry and Orthodontics (Assoc. Prof. Thurzo, MD, PhD., MPH, Ližková, DMD, PhD.)

Regenerative Dentistry (Assoc. Prof. Thurzo, MD, PhD., MPH, Assoc. Prof. Danišovič, RNDr., PhD.)

Restorative Dentistry 1 (Novák, MD, PhD.)

Restorative Dentistry 2 (Novák, MD, PhD.)

Restorative Dentistry 3 (Novák, MD, PhD.)

Restorative Dentistry 4 (Novák, MD, PhD.; Matajs, DMD, PhD.)

Special Orofacial Pathological Anatomy (Prof. Babál, MD, PhD.; Prof. Stanko, MD, PhD.)

Special Surgery: Maxillofacial Surgery (Assoc. Prof. Czakó, MD, PhD.)

Special Surgery: Oral 1 (Prof. Hirjak, MD, PhD.)

Special Surgery: Oral 2 (Prof. Hirjak, MD, PhD.)

Special Surgery: Oral 3 (Prof. Hirjak, MD, PhD.)

Special Surgery: Oral and Maxillofacial Surgery (Assoc. Prof. Czakó, MD, PhD.)

Therapeutic Dentistry 1 (Novák, MD, PhD.)

Therapeutic Dentistry 2 (Prof. Stanko, MD, PhD.)

2. Compulsory practice

Clinical practice – assistance and preventive dentistry (Prof. Stanko, MD, PhD.)

Clinical practice – dental care within the framework of interprofessional coop. and assistance

(Prof. Stanko, MD, PhD.; Assoc. Prof. Thurzo, MD, PhD., MPH, MHA.)

Clinical practice – gerodontology and social aspects of dental care (Prof. Stanko, MD, PhD.)

Clinical practice – interprofessional collaboration and dental hygiene (Prof. Stanko, MD, PhD.)

Summer mandatory dental practice 1 – assistance (Prof.Stanko,MD, PhD.;Prof. Thurzo, MD,PhD.)

Summer mandatory dental practice 2 – social aspects of dental care &assist. (Prof.Stanko,PhD.)

Summer mandatory dental practice 3 – lab. & pedo.or ortho.practice (Assoc.Prof.Thurzo, MD,PhD.)

Summer mandatory dental practice 4 – interdisciplinary assistance (Assoc. Prof. Thurzo, MD, PhD.)

3. Compulsory optional subjects

AI Robotics in Orthodontics (Assoc. Prof. Thurzo, MD, PhD., MPH, MHA.)

Endodontics 1 (Matajs, DMD, PhD.; Kováč, MD, Mgr., PhD., MPH.)

Endodontics 2 (Kováč, MD, Mgr., PhD., MPH.)

Forensic Medicine (Prof. Šidlo, MD, CSc., MPH.)

Gynecology and Obstetrics for Dentistry (Assoc. Prof. Krištúfková, MD, PhD.)

Introduction to Orthognathic Surgery (Prof. Hirjak, MD, PhD.)

Latin Medical Terminology 1 (Hamar, PhDr., PhD.)

Latin Medical Terminology 2 (Hamar, PhDr., PhD.)

Microscopic Structure and Development of the Orofacial Region (Prof. Varga, RNDr., PhD., PhD.)

Microvascular Propaedeutics (Assoc. Prof. Czakó, MD, PhD.)

Neurology for Dentistry (Prof. Turčáni, MD, PhD.)

Ophthalmology (Assoc. Prof. Krásnik, MD, PhD.)

Physical Education 1 (Važan, PaedDr., PhD.)

Physical Education 2 (Važan, PaedDr., PhD.)

Physical Education 3 (Važan, PaedDr., PhD.)

Physical Education 4 (Važan, PaedDr., PhD.)

Physical Education 5 (Važan, PaedDr., PhD.)

Physical Education 6 (Važan, PaedDr., PhD.)

Physical Education 7 (Važan, PaedDr., PhD.)

Physical Education 8 (Važan, PaedDr., PhD.)

Professional Communication in a Foreign Language 1 (Hamar, PhDr., PhD.)

Professional Communication in a Foreign Language 2 (Hamar, PhDr., PhD.)

Professional Communication in a Foreign Language 3 (Hamar, PhDr., PhD.)

Professional Communication in a Foreign Language 4 (Hamar, PhDr., PhD.)

Temporomandibular Joint Diseases (Prof. Hirjak, MD, PhD.)

Topographic Anatomy of the Head and Neck (Prof. Polák, MD, PhD.)

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: AI-assisted learning strategies and limits of artificial intelligence applications
Type, scope and method of educational activities: <i>Lectures/consultations: 6 hours/semester</i> <i>Practical classes/seminars: 6 hours/semester</i> <i>Independent study: 38 hours/semester</i> Mode of delivery: in-person teaching + independent study; in exceptional cases blended (in-person + distance). If distance delivery is exceptionally used, sessions are always synchronous. In-person contact hours: 12 hours (workshop blocks and practical exercises) Planned schedule of contact teaching: 2 blocks × (2 h lecture + 4 h practical)	
Number of earned credits: 2	
Recommended semester/trimester of the study: 1st Winter semester (Year 1)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None.	
Grading policy: ● Attendance: at least 80% at practical classes (workshops are hands-on; attendance is monitored). ● Continuous assessment (total 40 points): ○ P1: Patient-oriented video presentation (2–3 min) with a prompt log and reflection on AI limits (20 points). ○ P2: EBM mini-review of a clinical question (PICO, search record, critical appraisal) (20 points). ● Final examination (total 60 points): ○ Electronic part (MCQs + short-answer questions): 30 points — minimum 80% in this part, ○ Practical/demonstration part (live prompting + safe settings + interpretation): 30 points — minimum 80% in this part. ● Grading (percentage of the overall 100 points; blocking minimum of 80% must be achieved in both parts of the exam):	

- **A:** 96–100%, **B:** 92–95%, **C:** 88–91%, **D:** 84–87%, **E:** 80–83%, **FX:** < 80% or failure to meet blocking minima.

Courses objectives:

Graduates of the course will be able to use LLMs to self-assess and understand their own predispositions for optimal learning approaches (strategies) — identifying weaknesses and strengths and selecting strategies accordingly. They will be able to study effectively and work through various problems using LLMs and learn them with AI support.

*They will **know** the possibilities and limits of LLMs/generative tools in medicine, **understand** principles of safe and ethical use in learning and patient communication, and **be able to** design, produce and critically defend an AI-supported learning or patient-communication output with EBM support and an explicit description of limitations.*

How the graduate learns to learn better (with AI)

Learning goals → plan → practice → feedback → reflection → plan update.

Planning and metacognition

The student uses AI to create a personal learning plan (SMART goals, weekly milestones, "exam wrappers" after each exam).

*AI proposes topic decomposition into mini-blocks (concept map, links) and schedules **spaced repetition**.*

*After each block, the student completes a **calibration card**: what I know, how confident I am (0–100%), what I must verify.*

Retrieval practice (memory first)

AI generates tailored quizzes: MCQs, short answers, "explain like I'm 12", clinical mini-scenarios.

*The student answers **first without AI**, then compares with the key and receives **immediate feedback**.*

*From errors, AI prepares a **remedial set** (follow-up questions targeted to weak spots).*

Self-explanation & Feynman

*The student asks AI for **Socratic questioning** ("Ask step by step and don't reveal the solution until I answer").*

*They then generate a **patient-friendly** (CEFR A2) mini-leaflet or video script to check genuine understanding.*

Dual coding and production of outputs

*AI helps condense the topic into a **diagram/table** and a **short video** (storyboard, captions).*

*Outputs are archived in a **personal portfolio** (text, slides, video) for later reuse and iteration.*

Automation of revision

AI exports key facts to **flashcards** (e.g., Anki format) and plans reviews based on performance.

How the graduate develops critical thinking (with AI)

Principle: never treat AI as authority. Treat it as a **sparring partner**; always verify evidence.

Triangulation of evidence (EBM workflow)

AI helps formulate **PICO** and a search strategy.

The student gathers **3–5 independent sources** (guidelines, systematic reviews, RCTs) and personally checks:

study design, sample size, **effect sizes** (RR, OR), confidence intervals;

risks of bias (selection, measurement, publication), confounders.

Output: a critical summary + what remains unknown/what would change the conclusion.

"CRITIC" micro-routine for any claim

Claim (what is asserted?), **Reason** (what is it based on?), **Identify gaps** (what's missing?),

Test (how could I falsify it?), **Implications** (so what?), **Calibration** (how confident am I?).

Applied to one's own texts **and** AI outputs.

Red-teaming & hallucinations

Prompt to AI: "**Give five reasons why your answer may be wrong and suggest how to verify each.**"

Number rule: every number/percentage → verify in source; every guideline → check **date and jurisdiction**.

AI-off sprints

Part of the work is done **without AI** (initial outline), then compared with AI — reducing **automation bias**.

Argument discipline

Every claim has a **source**; every procedure has **alternatives** and **reasons for choice**.

Patient materials undergo **peer review** by a colleague or the instructor.

Knowledge:

- Fundamentals of LLMs (tokens, context, hallucinations, bias, practical interpretability).
- Prompting strategies (role, style, constraints, control questions, source verification).
- EBM framework (PICO, searching, critical appraisal; overview of GRADE/CONSORT-AI).
- Rules for safe AI use in education and healthcare (data protection, ethics, informed consent for patient materials).

Skills:

Design and iterate prompts for varied didactic goals (summary, explanation, comparison, patient-friendly outputs).

Translate complex dental concepts into accessible **patient** outputs (text, infographic/layout, video script).

Create a short patient-education video (script, storyboard, recording, captions) with correct AI disclosure

Formulate a clinical question (PICO), perform systematic searching and check relevance and quality.

Introduce internal control mechanisms (double-check, sourcing, red-teaming of own outputs).

Syllabus (course structure):

Two-block format: 2 × (3 h lecture + 3 h practical)

(distance self-study with micro-tasks in the LMS between blocks)

Block 1 (3 h lecture + 3 h practical)

Lecture (3 h):

- *Why AI for learning: opportunities vs limits; safety and ethics for LLMs (privacy, disclosure, bias, hallucinations).*
- *Basics of prompting strategies: CHAIN / CRITIC / REFLECT, verification, citing sources.*
- *Introduction to EBM with AI: PICO, search design, study types and rapid summaries.*

Practical (3 h):

- *Practical 1: designing and iterating prompts to explain/compare concepts; "Socratic tutor".*
- *Practical 2: confidence calibration and control questions; detecting hallucinations and errors.*
- *Practical 3: formulating PICO and building a search strategy; start of the **mini-review** (selecting 3–5 sources).*

Block 2 (3 h lecture + 3 h practical)

Lecture (3 h):

- *Critical appraisal: risk of bias, effect sizes, confidence intervals, generalisability.*
- *Patient **plain-language** output: linguistic/cultural appropriateness, the teach-back principle.*
- *Creating a short video: script, storyboard, recording, captions; ethical rules and AI disclosure.*

Practical (3 h):

- *Practical 4: completing and defending the **mini-review** (EBM triangulation + limits and risks).*
- *Practical 5: producing a 2–3 minute patient-education video (script → recording → captions) + reflection on AI limits.*
- *Final **red-team check**: peer review of outputs, corrections, and exporting key facts to flashcards.*

Recommended literature:

Six Strategies for Effective Learning — concise posters and short explanations (spacing, retrieval practice, dual coding, etc.). Ideal for immediate improvement of study habits and preparation for retrieval-based quizzes. *The Learning Scientists*.

BMJ: How to Read a Paper — a series of short chapters/articles on how to read studies; suitable for EBM basics (rapid reading, study types, where to look for weaknesses). Perfect for the mini-review and defence of claims. *bmj.com*

Implications of Large Language Models for Clinical Practice (2024) — a concise, open clinical primer on LLMs: benefits, limits, ethical issues and practical implications for medicine. Fits the "limits of AI" segment of the course.

Thurzo, A. Provable AI Ethics and Explainability in Medical and Educational AI Agents: Trustworthy Ethical Firewall. *Electronics* 2025, 14, 1294.
<https://doi.org/10.3390/electronics14071294>

Thurzo, A., Varga, I. Revisiting the Role of Review Articles in the Age of AI-Agents: Integrating AI-Reasoning and AI-Synthesis Reshaping the Future of Scientific Publishing. *Bratisl. Med. J.* (2025). <https://doi.org/10.1007/s44411-025-00106-8>

Thurzo, A. How is AI Transforming Medical Research, Education and Practice? *Bratisl. Med. J.* (2025). <https://doi.org/10.1007/s44411-025-00063-2>

Thurzo, A.; Thurzo, V. Embedding Fear in Medical AI: A Risk-Averse Framework for Safety and Ethics. *AI* 2025, 6, 101. <https://doi.org/10.3390/ai6050101>

The language needed to pass the course: *English*

Another course information:

BYOD: bring a laptop with headphones and microphone; access to the university LMS and approved AI tools is required.

Data security: do not use real patient identifiers; **AI disclosure is mandatory** for all outputs.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers: assoc. prof. MUDr. Andrej Thurzo, PhD., MPH, MHA

Lectures: assoc. prof. MUDr. Andrej Thurzo, PhD., MPH, MHA

Practicals: assoc. prof. MUDr. Andrej Thurzo, PhD., MPH, MHA

Last update: 24.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course code:	Course title: Anatomy 1
Type, scope and method of educational activities: Lectures: 48 hours/semester Practicals/internships: 36 hours/semester Self-study: 16 hours/semester Form of educational activities: combined	
Number of earned credits: 4	
Recommended semester/trimester of study: 1 st semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses:	
Grading policy: - 100% participation in the practical exercises. - Passing 1 written and 2 practical exams (thorax, abdomen). - Test with at least 60% points - Test evaluation: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less - Practical exam evaluation: A: excellent, B: very good, C: good, D: satisfactory, E: sufficiently, Fx: failed. Final mark of the semester is determined from the average of received scores.	
Courses objectives: Knowledge: - To be familiar with the architecture and structures of the human body (in general). - Knowing different parts of the locomotor system - Understanding and knowing the morphological structure of the heart, arteries and veins of the systemic and pulmonary circulations. - Possessing knowledge of the basic concepts and structures of the central and peripheral nervous systems. - Learning and studying the structures and organs of the respiratory system. - Understanding and identifying the structures and organs of the digestive system. - Acquiring knowledge about the organs of the urinary and genital systems. - Gaining knowledge about the projections of organs onto the thoracic and abdominal walls. Skills: - To understand and handle the anatomical terminology - Analyzing knowledge gained from the morphological and functional point of view. - Practical usage of theoretical information in the dissection of the thorax and abdomen. - Practical usage of theoretical information in dissection of muscles.	
Syllabus (course structure):	

Lectures:

- Introduction into anatomy (anatomical positions, planes and directions).
- General anatomy of bones, joints and muscles, fasciae and fascial compartments.
- Cardiovascular system – heart, arteries, veins
- Nervous system – basic concepts
- Respiratory system – nasal cavity, paranasal sinuses, pharynx, larynx, trachea, bronchi, lungs, pleura.
- Digestive system – basic concepts, oral cavity, teeth, salivary glands, esophagus, stomach, small and large intestine, liver, biliary ducts, pancreas, peritoneum.
- Urinary system.
- Female and male genital organs.
- Radiological examination methods of thorax and abdomen.

Practicals:

- Vertebrae, ribs, sternum.
- Joints of the vertebral column and thorax.
- Muscles and topographical regions of the thorax, abdomen and back.
- Vessels and nerves of the thoracic and abdominal walls and the back.
- Mammary gland, intercostal spaces.
- Pleurae, trachea, bronchi, lungs, mediastinum, heart, pericardium.
- Vessels, nerves, and lymph nodes of the thorax.
- inguinal canal.
- Organs in the abdominal cavity and pelvis.
- Peritoneum and spaces in the abdominal cavity.
- Vessels, nerves, and lymph nodes of the abdominal cavity and pelvis.
- External genital organs, perineum, pelvis.

Recommended literature:

Platzer, W. Color Atlas of Human Anatomy. Vol.1. Locomotor System. 8th ed. Stuttgart; New York: Georg Thieme Verlag, 2022. 472 p. ISBN 3132424439

Fritsch, H., Kuehnel, W. Color Atlas of Human Anatomy. Vol. 2. Internal organs. 7th ed. Stuttgart; New York: Georg Thieme Verlag, 2022. 480 p. ISBN 9783132424487

Kahle, W., Frotscher M. Color Atlas of Human Anatomy. Vol. 3. Nervous System and Sensory Organs. 8th ed. Stuttgart; New York: Georg Thieme Verlag, 2022. 426p. ISBN 9783132424517

Netter, F. H. Netter Atlas of Human Anatomy: Classic Regional Approach. 8th ed. Philadelphia: Saunders - Elsevier, 2022. 712 p. ISBN: 0323760236

Paulsen, F., Waschke, J. Sobotta Atlas of Anatomy. 17th ed., English/Latin. Elsevier, 2023. 1588p. ISBN: 9780702067648

Hansen J. T. Netter's Clinical Anatomy. 6 th ed. Philadelphia: Saunders – Elsevier, 2026. 672p. ISBN: 9780443378553					
The language needed to pass the course: English					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
Teachers:					
Doc. MUDr. A. Holomáňová, CSc., MUDr. H. El Falougy, PhD., MUDr. Z. Haviarová, PhD., MUDr. T. Barczy, PhD., MPH, RNDr. P. Lukáčiková, PhD., MUDr. A. Mifkovič, PhD., MUDr. S. Malakhov, PhD., Mgr. V. Zohdi, PhD., Mgr. T. Havránek, PhD.					
Last change: 27.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course code:	Course title: Anatomy 2
Type, range and form of educational activities: Lectures: 48 hours/semester Practicals/internships: 60 hours/semester Self-study: 65 hours/semester Form of educational activities: combined	
Number of earned credits: 7	
Recommended semester/trimester of study: 2 nd semester	
Study degree: 1 st + 2 nd level	
Prerequisite courses: Anatomy 1	
Grading policy: - 100% participation in the practical exercises. - Passing 1 written and 2 practical exams (upper limb and lower limb, head and neck). - Test with at least 60% points - Test evaluation: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less - Practical exam evaluation: A: excellent, B: very good, C: good, D: satisfactory, E: sufficiently, Fx: failed. Final exam: - Practical part - Oral part (3 questions), the student has 50 minutes to prepare. - The student must first pass the practical part successfully before being allowed to take the oral examination. - Exam evaluation: A: excellent, B: very good, C: good, D: satisfactory, E: sufficiently, Fx: failed.	
Courses objectives: Knowledge: - Acquiring knowledge about the endocrine glands. - Learning and studying the structures and organs of the lymphatic system. - Gaining knowledge of the structures and organs of the central and autonomic nervous systems. - Obtaining knowledge of the regions, organs, nerves, and vessels of the head and neck. - Possessing knowledge of the skeleton and muscles of the head and neck. - Learning and studying the anatomical structures and topographical-anatomical regions of the upper and lower limbs. - Acquiring knowledge about sensory organs and the skin. Skills:	

- Understanding and using anatomical terminology.
- Analyzing the acquired knowledge from morphological and clinical perspectives.
- Applying theoretical knowledge practically during dissection exercises.
- Identifying and describing radiological images depicting anatomical structures.

Syllabus (course structure):

Lectures:

- Lymphatic system.
- Endocrine glands.
- Spinal cord.
- Spinal nerves.
- Brain stem.
- Cranial nerves.
- Cerebellum.
- Diencephalon.
- Telencephalon.
- Autonomic nervous system.
- Sensory organs.
- Skin and its appendages.
- Radiological examination methods of the head and neck.

Practicals:

- Skull – viscerocranium.
- Skull – neurocranium.
- Joints of the skull.
- Muscles and topographical regions of the head and neck.
- Skeleton and joints of the upper limb.
- Skeleton and joints of the lower limb.
- Muscles and topographical regions of the upper and lower limbs.

Dissection:

Head and Neck: Surface landmarks of the head and neck. Dissection of the superficial structures. Dissection of the parotidomasseteric region. Dissection of the facial artery and vein. Dissection of the submandibular triangle. Dissection of the carotid triangle.

Dissection of the frontal region, infraorbital, and mental regions. Dissection of the structures in the lateral cervical region. Dissection of the occipital and posterior cervical regions.

Upper Limb: Surface landmarks and regions of the upper limb. Dissection of the deltopectoral triangle. Dissection of the structures in the axillary fossa. Dissection of the structures on the ventral and dorsal sides of the upper limb.

Lower Limb: Surface landmarks and regions of the lower limb. Dissection of the structures on the ventral and dorsal sides of the lower limb.

Central Nervous System: Macroscopic anatomy of the spinal cord. Structure of the spinal nerve. Emergence of cranial nerves from the cranial cavity. Meninges of the brain. Sinuses of the dura mater. Vascular supply of the brain. Origins of

cranial nerves. External morphology of the cerebral hemispheres (gyrification). Brainstem. Cerebellum. Fourth ventricle. Diencephalon. Third ventricle. Basal ganglia. White matter of the cerebrum. Lateral ventricles.					
Recommended literature: Platzer, W. Color Atlas of Human Anatomy. Vol.1. Locomotor System. 8th ed. Stuttgart; New York: Georg Thieme Verlag, 2022. 472 p. ISBN 3132424439 Fritsch, H., Kuehnel, W. Color Atlas of Human Anatomy. Vol. 2. Internal organs. 7th ed. Stuttgart; New York: Georg Thieme Verlag, 2022. 480 p. ISBN 9783132424487 Kahle, W., Frotscher M. Color Atlas of Human Anatomy. Vol. 3. Nervous System and Sensory Organs. 8th ed. Stuttgart; New York: Georg Thieme Verlag, 2022. 426p. ISBN 9783132424517 Netter, F. H. Netter Atlas of Human Anatomy: Classic Regional Approach. 8th ed. Philadelphia: Saunders - Elsevier, 2022. 712 p. ISBN: 0323760236 Paulsen, F., Waschke, J. Sobotta Atlas of Anatomy. 17th ed., English/Latin. Elsevier, 2023. 1588p. ISBN: 9780702067648 Hansen J. T. Netter's Clinical Anatomy. 6th ed. Philadelphia: Saunders – Elsevier, 2026. 672p. ISBN: 9780443378553					
The language needed to pass the course: English					
Another course information:					
Grading history: Number of students:					
A	B	C	D	E	FX
Teachers: Doc. MUDr. A. Holomáňová, CSc., MUDr. H. El Falougy, PhD., MUDr. Z. Haviarová, PhD., MUDr. T. Barczy, PhD., MPH, RNDr. P. Lukáčiková, PhD., MUDr. A. Mifkovič, PhD., MUDr. S. Malakhov, PhD., Mgr. V. Zohdi, PhD., Mgr. T. Havránek, PhD.					
Last change: 27.10.2027					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Biochemistry
Type, scope and method of educational activities: Oral lectures: 24 hours/semester Practical: 36 hours/semester Individual study: 15 hours/semester Method of education: on-site learning	
Number of earned credits: 3	
Recommended semester/trimester of the study: 3rd semester (winter), 2nd year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Chemistry</i>	
Grading policy: Participation in lectures and practical exercises/seminars, submission of protocols from the practical parts. Subsequently, the student takes a final exam. <u>Final exam:</u> consists of a written part (get more than 70%) and an oral part, where the student draws 2 questions (metabolism, functional biochemistry and oral cavity biochemistry) Test rating: A: 94-100%, B: 89-93%, C: 83-88%, D: 77-82%, E: 71-76%, Fx: 70% and less	
Courses objectives: By completing the course, the student will gain the knowledge, understanding and skills necessary to understand biochemical processes in the human body, with particular emphasis on the oral cavity and related tissues. <u>Knowledge:</u> After successfully completing the course, the student will be able to: · list and describe the basic metabolic processes in the cells of the human body as a basis for understanding the function of organs, · explain the biochemical foundations of the function of tissues and organs of the human body, · clarify the molecular mechanisms of organ function regulation, · characterize biochemical processes in the oral cavity and explain the pathobiochemical mechanisms affecting the function of teeth and oral tissues. <u>Skills:</u> After successfully completing the course, the student will be able to: · use the acquired theoretical knowledge in performing basic laboratory examinations using dry chemistry methods, · analyze the functioning of tissues and organs at the molecular level, · identify and interpret changes in biochemical processes in pathological conditions, · compare and explain the molecular mechanisms of action of drugs based on knowledge of biochemical principles, · integrate knowledge from biochemistry with knowledge from other preclinical disciplines, · apply the acquired knowledge in understanding and solving problems in the field of dentistry, · evaluate the importance of biochemical processes in the etiopathogenesis of oral cavity diseases, · develop the ability to formulate professional conclusions based on biochemical data.	

Syllabus (course structure):

Utilization of the proton gradient in cellular energy supplying. Metabolic transformations of pyruvate. Citrate cycle, energy balance and importance. Glycolysis, utilization of intermediates. Glycolysis under anaerobic and aerobic conditions, energy balance of glycolysis and its regulation. Glycogen metabolism. Gluconeogenesis, its regulation. Cori cycle. Glycemia, regulation of glycemia. Basic lipid metabolism. Oxidation of free fatty acids. Importance of β -oxidation for cellular energetics. Synthesis of free fatty acids and its regulation. Synthesis of triacylglycerols and glycerolphospholipids. Formation of ketone bodies, their utilization in the body, disorders of ketone body metabolism. Synthesis of basic types of lipoproteins and their transformations. Metabolism of amino acids. Detoxification of ammonia, ureagenesis. Metabolism of nucleotides. Purine nucleotide metabolism and its disorders - hyperuricemia. Uric acid as an antioxidant in the oral cavity. Gastrointestinal tract - digestion and absorption of nutrients. The role of salivary amylase in the oral phase of digestion. General endocrinology. Hypothalamic-pituitary system. Pancreatic hormones: insulin, glucagon. Oral glucose tolerance test (oGTT) - its essence and significance. Impaired glucose tolerance, diabetes mellitus. Adrenal cortex hormones - mechanism of action of cortisol and aldosterone. Biochemistry of connective tissue. Biochemistry of the nervous system in the regulation of metabolic and functional processes (ANS, CNS). Maintaining of constant internal environment, acid-base balance. Calcium and phosphate, their function, metabolism and significance for the hard tissues of the oral cavity. Calcitropic hormones. Saliva and water management in the body. Mechanism of action of ADH and AngII. Role of the kidneys in maintaining homeostasis and excretion of metabolic waste products. Blood plasma proteins, their metabolism, functions and disorders. Liver biochemistry. Synthesis and degradation of heme, bilirubin metabolism – hyperbilirubinemia. Using of serum enzyme activity determination in laboratory diagnostics. Oral biochemistry and pathobiochemistry. Biochemistry of hard tissues. Relationship between bone metabolism and blood calcium levels. Biochemistry of dental plaque and dental caries. Biochemistry of periodontal diseases.

Recommended literature:

Champe, Harvey: Biochemistry. J.B. Lippincott Company, the last edition

The language needed to pass the course: English

Another course information:**Grading history:**

Number of students:

A	B	C	D	E	FX	
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Teachers:

Lectures: **Associate Professor RNDr.** Monika Ďurfinová, PhD.; **Associate Professor Ing.** Mária Chomová, PhD.; **Professor RNDr.** Jana Muchová, PhD.; **Associate Professor M.D.** Viera Rendeková, CSc.; **Professor M.D.** Ladislav Turecký, CSc.; **Associate Professor RNDr.** Eva Uhlíková, CSc.; **Professor Ing.** Ingrid Žitňanová, PhD. Practicals: **Ing.** Lucia Laubertová, PhD.; **Mgr.** Lenka Nemcová; **Mgr.** Katarína Orešanská; **RNDr.** Zuzana Országhová, PhD.

Last update: 28.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Biology, Genetics and Regenerative Medicine 1
Type, scope and method of educational activities: Oral lectures: 24 hours/semester Practical: 24 hours/semester Individual study: 35 hours/semester Method of education: in-person teaching	
Number of earned credits: 3	
Recommended semester/trimester of the study: <i>uvádza sa odporúčaný semester štúdia</i> 1st semester (winter), 1st year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None.	
Grading policy: 100% attendance at the practicals Preparation of one seminar paper or poster. 2 written test – minimal 80% of correct answers Test evaluation: A: 97 - 100 %, B: 93 – 96 %, C: 89 – 92 %, D: 85 – 88 %, E: 80 – 84 %, Fx: 79 % or less The grade, in the case of a required retake test, will be determined from the average of the obtained scores. The final grade will be determined from the average of the obtained scores.	
Courses objectives: Knowledge: - molecules in cells and organisms - morphology, chemical composition, physiology, and functional organization of prokaryotic and eukaryotic cells - morphology, function, and biogenesis of cellular organelles - biomembranes, substance transport, extracellular vesicles, receptors, and intercellular communication - structure and function of nucleic acids; DNA replication, transcription, translation, regulation of protein synthesis, genetic code, genes of prokaryotic and eukaryotic cells, gene expression, DNA polymorphisms, and methods of their analysis - forms of entry and existence of foreign DNA in the cell - insertion sequences and transposons, antibiotic resistance (plasmids, vectors, biotechnologies, recombination techniques, significance and application of restriction endonucleases, gel electrophoresis)	

- acquisition and preparation of material for DNA analysis, isolation of nucleic acids
- overview of basic methods used in molecular genetics and their potential applications in dentistry, DNA amplification and sequencing
- cell reproduction (amitosis, mitosis, and meiosis) and the cell cycle, differences between spermiogenesis and oogenesis, disorders and their consequences
- cell death
- relationship between microorganisms and the host organism, oral microbiome, selected infections caused by prokaryotic and unicellular organisms, their survival strategies, and diagnostic possibilities
- characteristics, classification, genome, and reproduction of viruses; viral mutations and recombinations

Skills:

- mastery of microscopic techniques (light microscopy), preparation of native and simple fixed microscopic specimens
- *in vitro* cell culture
- use of selected molecular genetics methods – collection, incubation, and storage of biological material; DNA isolation from tissue; gel separation of DNA fragments; DNA quantification; DNA digestion; blotting; and DNA denaturation and renaturation

Syllabus (course structure):

Medical Biology as a part of medical sciences and its brief history. General characteristics and types of cells. Chemical composition of cells. The cell as the basic structural and functional unit (organelles – morphology, biogenesis, and functions under physiological and pathological conditions). Biomembranes – structure, general importance of the membrane principle, and substance transport. Intercellular spaces, receptors, and intercellular communication. Introduction to molecular biology and its brief history. Structure of DNA and RNA, denaturation and renaturation of DNA, DNA replication, transcription, translation, regulation of protein synthesis and post-translational modifications, genetic code, epigenetics, and alternative use of genetic information. Genes of prokaryotic and eukaryotic cells, insertion sequences and transposons, antibiotic resistance (plasmids, recombinant techniques, vectors). Methods of DNA analysis and their application in dentistry. Cell reproduction and the cell cycle. Cell death. Relationship between microorganisms and the host organism, the oral microbiome, selected oral infections caused by prokaryotic and unicellular organisms, and molecular-biological diagnostic possibilities. Viruses – genome, reproduction, mutations and recombinations, oncogenic viruses, and acutely transforming viruses. Prokaryotic cells – morphology and genome, parasexual processes in bacteria. CRISPR/Cas9 system.

Recommended literature:

Repiská V., Böhmer D., Danišovič L., Klimová D. Medical Biology and Molecular Genetics. First edition. Bratislava: Univerzita Komenského, 2020. - 306 s. ISBN 978-80-223-4984-0

Alberts B., Heald R., Johnson A. et al. Molecular biology of the cell. 7th edition. New

York: W. W. Norton & Company, 2022. – 1552 pp. ISBN 978-0393884821

The language needed to pass the course: *English*

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Lectures: prof. RNDr. Vanda Repiská, PhD., MPH., doc. RNDr. Ľuboš Danišovič, PhD., doc. Ing. Helena Gbelcová, Ph.D.

Practicals: : prof. RNDr. Vanda Repiská, PhD., MPH., doc. RNDr. Ľuboš Danišovič, PhD., doc. Ing. Helena Gbelcová, Ph.D., RNDr. Petra Priščáková, PhD., RNDr. Marcela Kuniaková, PhD., RNDr. Zuzana Varchulová-Nováková, PhD., RNDr. Andrea Pastoráková, PhD., MUDr. Martina Čulenová, PhD., RNDr. Ľubica Milošovičová, PhD., Mgr. Daniela Klimová, PhD., MUDr. Štefan Harsányi, PhD.

Last update: 27.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Biology, Genetics and Regenerative Medicine 2
Type, scope and method of educational activities: Oral lectures: 24 hours/semester Practical: 24 hours/semester Individual study: 85 hours/semester Method of education: in-person teaching	
Number of earned credits: 5	
Recommended semester/trimester of the study: <i>2nd semester (summer), 1st year</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Biology, Genetics and Regenerative Medicine 1	
Grading policy: 100% attendance at the practicals Preparation of one seminar paper or poster. 1 written test – minimal 80% of correct answers Test evaluation: A: 97 - 100 %, B: 93 – 96 %, C: 89 – 92 %, D: 85 – 88 %, E: 80 – 84 %, Fx: 79 % or less The grade, in the case of a required retake test, will be determined from the average of the obtained scores. Examination: written – minimum score of 80% required oral – 4 questions (cell biology, molecular biology and genetics, human genetics, regenerative medicine)	
Courses objectives: Knowledge: - chromosomal basis of heredity, chromosome structure, nomenclature, and identification techniques - organization of the human genome – types of DNA, gene structure, homeoboxes and homeodomains, DNA–histone complex - Human Genome Project and its significance - regulation and deregulation of the cell cycle - molecular basis of carcinogenesis, oncogenes, their functions in the organism, oncogene mutations, and their relationship to malignancy - tumor suppressor genes – their functions and types of mutations - biology of the most common oral cancers – squamous cell carcinoma, adenocarcinomas of the minor salivary glands, lymphomas, familial cancer occurrence - mutagenesis, classification and basic characteristics of mutagens, mutagen testing,	

DNA repair mechanisms

- syndromes of increased spontaneous chromosomal fragility
- malignant diseases associated with characteristic chromosomal rearrangements
- gene therapy and vectors used in gene therapy
- basic methods of human genetics (twin method, genealogical method, population genetics)
- monogenic diseases (autosomal dominant, codominant, and recessive inheritance; X-linked inheritance)
- multifactorial inheritance of quantitative and qualitative traits, normal variability, congenital developmental defects with multifactorial inheritance patterns
- classical and molecular cytogenetics (in interphase and mitosis)
- chromosomal aberrations in humans (numerical and structural), mechanisms of formation, frequencies, most common types, and recurrence risk
- genetic aspects of oro-maxillofacial development and the most common disorders
- teratogenesis – basic characteristics, mechanisms, and possibilities of differential diagnosis
- cells applied in regenerative medicine and tissue engineering
- scaffolds, biomaterials used for scaffold fabrication, cytotoxicity, and biocompatibility
- scaffold fabrication technologies (additive manufacturing)
- preparation and maturation of artificial tissues (bioreactors)
- immunoengineering

Skills:

ChatGPT povedal:

- ability to determine the contribution of hereditary and non-hereditary factors to the development of a studied trait
- construction of a standard pedigree
- application of the Hardy–Weinberg law
- cytogenetic examination in interphase (X and Y chromatin)
- cytogenetic examination in metaphase
- determination of the risk of the most common chromosomal aberrations based on their type or parental age, according to the course of meiosis
- determination of the risk of transmission of structural chromosomal aberrations
- evaluation of mutagen testing
- genetic analysis of cleft lip and palate

Syllabus (course structure):

The Human Genome Project and its significance. Chromosomal basis of heredity – chromosome structure, nomenclature, and identification techniques. Methods of classical and molecular cytogenetics with emphasis on their application in dentistry. Classification of genetically determined pathological conditions. Chromosomal aberrations. Dental aspects of syndromes caused by chromosomal aberrations. Oncogenesis – molecular basis of carcinogenesis – oncogenes and tumor suppressor

genes and their functions. Gene therapy. Epigenetics. Genetic basis of the regulation of oromaxillofacial development. Multifactorial and polygenic inheritance, pathological conditions with multifactorial inheritance, and congenital developmental defects. Threshold effect theory. Possibilities of prenatal diagnosis. Mutagenesis. Teratogenesis – basic characteristics, mechanism of formation, and possibilities of differential diagnosis. Introduction to regenerative medicine. Cells applied in regenerative medicine and tissue engineering. Scaffolds as cell carriers; natural, synthetic, and hybrid biomaterials used for scaffold fabrication. Testing of fundamental scaffold properties (cytotoxicity, biocompatibility, and biodegradability). Scaffold fabrication technologies (electrospinning, 3D printing, and bioprinting). Maturation of artificial tissues, bioreactors. Immunoengineering as a new discipline of regenerative medicine.

Recommended literature:

Repiská V., Böhmer D., Danišovič Ľ., Klimová D. Medical Biology and Molecular Genetics. First edition. Bratislava: Univerzita Komenského, 2020. - 306 s. ISBN 978-80-223-4984-0

Alberts B., Heald R., Johnson A. et al. Molecular biology of the cell. 7th edition. New York: W. W. Norton & Company, 2022. – 1552 pp. ISBN 978-0393884821

Cohn R., Scherer S., Hamosh A. Thompson & Thompson Genetics and Genomics in Medicine (Thompson and Thompson Genetics in Medicine). 9th edition. Philadelphia: Elsevier, 2023. – 580 pp. ISBN 978-0323547628

The language needed to pass the course: *English*

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Lectures: prof. RNDr. Vanda Repiská, PhD., MPH., doc. RNDr. Ľuboš Danišovič, PhD., docprof. RNDr. Vanda Repiská, PhD., MPH., doc. Ing. Helena Gbelcová, Ph.D., doc. RNDr. Ľuboš Danišovič, PhD., RNDr. Petra Priščáková, PhD., MUDr. Martina Čulenová, PhD., RNDr. Marcela Kuniaková, PhD., RNDr. Zuzana Varchulová-Nováková, PhD., RNDr. Andrea Pastoráková, PhD., Mgr. Daniela Klimová, PhD., RNDr. Ľubica Milošovičová, PhD., MUDr. Štefan Harsányi, PhD., MUDr. Lajos Gergely

Last update: 27.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Chemistry
Type, scope and method of educational activities: Oral lectures: 24 hours/semester Practical: 24 hours/semester Individual study: 27 hours/semester Method of education: presence	
Number of earned credits: 3	
Recommended semester of the study: 2nd. semester (summer), 1st year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None.	
Grading policy: 100% attendance at the lectures and at the practical education (seminars and laboratory practices) Evaluation of the course: 2 midterm written tests consisting of multiple choice as well as open questions. Points are summarized of both tests. Final grading of course: A: 94-100%, B: 89-93%, C: 83-88%, D: 77-82%, E: 71-76%, Fx: 70% and less.	
Courses objectives: By completing the course, the student will acquire the knowledge and skills necessary to understand the relationships between the structure, properties, and functions of biologically important compounds.	
<u>Knowledge:</u> After completing the course, the student: • is able to connect chemical and biochemical knowledge with physiological processes in the body, • understands the physiological functions of biogenic elements in the human organism, • comprehends the principles of kinetics and equilibrium of biochemical reactions, acid-base and redox processes, osmotic phenomena, and the principles of energy utilization in the cell, • knows and can explain the structure, properties, and biological functions of carbohydrates, lipids, proteins, and enzymes.	
<u>Skills:</u> After completing the course, the student: • is able to interpret chemical and biochemical reactions in the body, • acquires the ability to calculate basic characteristics of solutions (composition and osmolarity), interpret pH, and understand the role of buffer systems in assessing the acid-base balance of the organism, • can analyze the principles of regulation of enzymatic reactions and metabolic processes, • applies biochemical knowledge to explain physiological and pathological phenomena, particularly in the oral cavity,	

- is able to evaluate and correctly interpret results obtained from performing basic physico-chemical and biochemical methods used in laboratory and clinical practice.

Syllabus (course structure):

Biogenic elements in the organism and their physiological functions, chemical composition of the tooth. Disperse systems in relation to the organism; types of disperse systems. Colligative properties of solutions and the importance of osmotic pressure in the body. Calculations of composition and osmolarity of solutions. Kinetics and equilibrium of biochemical processes. Redox reactions and biological oxidations. The organism as a thermodynamic system - significance and transfer of free energy, entropy, and order in biological systems; energy rich compounds. Acids, bases, pH, buffer systems, acid-base balance, and maintenance of pH in the body. Structure and biochemically significant reactions of bioorganic compounds, toxicologically significant organic compounds; important intermediates of metabolism. Organic components of teeth and saliva, active substances in dental hygiene. Structure, properties, and biological functions of carbohydrates, biochemically important reactions of monosaccharides (oxidation-reduction, esterification, formation and significance of glucuronic acid). Polysaccharides - classification and structure, homopolysaccharides, heteropolysaccharides, glycoconjugates. Carbohydrates as a risk factor in dental caries; the effect of diet on tooth tissue quality. Structure, classification, and biological functions of simple and complex lipids and their derivatives. Biological membranes and the transport of substances across the membranes. Eicosanoids, steroids. Dental waxes. Structure, properties, and biochemically significant reactions of amino acids. Peptide bond, biologically important peptides and polypeptides. Structure, properties, and biological functions of proteins. Structural proteins, plasma proteins, blood coagulation system, immunoglobulins. Connective tissue proteins, non-collagenous proteins, and calcium-binding proteins. General characteristics of enzymes. Mechanism of action and kinetics of enzymatic reactions, enzyme specificities, role of coenzymes. Regulation of enzyme activity with or without changes in the number of enzyme molecules. Michaelis constant (K_M) and its practical significance. Principles and mechanisms of regulation of biochemical processes. Allosteric regulation in metabolism. Induction and repression of enzymes - their role in the regulation of cellular metabolism. Classification and nomenclature of enzymes. Enzymes in the oral cavity - their function and diagnostic importance. Vitamins as coenzymes - their role in metabolism. Calculations of enzyme activities.

Recommended literature:

Zuzana Országhová, Ingrid Žitňanová et al. *Textbook of Medical Chemistry* [online]. Bratislava: Comenius University, 2018. 299 p. ISBN 978-80-223-4512-5

Harvey, R.A. and Ferrier, D. *Lippincott's Illustrated Reviews: Biochemistry*. 6th ed. J.B. Wolters Kluwer, Lippincott Williams & Wilkins, ©2013. 560 p. Lippincott Illustrated Reviews Series. ISBN 978-1-4511-7562-2

The language needed to pass the course:

English

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX	
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Teachers: Lectures: Professor RNDr. J. Muchová, PhD.; Professor Ing. I. Žitňanová, PhD.; RNDr. L. Andrezálová, PhD.; Mgr. M. Dvořáková, PhD.; RNDr. Z. Országhová, PhD.; RNDr. Z. Paduchová, PhD. Practicals: RNDr. L. Andrezálová, PhD.; Mgr. M. Dvořáková, PhD.; Mgr. M. Janubová, PhD.; Ing. M. Ježovičová, PhD.; Ing. K. Koňariková, PhD.; RNDr. Z. Országhová, PhD.; RNDr. Z. Paduchová, PhD.
Last update: 28.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Cytology, histology and embryology
Type, scope and method of educational activities: <i>Oral lectures: 56 hours /semester</i> <i>Practicals: 42 hours/semester</i> <i>Individual study: 60 hours /semester</i> <i>Teaching methods: taught in person. In case of an emergency (e.g. pandemic situation), communication via MS TEAMS and MOODLE (distance method), or a combination of these methods.</i>	
Number of earned credits: 6	
Recommended semester of the study: <i>1st semester of study (winter)</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None..	
Grading policy: <i>The student is evaluated based on the study results during the semester (control questions, written partial tests, making pictures and their description from observed histological preparations) and participation in mandatory forms of teaching. <u>Participation in lectures is mandatory</u>, as partial tests also contain information from lectures.</i> <i>The criterion for successful completion of the subject is successful completion of partial tests with</i> <i>a minimum success rate of 70% (on average) or successful completion (at least 70%) of the semester corrective test (questions from the entire semester) and 100% participation in practicals</i> <i>(maximum 2 excused absences that need to be substituted).</i> <i>Grade average of partial tests or the semester corrective test: A: 100 - 95 %, B: 94 - 88 %, C: 87 -</i> <i>80 %, D: 79 - 75 %, E: 74 - 70 %, Fx: 69 % and less.</i> <i>The final exam consists of 3 parts:</i> <i>Test with a passing score of 70%</i> <i>Identification of unlabeled histological preparations (minimum 7 out of 10)</i> <i>Theoretical (oral) part – 3 questions</i> <i>If the student is successful in the first 2 parts of the exam, he/she can continue with the third (oral) part.</i>	
Courses objectives:	
<u>Knowledge:</u>	

After completing the course, the student is able to:

1. Theoretically understand the basic steps of histological technique from tissue collection to the identification of human body tissues on histological preparations.
2. Define and use in the correct context the terms necessary to describe the structure, function and occurrence of individual cell types in humans at the light microscopic and electron microscopic levels (Cytology).
3. Distinguish and identify the microscopic structure of individual tissue types, their cells and components of the extracellular matrix (General histology).
4. Distinguish and identify the microscopic structure of selected organs in humans (microscopic anatomy of the heart and blood vessels, lungs, kidneys, digestive tract, liver, pancreas, brain and spinal cord, skin, pituitary gland, and others)
5. Understand the microscopic structure of the organs of the oral cavity and salivary glands.
6. Understand the relationship between the microscopic structure of tissues and organs and their function.
7. Describe and explain fertilization, early embryonic development, and the course of embryogenesis from fertilization to the end of the 8th week of development. Understand the development of selected organs in humans.

Skills:

1. After completing the course, the student is able to use a light microscope to identify and describe the structure of individual types of cells and tissues of humans, as well as the structure of selected organs.
2. Is able to theoretically describe human development from fertilization, as well as the development of structures and organs of the human embryo, and also the fetal development of selected organs.

Syllabus (course structure):

Lecture topics:

1. Introduction to the study of histology. History and current status of histology in the curriculum of dentistry. Histological technique and its importance for practice.
2. Cytology. Cell theory. Plasma membrane, cell nucleus and cell organelles.
3. Cytomorphology. Description of selected specialized cells. Introduction to the study of human tissues.
4. Classification of epithelial tissue. Covering and lining epithelia and glandular epithelia. Characteristics and development of epithelial tissue.
5. Supporting and connective tissue 1: Connective tissue. Functional histology of connective tissue cells and their clinical significance. Classification of connective tissue types. Monocyte-macrophage system.
6. Supporting and connective tissue 2: Cartilage, bone and ossification. Microscopic structure of the joint, synovial membrane and articular cartilage.
7. Supporting and connective tissue 3: Blood and hematopoiesis. Morphology and development of formed blood elements. Microscopic structure of bone marrow. Vessels.
8. Muscle tissue. Functional histology of skeletal, smooth and cardiac muscle.
9. Nervous tissue. Morphology of neurons and neuroglial cells. Structure of gray and white matter of the central nervous system and their development.
10. Microscopic structure of the oral cavity and major salivary glands.

11. Microscopic structure of selected human organs (microscopic anatomy of the heart and blood vessels, lungs, kidneys, digestive tract, liver, pancreas, brain and spinal cord, skin, pituitary gland, and others)
12. Development and microscopic structure of tooth 1 (developmental stages of the tooth, amelogenesis, dentinogenesis and cementogenesis).
13. Development and microscopic structure of tooth 2 (development and microscopic structure of the dental pulp and adjacent tooth tissues, tooth eruption).
14. Introduction to the study of embryology. History and current status of embryology in the curriculum of dentistry. Fertilization. Zygote furrowing and blastocyst development. Blastocyst implantation and decidual reaction of the uterine mucosa. Development of extraembryonic. Teratology and teratogens.
15. Embryogenesis (3rd and 4th week of development) and formation of the embryo's body. First segments (somites). Development of the notochord and neural tube. Overview of germ layer derivatives. Development and functional morphology of the placenta. Placental barrier.
16. The pharyngeal region of the embryo and its derivatives. Development of the face and neck, anomalies. Skin.

Practicals:

Introduction to practicals in histology and embryology. Light and electron microscope. Fundamentals of histological technique. Study of cells at the light-optical and electron-microscopic level. Introduction to tissues. Lining and covering epithelia. Glandular epithelia. Connective tissues. Cartilage, bone and ossification. Blood. Blood elements. Blood smear stained by the Pappenheim method. Muscle tissue. Nervous tissue. Oral cavity, tongue and major salivary glands. Tooth, tooth development. Skin.

Recommended literature:

Mescher, A.L. Junqueira's Basic Histology. Text and Atlas, 17 th Ed, McGraw-Hill Medical Books, 2023, ISBN: 1264930399, 704 p.

Balko, J., Tonar, Z., Varga, I. and Hudák, R., 1st ed. Memorix Histology. Triton, 2018, ISBN: 9788075535771, 584 p.

Mikušová, Polák. Introduction to Histology and Embryology 1 for students of Dentistry and General Medicine. CU Bratislava 2017, 140 p. ISBN 978-80-223-4348-0.

Sadler, T. W. Langman's Medical Embryology, 15 th Ed, Lippincott Raven, 2023, ISBN: 9781975180010, 472 p.

Moore, K.L., Persaud, T.V.N., Torchia, M.G. Before We Are Born, 10 th Ed, Saunders, 2019, ISBN: 9780323608497, 350 p.

The language needed to pass the course: *English*

Another course information: lectures are mandatory

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

*Guaranteed by: **Professor RNDr.** Ivan Varga, PhD. et PhD. Lectures: **Professor RNDr.** Ivan Varga, PhD. et PhD., **Associate Professor RNDr.** Marianna Danková, PhD. and model lectures given by Assistant Professors as part of a comprehensive teaching activity prior to the start of their habilitation procedure Practicals: **Professor RNDr.** Ivan Varga, PhD. et PhD., **Associate Professor RNDr.** Marianna Danková, PhD., **RNDr.** Mária Kleinová, PhD., **Mgr.** Miroslava Juríková, PhD., **M.D.** Paulína Gálfiová, PhD., **M.D.** Martin Klein, PhD., **D.V.M.** Ján Líška, **CSc.**, **M.D.** Mária Lorencová, PhD., **M.D.** Renáta Mikušová, PhD., **M.D.** Simona Polakovičová, PhD., **M.D.** Vanda Rísová, PhD.. **M.D.** **Mgr.** Rami Saade, PhD., **M.D.** Georgína Kolníková, PhD., **RNDr.** Claudia Feitscherová and internal PhD. students of the Institute*

Last update: 30.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Dental Practice Management, AI, Cybersecurity and Forensic Aspects
Type, scope and method of educational activities: <i>Lectures/consultations: 12 hours/semester</i> <i>Practical classes/seminars: 0 hours/semester</i> <i>Independent study: 60 hours/semester</i> <i>Teaching method: on-site (in-person); blended (on-site + distance) only exceptionally. Any exceptional distance delivery is synchronous only.</i> <i>Format & scope: 12 h on-site in blocks; distance only in exceptional, synchronous sessions.</i>	
Number of earned credits: 3	
Recommended semester of the study: <i>9th semester - Year 5 – winter semester</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None. (Recommended prior courses: <i>Professionalism, Ethics and Legislation; AI-assisted Learning Strategies.</i>).	
Grading policy: Course completion requirements (Final exam): • Written exam (electronic examination) – admission to the oral part requires ≥ 80% in the written component. • Oral exam – 3 questions (practice management, dental AI, medico-legal basics). • Project (mini business plan + AI/legal compliance checklist) – submit before the exam date (pass/fail; failure = not admitted to the oral exam).	
Grading (overall % out of 100): A: 96 – 100 % B: 85 – 95 % C: 73 – 84 % D: 66 – 72 % E: 60 – 65 % Fx: < 60 %	
Weights: written 60 %, oral 40 %. (Minimum: written ≥ 80 % and project "pass".)	
Courses objectives: <i>Students understand core dental practice management, can identify and manage clinical/operational/legal risks, and can use AI tools appropriately under EU MDR</i>	

*(2017/745), GDPR and **lege artis** principles. They can draft a basic **business plan**, set **quality & safety processes** (ISO 13485/14971, proportionately), critically appraise **AI outputs** (decision support, not decision making), and handle **forensic scenarios** (patient communication, health authority interactions, expert opinions).*

*The graduate also understands the basic principles of **cybersecurity in healthcare** – is aware of risks related to data breaches, ransomware attacks, phishing and misuse of user accounts in the context of a dental practice. The student is able to propose basic organisational and technical safeguards (strong passwords, two-factor authentication, encrypted data storage, regular backups, segmentation of user rights), knows how to respond to a suspected security incident and how to document and communicate such an incident in line with GDPR and internal policies of the provider.*

Knowledge:

- **Practice operations** (finance, HR, procurement, patient flow, scheduling, contracting).
- Legal essentials: **Act No. 576/2004, 578/2004, 581/2004, GDPR/EU 2016/679 + Act 18/2018**, records, informed consent, complaints.
- **AI in dentistry**: capabilities, limits, bias, validation, safety, cybersecurity, data governance.
- **Forensic dentistry**: handling complaints, expert reports, documentation standards, *lege artis*.

Cybersecurity in the dental practice:

- – understands typical cyber threats in healthcare (phishing, ransomware, malware, social engineering, credential theft) and their impact on availability and confidentiality of medical records,
- – understands the difference between technical and organisational safeguards (passwords, encryption, backups, network segmentation, staff training, rules for mobile devices),
- – knows the principles of data backup and recovery (backup frequency, offline/immutable backups, testing of restore procedures),
- – is aware of the importance of encryption of data at rest and in transit, role-based access control and logging of access (audit trail),
- – has a basic overview of what constitutes a security incident and when it may qualify as a personal data breach that must be reported under GDPR.

Skills:

- Create a **basic clinic business plan** and **budget** (CAPEX/OPEX, cash-flow, basic reimbursement logic).
- Design **processes and roles** (triage, scheduling, sterilisation, inventory, quality & safety).

- Draft **informed consent** and **record-keeping** templates compliant with GDPR/MDR.
- Build an **AI/IT compliance checklist** (purpose, legal basis, device class, monitoring).
- Prepare a **provider response** to a patient complaint and a basic **submission to the regulator**.
- – Design a basic **cybersecurity framework** for a dental practice (password and access policy, use of MFA, backup policy, rules for remote work and mobile devices).
- – Complete a simple **cybersecurity checklist** for the practice (inventory of IT assets, data flow mapping, identification of vulnerable points, proposal of basic safeguards).
- – Draft a brief **security incident report** (what happened, when, which systems and data were affected, immediate actions taken) and prepare the documentation needed for potential notification (DPO, data protection authority, management of the provider).

Syllabus (course structure):

1. *Strategy of a dental clinic: services, target groups, positioning.*
2. *Financial basics: budgeting, cash-flow, costing, pricing, contracting.*
3. *Operations: capacity planning, waiting-time management, procurement & inventory.*
4. *HR & culture: roles, competencies, training, motivation, H&S.*
5. *Quality & safety: internal policies, **ISO 13485/14971** (fit-for-purpose), incident reporting.*
6. *Legal essentials: **Act 576/2004, 578/2004**, records, informed consent, tele-dentistry.*
7. *GDPR in practice: legal bases, DPIA, data minimisation, access control, logging.*
8. ***EU MDR (2017/745)**; software/AI as a medical device; CE, clinical evaluation, vigilance.*
9. *AI in dentistry: diagnostics, treatment planning, remote monitoring; limits, bias, validation.*
10. *Cybersecurity & data governance: backups, encryption, access policies, audit trail.*
11. *Forensic I: complaints, communication, dispute prevention, alternative dispute resolution.*
12. *Forensic II: regulator interactions, expert opinions, evidence preparation.*
13. *Ethical & lawful communication and marketing (no deceptive claims).*
14. *Mini-workshop: **Business plan + AI/legal checklist** (self-study with consultation window).*
15. ***Cybersecurity and data management:** typical threats in healthcare (phishing, ransomware, credential theft), basic safeguards (passwords, MFA, updates, network segmentation), backup and recovery, encryption at rest and in transit, access control and role-based access, logging and audit trail, basic steps in case of a security incident.*

Recommended literature:

Acts No. 576/2004, 578/2004, 581/2004 (current consolidated versions).

GDPR (EU 2016/679) and Act 18/2018 (Slovakia).

EU MDR (2017/745); ISO 13485, ISO 14971, IEC 62304 (overview).

Senn DR, Stimson PG. *Forensic Dentistry*.

Finkbeiner BL, Johnson LR. *Practice Management for the Dental Team*.

(overview) *Artificial Intelligence in Dentistry (Springer).*

Methodological guidance from the national health authority and the Slovak Chamber of Dentists.

The language needed to pass the course: *English*

Another course information:

AI tools provide decision support, not a substitute for professional judgement; liability remains with the dentist. The syllabus may be slightly adjusted to reflect regulatory updates and available technologies.

Grading history:

Vyplní študijné odd.

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers: Assoc. Prof. Andrej Thurzo, M.D., PhD, MPH, MHA

Lectures: Assoc. Prof. Andrej Thurzo, M.D., PhD, MPH, MHA, D.M.D. Martin Strunga,
D.M.D. Michaeela Lifkova, PhD,

Practicals: Assoc. Prof. Andrej Thurzo, M.D., PhD, MPH, MHA, D.M.D. Martin Strunga,
D.M.D. Michaeela Lifkova, PhD,

Last update: 29.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code: Vyplní študijné odd.	Course Title: Dental Materials, Equipments and Simulations 1
Type, scope and method of educational activities: Type of activities: lecture / practicals Number of hours per week/ per semester: 14s / 72s Individual study: 15 hours/semester Form of the course: on-site learning/ distance MS Teams	
Number of earned credits: 4	
Recommended semester of the study: 1st semester (winter)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None.	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers +practical part: Evaluation of tooth morphology modeling, basic skills in wax and dental stone manipulation, identification of extracted teeth. Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and below The overall rating is determined from the average of the ratings obtained.	
Courses objectives: Knowledge: Acquisition of terminology, tooth morphology, basic instruments, materials, technologies, and working procedures in dentistry. Ergonomics of dental practice. Composition, properties, handling, and indications of materials used in operative dentistry, prosthodontics, oral surgery, periodontology, and dental laboratory technology. Skills: Development of psychomotor skills necessary for clinical practice. Preparation and manipulation of restorative materials, impression materials, and materials used in dental laboratory procedures. Principles of instrument cleaning, maintenance, and safe storage in dentistry, and the proper use of dental equipment and devices. Technique of dental calculus removal on haptic simulators.	
Syllabus (course structure): • Introduction to dental materials: properties, classification, manipulation. • Equipment of the dental operator – dental unit (micromotor, suction, operation and maintenance), light-curing units, endodontic motors, electrosurgery units, dental lasers, ultrasonic scalers, air-abrasion devices, intraoral scanner.	

- Ergonomics in dentistry: principles of four-handed dentistry, operator–assistant–patient positioning, hand stabilization techniques.
- Work safety, decontamination, and the sterilization chain of dental instruments and equipment.

Basic skills and work with haptic simulators : dental calculus removal.

Recommended literature:

Scheller-Sheridan C.: Basic Guide to Dental Instruments, Wiley-Blackwell, 2011, ISBN 9781444335323

Anusavice KJ, Shen C, Rawls HR. Phillips' Science of Dental Materials. 14th ed. St. Louis: Elsevier; 2022.

The language needed to pass the course: English

Another course information:

Grading history:

Vyplní študijné odd.

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: M.D. Lea Csicsayová, Ph.D., D.M.D. Michaela Lifková, Ph.D.

Practicals: M.D. Lea Csicsayová, Ph.D., M.D. Darina Gabániová, Ph.D., M.D. Zita Kestlerová, Ph.D., M.D. Roman Pecháň, D.M.D. Alexandros Tzigeris, D.M.D. Michaela Lifková, Ph.D., Assoc. Prof. M.D. Andrej Thurzo, Ph.D., MPH, MHA., D.M.D. Martin Strunga.

Last update: 04.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Dental Materials, Equipments and Simulations 2
Type, scope and method of educational activities: Type of activities: lecture / practicals Number of hours: per week/ per semester: 17s / 72s Kontrolované samoštúdium: 35h Form of the course: on-site learning/ distance MS Teams	
Number of earned credits: 5	
Recommended semester/trimester of the study: 2nd (summer)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Dental Materials, Equipments and Simulations 1	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Final exam:- practical part: ergonomic positioning and four-handed dentistry techniques, cavity preparation performance, evaluation of radiographs and treatment planning Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and below The overall rating is determined from the average of the ratings obtained.	
Courses objectives: <u>Knowledge:</u> fundamentals of diagnosis and treatment of dental caries, Black's classification of cavities, cavity preparation, selection of restorative treatment, dental radiography, fundamentals of periodontology <u>Skills:</u> Development of psychomotor skills required for clinical practice in operative dentistry, cavity preparation according to Black's classification, work with rotary instruments, control and stabilization of micromotor and high-speed handpiece, patient and operator positioning during treatment, use of ultrasonic devices and periodontal cures.	
Syllabus (course structure): • Morphology of hard dental tissues and its relevance in cavity preparation. • Conventional vs. minimally invasive approaches to cavity preparation. • Rotary instruments: types, abrasive surfaces, indications, sequencing and instrument selection. • Hand stabilization, fulcrum support, and controlled instrument movement. • Occlusal surface form and function – guiding cavity outline in accordance with occlusion. • Evaluation of the marginal outline, internal walls, and transitional areas. • Safety principles in the use of rotary instruments.	

- Adhesion and adhesive systems in restorative dentistry; overview of restorative materials.
- Basics of periodontal examination and therapy.
- Dental radiography in diagnosis and treatment planning.

Black's cavities preparations on haptic simulators.

Recommended literature:

Craig RG, Powers JM, Wataha JC. Craig's Restorative Dental Materials. 14th ed. St. Louis: Elsevier; 2018.

Ritter AV, Boushell LW, Walter R, editors. Sturdevant's Art and Science of Operative Dentistry. 7th ed. St. Louis: Elsevier; 2019.

Mount GJ, Hume WR, Ngo H, Wolff M. Preservation and Restoration of Tooth Structure. 3rd ed. Chichester: John Wiley & Sons; 2016.

Newman MG, Takei H, Klokkevold PR, Carranza FA, editors. Newman and Carranza's Clinical Periodontology and Implantology. 14th ed. St. Louis: Elsevier; 2023. ISBN 978-0-323-87887-6

The language needed to pass the course: English

Another course information:

Grading history:

Vyplní študijné odd.

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: M.D. Lea Csicsayová, Ph.D., D.M.D. Michaela Lifková, Ph.D.

Practicals: M.D. Lea Csicsayová, Ph.D., M.D. Darina Gabániová, Ph.D., M.D. Zita Kestlerová, Ph.D., M.D. Roman Pecháň, D.M.D. Alexandros Tzigeris, D.M.D. Michaela Lifková, Ph.D., Assoc. Prof. M.D. Andrej Thurzo, Ph.D., MPH, MHA., D.M.D. Martin Strunga.

Last update: 04.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Dental Materials, Equipments and Simulations 3
Forma výučby: prednáška / cvičenie Odporúčaný rozsah výučby (v hodinách): Týždenný: Za obdobie štúdia: 20s / 80s Individual study: 25h Form of the course: on-site learning/ distance MS Teams	
Number of earned credits: 5	
Recommended semester/trimester of the study: 3rd (winter), 2nd year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Dental Materials, Equipments and Simulations 2	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Final exam:- practical part: evaluation of full-crown preparation, assessment of parallelism of 2 abutments preparations for a three-unit fixed bridge Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less The overall rating is determined from the average of the ratings obtained.	
Courses objectives: <u>Knowledge:</u> fundamentals of dental prosthodontics, types of tooth hard-tissue preparations, selection and characteristics of prosthetic materials, occlusion, and principles of removable dental prostheses <u>Skills:</u> preparation of a tooth for a full crown – occlusal reduction, axial reduction; preparation of two abutment teeth for a fixed bridge – creation of a common path of insertion; impression techniques (conventional and digital); procedures for the fabrication of removable dental prostheses.	

Syllabus (course structure):

Indications for crown preparations: full crowns, fixed partial restorations, veneers.

- *Types of preparations (horizontal vs. vertical finish lines) — selection according to restorative material.*
- *Preparation of abutment teeth for fixed bridges — abutment geometry and common path of insertion.*
- *Occlusal contacts and their evaluation. Occlusal equilibrium.*
- *Classification of defects in prosthodontics.*
- *Clinical considerations in removable prostheses.*
- *Clinical and laboratory workflow for fabrication of removable dental prostheses.*
- *Fundamentals of communication between clinician and dental laboratory (analog and digital protocols).*

Recommended literature:

Shillingburg HT, Sather DA, Wilson EL, Cain JR, Mitchell DL, Blanco LJ, Kessler JC. Fundamentals of Fixed Prosthodontics. 4th ed. Chicago: Quintessence Publishing; 2012

McCracken's Removable Partial Prosthodontics. 13th ed. St. Louis: Elsevier; 2019

Zarb GA, Hobkirk J, Eckert S, Jacob R. Prosthodontic Treatment for Edentulous Patients: Complete Dentures and Implant-Supported Prostheses. 13th ed. St. Louis: Elsevier; 2012

The language needed to pass the course: English

Another course information:**Grading history:**

Vyplní študijné odd.

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: M.D. Lea Csicsayová, Ph.D., M.D. Darina Gabániová, Ph.D., M.D. Zita Kestlerová, Ph.D., M.D. Roman Pecháň, D.M.D. Alexandros Tzigeris, D.M.D. Michaela Lifková, Ph.D.

Practicals: M.D. Lea Csicsayová, Ph.D., M.D. Darina Gabániová, Ph.D., M.D. Zita Kestlerová, Ph.D., M.D. Roman Pecháň, D.M.D. Alexandros Tzigeris, D.M.D. Michaela Lifková, Ph.D., Assoc. Prof. M.D. Andrej Thurzo, Ph.D., MPH, MHA., D.M.D. Martin Strunga.

Last update: 05.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Dental Materials, Equipments and Simulations 4
Forma výučby: prednáška / cvičenie Odporúčaný rozsah výučby (v hodinách): Týždenný: Za obdobie štúdia: 20s / 80s Individual study: 75h Form of the course: on-site learning/ distance MS Teams	
Number of earned credits: 7	
Recommended semester/trimester of the study: 4 rd (summer), 2 nd year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Dental Materials, Equipments and Simulations 3	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers +practical part: evaluation of phantom-patient treatment performance (endodontics, extraction) Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and below Final Examination: 1. Practical Clinical OSCE: endodontic treatment: canal preparation and obturation, post-endodontic core build-up and preparation for an overlay restoration, radiograph interpretation, tooth extraction with local anesthesia administration on a phantom patient 2. Theoretical Examination: 4 oral questions covering the subject content The overall rating is determined from the average of the ratings obtained.	
Courses objectives: Knowledge: Fundamentals of patient management in the dental clinic, dental documentation, basics of oral surgical procedures, principles of local anesthesia	

administration, tooth extractions, fundamentals of endodontic and post-endodontic treatment.

Skills: techniques of local anesthesia administration, procedures for tooth extraction, preparation of the access cavity, mechanical instrumentation of the root canal system, placement of a fiber-reinforced composite (FRC) post, post-endodontic core build-ups, preparation for an overlay restoration.

Syllabus (course structure):

- *Pharmacology of local anesthetics and safety principles.*
- *Infiltration and nerve block anesthesia – technique and anatomical landmarks.*
- *Indications, contraindications, and biomechanics of tooth extraction.*
- *Fundamental principles of endodontic treatment – access cavity, root canal system, mechanical and chemical instrumentation, obturation.*
- *Post-endodontic treatment – use of FRC posts, post-endodontic core build-ups.*
- *Prosthetic rehabilitation of devitalized teeth.*
- *Intraoral scanning – protocols and accuracy considerations.*
- *CAD/CAM materials and selection of the prosthetic restoration.*

Recommended literature:

- *Malamed SF. Handbook of Local Anesthesia. 7th ed. St. Louis: Elsevier; 2019*
- *Stanko,P.,Poruban,D.,novotňáková,D.,Hollý,D.: Dentoalveolar and Maxillofacial Surgery. Comenius University in Bratislava 2020, 398 p. ISBN 978-80-223-4824-9*
- *Hargreaves KM, Berman LH, editors. Cohen's Pathways of the Pulp. 12th ed. St. Louis: Elsevier; 2021*
- *Ferrari M, Goracci C. Fiber Posts and Endodontically Treated Teeth. London: Taylor & Francis; 2011*
- *Grunheid T, Larson BE, editors. Digital Dentistry: A Comprehensive Reference. Wiley-Blackwell; 2023*

The language needed to pass the course: English

Another course information:

Grading history:

Vyplní študijné odd.

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Lectures: M.D. Lea Csicsayová, Ph.D., M.D. Darina Gabániová, Ph.D., M.D. Zita Kestlerová, Ph.D., M.D. Roman Pecháň, D.M.D. Alexandros Tzigeris, D.M.D. Michaela Lifková, Ph.D.

Practicals: M.D. Lea Csicsayová, Ph.D., M.D. Darina Gabániová, Ph.D., M.D. Zita Kestlerová, Ph.D., M.D. Roman Pecháň, D.M.D. Alexandros Tzigeris, D.M.D. Michaela Lifková, Ph.D., Assoc. Prof. M.D. Andrej Thurzo, Ph.D., MPH, MHA., D.M.D. Martin Strunga.

Last update: 05.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Code of the course: L-S-ZL-018	Name of the course: Dermatovenerology
Type, duration and methods of education: Lectures: 18 lessons/semester Practicals: 20 lessons/semester Self-study: 12 lessons/semester Method of education: combined	
Number of credits: 2	
Recommended semester/trimester of the study: 6 th semester	
Level of the study: 1 st + 2 nd level	
Prerequisite courses: Medical Microbiology	
The requirements for completing the course: 100% participation in practicals Exam: test – minimum of 60% success rate Practical part – writing of the medical record of one patient, including differential diagnosis, 1 question from practicals Theoretical part - 3 questions from dermatovenerology Evaluation of the test: A: 91 - 100 %, B: 81 - 99 %, C: 73 - 80 %, D: 66 - 72 %, E: 60 - 65 %, Fx: 59 % and less The final evaluation is calculated as the median of all received results.	
Outcome of the education: <u>Theoretical knowledge:</u> Etiopathogenesis, clinical picture, diagnostics, differential diagnoses and therapy of mucocutaneous diseases, sexually transmitted infections. <u>Practical skills:</u> laboratory methods in dermatovenerology: alergological and mycological examination, collecting of tissue for histological examination, microscopic examination of pathological materials. Differential diagnostics procedures. Proposals of medical examination and treatment recommendation for diseases in the oral cavity.	
Content: Anatomy, morphology and physiology of the skin and mucous membranes. Allergic eczema, toxic dermatitis, phototoxic and photoallergic reactions. Atopic dermatitis. Seborrheic dermatitis. Microbial eczema. Erythematous squamous dermatosis. Papular and pustular dermatosis. Bullous dermatosis. Medicamentous exanthema. Disorders of sebaceous glands. Alopecia. Viral dermatosis. Bacterial infections of skin and mucous membranes. Mycological infections. Epizoonosis. Parasitic diseases. Collagenosis. Precancerous lesions, tumors. Diseases of the oral cavity.	
Recommended literature: Švecová, D.: Dermatology for dentistry UK Bratislava 2010, 339s. Švecová, D.: Handbook of Dermatovenerology for Practical Lessons , UK Bratislava 2018, 274 s.	
Language requirements for completing the course: English	
Notes:	

Evaluation:

Overall number of evaluated students:

A	B	C	D	E	FX

Lectors:**English language**Lectures: prof. MUDr. D. Švecová, PhD.,Practicals: prof. MUDr. Danka Švecová, PhD., MUDr. Martina Part, PhD., MPH., MUDr. Natália Andrýsková, PhD., MUDr. Paula Ďuríková, MUDr. Beáta Mayer**Last revision:** 27.10.2025**Approved by:** prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

COURSE DESCRIPTION

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course Title: Digital technologies and 3D printing in dentistry
Educational activities: Lectures/consultations: 24 hours/semester Practical classes/seminars (hands-on in computer / 3D-printing labs): 60 hours/semester Self-study: 16 hours/semester Mode of delivery: blended learning (on-site + online) • on-site lectures and seminars, • online demonstrations and tutorials, • e-learning case studies and short tasks in the LMS.	
Number of credits: 4	
Recommended semester: (5th semester), 3rd year, winter semester	
Educational level: joined 1 st and 2 nd level	
Prerequisites: <i>None.</i>	
Course requirements: Form of assessment: S – examination (graded A–Fx) In-semester requirements: • minimum 80 % attendance at practical classes (max. 20 % excused absence), • active participation in hands-on tasks (scanning on demo cases, basic CAD design, preparation of data for 3D printing). Examination – electronic - written test: • one written test (MCQs, short-answer questions, image-based and workflow questions), • content: digital data acquisition (intraoral and laboratory scanners, CBCT), data formats, basics of CAD, principles of 3D printing and materials, typical indications (models, guides, splints, aligners), basic aspects of AI in digital dentistry, safety and regulatory issues. Minimum passing score: • to successfully complete the course, the student must reach at least 80 % in the written test, • a student who scores below 80 % is graded Fx and must repeat the exam, regardless of attendance. Proposed grading scale (based on test score): • A: 98 – 100 % • B: 95 – 97 % • C: 90 – 94 % • D: 85 – 89 %	

- E: 80 – 84 %
Fx: 79 % or less

Credits will not be awarded if the student:

- scores below 80 % in the test, or
- fails to meet the attendance requirement.

Learning outcomes:

Upon completion of the course, the student:

- understands the main **digital technologies in dentistry** (intraoral and extraoral scanners, CBCT, CAD/CAM, 3D printing),
- understands where digital workflows bring **added value** compared with analogue approaches (accuracy, repeatability, archiving, communication with the lab),
- is familiar with **3D printing technologies** used in dentistry (especially SLA/DLP/LCD, FDM, selectively SLS) and their typical indications,
- has an overview of basic **3D printing materials** (for models, guides, splints, temporary restorations, orthodontic appliances) and their limitations,
- understands the role of **AI tools** in planning, segmentation and design, as well as their limitations and the need for human oversight,
- is aware of essential **safety, ethical and regulatory frameworks** – patient data protection, medical device certification, documentation and validation of digital workflows.

Knowledge: After completing the course, the student:

- knows core **digital dentistry terminology**: CAD/CAM, STL, PLY, OBJ, DICOM, trueness, precision, slicer, nesting, etc.,
- understands principles of **digital scanning** – intraoral, laboratory and other optical systems, including typical sources of error,
- can describe the main **3D printing technologies** used in dentistry and explain their suitability or limitations for different indications,
- is familiar with the most common **dental printing materials** and their indications (models, surgical guides, occlusal splints, temporary crowns and bridges, aligner models),
- understands the concept of **3D planning** – integration of CBCT, dental and facial scans in implantology, OMFS and orthodontics,
- knows basic principles of **biological and mechanical safety** of printed devices used in the mouth (post-curing, post-processing, validation).

Skills: The student is able to:

- design a simple **digital workflow** for a clinical scenario (e.g. model + splint, model + guide, model + aligner model),

- under supervision, prepare and edit **3D data** in CAD software (trimming, defining margins and thickness, orientation),
- set **basic 3D printing parameters** in a slicer (material, orientation, supports, layer thickness) and understand their influence on accuracy and production time,
- identify common **errors in digital workflows** (incomplete scan, artefacts, deformations, export problems) and propose corrections,
- decide when a **digital approach is appropriate** and when conventional analogue techniques may be preferable,
- communicate efficiently with a dental laboratory/technician using proper digital terminology and file specifications.

Syllabus:

1. Introduction to digital dentistry – development, current state, trends.
2. Digital data acquisition – intraoral and laboratory scanners, CBCT, photographic and 3D face scans.
3. Data formats and data management (STL, PLY, OBJ, DICOM; export/import; registration; GDPR basics).
4. CAD in dentistry – design of models, splints, guides, auxiliary elements and simple restorations.
5. Fundamentals of 3D printing – main technologies, key parameters, accuracy, limitations.
6. Materials for dental 3D printing – indications, biocompatibility, limitations.
7. Surgical guides, anatomical models and splints in implantology, OMFS and orthodontics.
8. Orthodontic and prosthodontic applications – aligners, customised appliances, provisional restorations.
9. 3D printing in regenerative and personalised dentistry – scaffolds, bone substitutes, personalised splints.
10. AI in digital dentistry – segmentation, virtual treatment planning, decision support.
11. Chairside vs. laboratory workflows – logistics, economics, outsourcing vs. in-house.
12. Quality, safety and regulation – MDR, CE marking, documentation and validation of workflows.
13. Summary, best-practice examples and discussion.

Recommended literature:

- Thurzo A. et al.: Clinical 3D Printing in Dentistry. SAMOSATO, Bratislava, 2022.
- Selected review papers on digital dentistry and 3D printing in dentistry (to be specified by the course guarantor).
- *Modern diagnostics, simulations and 3D printing in dentistry, e-book for 3rd year medical students – dentistry*, © 2022 Thurzo et al., URL:
https://docs.google.com/document/d/1SCYjsUeHjQXXau5euXExDOO81UH_mdWYasCxG8bEggE/

Language necessary to complete the course: English

Notes: Basic computer literacy and familiarity with common 3D file formats (STL, PLY) are highly recommended. Course capacity may be limited by the number of available workstations and 3D printers.

Past grade distribution:

Total number of evaluated students:

A	B	C	D	E	FX
a	b	c	d	e	f

Lecturers:

Main responsible teacher: Assoc. Prof. Andrej Thurzo, MD, PhD., MPH, MHA

Lectures: Assoc. Prof. Andrej Thurzo, MD, PhD., MPH, MHA, Martin Strunga DMD, Michaela Lifkova D.M.D., PhD.,

Practicals: Assoc. Prof. Andrej Thurzo, MD, PhD., MPH, MHA, Martin Strunga DMD, Michaela Lifkova D.M.D., PhD.,

Date of last change: 1.11.2025

Approved by: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Diploma Thesis 1 / Final Professional Internship 1
Type, scope and method of educational activities: <i>Lectures/Consultations: 50 h/semester</i> <i>Clinical internship (seminar/practical): 40 h/semester</i> <i>Independent study: 5 h/semester</i> <i>Delivery: on-site (distance learning is excluded)</i> <i>The above contact hours and credits apply equally to both variants, Diploma Thesis and Final Professional Internship.</i>	
Number of earned credits: 3 ECTS	
Recommended semester/trimester of the study: <i>5th semester (winter)</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None.	
Grading policy: The course is one of six parts of a coherent capstone module that can be completed in two equivalent forms: variant A – Diploma Thesis (a research-oriented written thesis) and variant B – Final Professional Internship (a practice-oriented final internship at an approved workplace with a structured professional record/portfolio). Both variants carry the same number of credits and workload and are alternative ways of meeting the final requirements of the study programme in line with current Slovak higher-education legislation on the final internship. Assessment (variant A – Diploma Thesis) - Graded Credit: Methodology/QA 30%, Data Quality and Reliability 30%, Interpretation 30%, Colloquium 10%. Grading Scale: A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx < 60% • Approved topic and aims with demonstrable clinical impact; • Literature review (≥ 20 current sources; structured per PICO/PEO where relevant); • Clinical-expert protocol (setting, inclusion/exclusion criteria, data capture & protection, patient safety, informed consent, GDPR); • Logbook of clinical activities (shadowing/observation; standardised photo-protocol & documentation); • Regular consultations with supervisor (≥ 3) and interim "checkpoint" presentations; • Attendance at internship ≥ 85%.	

Assessment (variant B – Final Professional Internship) - Graded Credit:

Grading uses the same A–Fx scale as for the thesis variant (H – graded credit). The assessment is based on:

- **33%** written assessment from the clinical workplace/host organisation, prepared by the **responsible person at the host site**, confirming the activities actually performed by the student in the prescribed scope;
- **67%** assessment by the **consultant** (academic staff member of the Faculty of Medicine, Comenius University), who evaluates the quality of the **video report** and the **ongoing electronic record/logbook of the internship** (course of the internship, activities performed, and reflection on the application of knowledge, skills and competences);
- **minimum attendance at the internship: $\geq 85\%$.**

The Final Professional Internship may be undertaken only after prior approval by the Faculty of Medicine of both

(i) the internship site and

(ii) the person responsible for the internship at the host organisation.

The internship is carried out under the supervision of the consultant, who provides expert guidance and monitors the progress of the internship in accordance with the learning outcomes of the study programme.

Courses objectives:

This course is one of six components of a capstone module that may be completed either as a **research-oriented Diploma Thesis (variant A)** or as a **practice-oriented Final Professional Internship (variant B)**; in both cases it is designed to demonstrate the student's ability to apply knowledge, skills and competences in real clinical settings.

Selects a clinically meaningful topic, formulates a research question, and designs a **safe clinical-expert procedure/technology** (e.g., 2D/3D measurements, tele-monitoring, AI support); sets up data collection and risk controls in line with ethics and GDPR.

Knowledge:

Clinical research basics (study types, bias), measurement methodology (reliability/validity), planning statistics, QA and patient safety principles.

Skills:

PICO/PEO framing, systematic review, CRF/logbook creation, SOPs for data capture, and a basic **why-log** of clinical decisions.

Syllabus (course structure):

Aims & significance → review & critical appraisal → ethics, GDPR & safety → **clinical-expert protocol** design → documentation standardisation (photos, scans, radiographs) → pilot preparation → interim presentation.

Topic selection and supervisor communication; definition of aims; selection of study literature.

For variant B – Final Professional Internship:

- approval of the internship site and of the responsible person at the host organisation by the Faculty of Medicine;
- appointment of a **consultant** (academic staff member of the Faculty of Medicine) and continuous monitoring of the internship in line with the learning outcomes of the study programme;
- initial orientation and occupational health and safety (OHS) briefing at the host workplace;
- creation of an **electronic internship record/logbook** (shadowing/observation, standardised photo-protocol and documentation), which forms the basis for the later video report and written record of the internship.

Recommended literature:

Internal Regulation No. 32/2023 – Rector's Directive of Comenius University on the essentials of theses, control of originality, storage and accessibility.

Internal Regulation No. 31/2023 – Study Code of the Faculty of Medicine, CU.

Literature selected according to the thesis topic.

Implementing regulations of Comenius University in Bratislava and the Faculty of Medicine governing final theses and final professional internships (once issued), in their up-to-date wording as published on the official websites of Comenius University and the Faculty of Medicine.

The language needed to pass the course: English

Another course information: The course is designed as a **universal capstone module** of the study programme, which may be completed either in the form of a Diploma Thesis or as a Final Professional Internship, in accordance with the current Slovak higher-education legislation on the final internship as an alternative to a written thesis.

The detailed requirements for both forms (approval of internship sites, responsible person at the host organisation, appointment and role of the academic consultant, structure of the internship record and assessments) will follow the implementing internal regulations of Comenius University in Bratislava and the Faculty of Medicine once issued.

The course is also aligned with **Directive 2005/36/EC** of the European Parliament and of the Council on the recognition of professional qualifications, where it will be identified under the **"Clinical practice"** category.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers: prof. Peter Stanko, MD, PhD.; Assoc. prof. Andrej Thurzo, MD, PhD., MPH, MHA; Michaela Lifková, MD, PhD

Lectures: According to the thesis topic at the clinical department

Practicals:According to the thesis topic at the clinical department
Last update: 11.11.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Diploma Thesis 2 / Final Professional Internship 2
Type, scope and method of educational activities: <i>Consultations: 50 h/semester</i> <i>Clinical internship: 40 h/semester</i> <i>Independent study: 5 h/semester</i> <i>Delivery: on-site (distance learning is excluded)</i>	
Number of earned credits: 2 ECTS	
Recommended semester/trimester of the study: <i>6th semester (summer)</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Diploma Work 1	
Grading policy: The course is one of six parts of a coherent capstone module that can be completed in two equivalent forms: variant A – Diploma Thesis (a research-oriented written thesis) and variant B – Final Professional Internship (a practice-oriented final internship at an approved workplace with a structured professional record/portfolio). Both variants carry the same number of credits and workload and are alternative ways of meeting the final requirements of the study programme in line with current Slovak higher-education legislation on the final internship. Assessment (variant A – Diploma Thesis) - Graded Credit: Methodology/QA 30%, Data Quality and Reliability 30%, Interpretation 30%, Colloquium 10%. Grading Scale: A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx < 60% • Continuous supervisor communication and presentation of agreed outputs; • Pilot measurements/data collection per protocol (min. 5–10 cases/measurements as appropriate); • SOP + QA protocol (image/photo quality standards, device calibration, inter-/intra-observer reliability); • Interim report (aims – methods – risks – preliminary findings); • Attendance ≥ 85%, ≥ 3 consultations. Assessment (variant B – Final Professional Internship) - Graded Credit: Grading uses the same A–Fx scale as for the thesis variant (H – graded credit). The assessment is based on:	

- **33%** written assessment from the clinical workplace/host organisation, prepared by the **responsible person at the host site**, confirming the activities actually performed by the student in the prescribed scope;
- **67%** assessment by the **consultant** (academic staff member of the Faculty of Medicine, Comenius University), who evaluates the quality of the **video report** and the **ongoing electronic record/logbook of the internship** (course of the internship, activities performed, and reflection on the application of knowledge, skills and competences);
- **minimum attendance at the internship: $\geq 85\%$.**

The Final Professional Internship may be undertaken only after prior approval by the Faculty of Medicine of both

(i) the internship site and

(ii) the person responsible for the internship at the host organisation.

The internship is carried out under the supervision of the consultant, who provides expert guidance and monitors the progress of the internship in accordance with the learning outcomes of the study programme.

: This course is one of six components of a capstone module that may be completed either as a research-oriented Diploma Thesis (variant A) or as a practice-oriented Final Professional Internship (variant B); in both cases it is designed to demonstrate the student's ability to apply knowledge, skills and competences in real clinical settings.

Translates the protocol into pilot practice, resolves logistical and data-quality issues, proposes protocol refinements, and configures **tele-monitoring** where relevant.

Able to process the selected topic at the level of a scientific study; selects appropriate literature and methods.

Knowledge:

SOP/QA, calibration, minimal samples and pilot statistics, limitations of AI/3D methods in pilot capture.

Skills:

Standardised clinical records, pilot **2D/3D** measurements, secure data pipeline, protocol updating.

Syllabus (course structure):

Training → pilot implementation → QA/protocol adjustments → interim presentation → plan for the full study phase.

Preparation and study of selected literature; drafting the thesis outline; beginning the core (main) part of the thesis.

For variant B – Final Professional Internship:

- *continuation of the final internship at the approved workplace under the supervision of the consultant and the responsible person at the host organisation;*

- implementation of the **"pilot phase"** of the internship – first assigned tasks and clinical cases within the student's competence;
- ongoing completion of the **internship record/logbook** with concrete activities, cases and short reflections on how knowledge and skills are applied;
- regular feedback from the consultant and the responsible person at the host organisation on the content and quality of the activities performed;
- adjustment of the individual internship plan based on interim evaluation and the needs of the workplace.

Recommended literature:

Internal Regulation No. 32/2023 – Rector's Directive of Comenius University on the essentials of theses, control of originality, storage and accessibility.

Internal Regulation No. 31/2023 – Study Code of the Faculty of Medicine, CU.

Literature selected according to the thesis topic.

Implementing regulations of Comenius University in Bratislava and the Faculty of Medicine governing final theses and final professional internships (once issued), in their up-to-date wording as published on the official websites of Comenius University and the Faculty of Medicine.

The language needed to pass the course: English

Another course information:

The course is designed as a **universal capstone module** of the study programme, which may be completed either in the form of a Diploma Thesis or as a Final Professional Internship, in accordance with the current Slovak higher-education legislation on the final internship as an alternative to a written thesis.

The detailed requirements for both forms (approval of internship sites, responsible person at the host organisation, appointment and role of the academic consultant, structure of the internship record and assessments) will follow the implementing internal regulations of Comenius University in Bratislava and the Faculty of Medicine once issued.

The course is also aligned with **Directive 2005/36/EC** of the European Parliament and of the Council on the recognition of professional qualifications, where it will be identified under the **"Clinical practice"** category.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers: prof. Peter Stanko, MD, PhD.; Assoc. prof. Andrej Thurzo, MD, PhD., MPH, MHA; Michaela Lifková, MD, PhD

Lectures: According to the thesis topic at the clinical department

Practicals: According to the thesis topic at the clinical department

Last update: 11.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Diploma Thesis 3 / Final Professional Internship 3
Type, scope and method of educational activities: <i>Consultations: 50 h/semester</i> <i>Clinical internship: 40 h/semester</i> <i>Independent study: 5 h/semester</i> <i>Delivery: on-site (distance learning is excluded) The above contact hours and credits apply equally to both variants, Diploma Thesis and Final Professional Internship.</i>	
Number of earned credits: 4 ECTS	
Recommended semester/trimester of the study: <i>7th semester (winter)</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Diploma Work 2	
Grading policy: The course is one of six parts of a coherent capstone module that can be completed in two equivalent forms: variant A – Diploma Thesis (a research-oriented written thesis) and variant B – Final Professional Internship (a practice-oriented final internship at an approved workplace with a structured professional record/portfolio). Both variants carry the same number of credits and workload and are alternative ways of meeting the final requirements of the study programme in line with current Slovak higher-education legislation on the final internship. Assessment (variant A – Diploma Thesis) - Graded Credit: Methodology/QA 30%, Data Quality and Reliability 30%, Interpretation 30%, Colloquium 10%. Grading Scale: A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx < 60% • Progress report (methodology, safety, risks, reliability); • Minimum number of analysed cases/measurements (per topic & supervisor decision); • Presentation with critique of limitations; • Attendance ≥ 85%. • Ongoing supervisor communication and presentation of agreed outputs are required. Assessment (variant B – Final Professional Internship) - Graded Credit: Grading uses the same A–Fx scale as for the thesis variant (H – graded credit). The assessment is based on:	

- **33%** written assessment from the clinical workplace/host organisation, prepared by the **responsible person at the host site**, confirming the activities actually performed by the student in the prescribed scope;
- **67%** assessment by the **consultant** (academic staff member of the Faculty of Medicine, Comenius University), who evaluates the quality of the **video report** and the **ongoing electronic record/logbook of the internship** (course of the internship, activities performed, and reflection on the application of knowledge, skills and competences);
- **minimum attendance at the internship: $\geq 85\%$.**

The Final Professional Internship may be undertaken only after prior approval by the Faculty of Medicine of both

(i) the internship site and

(ii) the person responsible for the internship at the host organisation.

The internship is carried out under the supervision of the consultant, who provides expert guidance and monitors the progress of the internship in accordance with the learning outcomes of the study programme.

: This course is one of six components of a capstone module that may be completed either as a research-oriented Diploma Thesis (variant A) or as a practice-oriented Final Professional Internship (variant B); in both cases it is designed to demonstrate the student's ability to apply knowledge, skills and competences in real clinical settings. Performs reliable **2D/3D** (optionally AI-assisted) measurements; explains clinical significance and limits.

Able to process the selected topic at the level of a scientific study; selects appropriate literature and methods.

Knowledge:

Validation, reliability, inferential basics (confidence intervals, tests), transparent reporting.

Skills:

Case analysis, decision **why-logs**, figure/graph preparation, **pre-registration** (where applicable).

Syllabus (course structure):

Core thesis development based on the progress report; chapter/subchapter structuring;

Data collection → **quality control** → **analysis** → **interpretation** → **manuscript/chapters draft**.

For variant B – Final Professional Internship:

- *more active involvement of the student in the clinical and operational activities of the workplace under supervision;*
- *increasingly independent performance of routine tasks within the student's competence while maintaining patient safety;*

- selection and processing of the first case reports or small projects (e.g. patient education, process improvement) as part of the internship record/portfolio;
- systematic completion of the logbook with the course of the internship, cases and outcomes of the activities performed;
- regular reflection by the student (what has been learned, which problems were solved, which competences are being developed) and discussion of this reflection with the consultant;
- ongoing feedback from the consultant and the responsible person at the host site on the development of professional competences.

Recommended literature:

Internal Regulation No. 32/2023 – Rector's Directive of Comenius University on the essentials of theses, control of originality, storage and accessibility.

Internal Regulation No. 31/2023 – Study Code of the Faculty of Medicine, CU.

Literature selected according to the thesis topic.

Implementing regulations of Comenius University in Bratislava and the Faculty of Medicine governing final theses and final professional internships (once issued), in their up-to-date wording as published on the official websites of Comenius University and the Faculty of Medicine.

The language needed to pass the course: English

Another course information:

The course is designed as a **universal capstone module** of the study programme, which may be completed either in the form of a Diploma Thesis or as a Final Professional Internship, in accordance with the current Slovak higher-education legislation on the final internship as an alternative to a written thesis.

The detailed requirements for both forms (approval of internship sites, responsible person at the host organisation, appointment and role of the academic consultant, structure of the internship record and assessments) will follow the implementing internal regulations of Comenius University in Bratislava and the Faculty of Medicine once issued.

The course is also aligned with **Directive 2005/36/EC** of the European Parliament and of the Council on the recognition of professional qualifications, where it will be identified under the **"Clinical practice"** category.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers: prof. Peter Stanko, MD, PhD.; Assoc. prof. Andrej Thurzo, MD, PhD., MPH, MHA; Michaela Lifková, MD, PhD

Lectures: According to the thesis topic at the clinical department

Practicals: According to the thesis topic at the clinical department

Last update: 11.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Diploma Thesis 4 / Final Professional Internship 4
Type, scope and method of educational activities: <i>Consultations: 50 h/semester</i> <i>Clinical internship: 40 h/semester</i> <i>Independent study: 5 h/semester</i> <i>Delivery: on-site (distance learning is excluded) The above contact hours and credits apply equally to both variants, Diploma Thesis and Final Professional Internship.</i>	
Number of earned credits: 4 ECTS	
Recommended semester/trimester of the study: <i>8th semester (summer)</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Diploma Work 3	
Grading policy: The course is one of six parts of a coherent capstone module that can be completed in two equivalent forms: variant A – Diploma Thesis (a research-oriented written thesis) and variant B – Final Professional Internship (a practice-oriented final internship at an approved workplace with a structured professional record/portfolio). Both variants carry the same number of credits and workload and are alternative ways of meeting the final requirements of the study programme in line with current Slovak higher-education legislation on the final internship. Assessment (variant A – Diploma Thesis) - Graded Credit: Methodology/QA 30%, Data Quality and Reliability 30%, Interpretation 30%, Colloquium 10%. Grading Scale: A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx < 60% • Updated dataset, pre-analysis, manuscript plan; attendance ≥ 85%; • Assessment weighting: clinical synthesis & recommendations/algorithm 40%, strength of evidence 30%, manuscript quality 20%, colloquium 10%. (A–Fx scale .) • Ongoing supervisor communication and presentation of agreed outputs. Assessment (variant B – Final Professional Internship) - Graded Credit: Grading uses the same A–Fx scale as for the thesis variant (H – graded credit). The assessment is based on:	

- **33%** written assessment from the clinical workplace/host organisation, prepared by the **responsible person at the host site**, confirming the activities actually performed by the student in the prescribed scope;
- **67%** assessment by the **consultant** (academic staff member of the Faculty of Medicine, Comenius University), who evaluates the quality of the **video report** and the **ongoing electronic record/logbook of the internship** (course of the internship, activities performed, and reflection on the application of knowledge, skills and competences);
- **minimum attendance at the internship: $\geq 85\%$.**

The Final Professional Internship may be undertaken only after prior approval by the Faculty of Medicine of both

(i) the internship site and

(ii) the person responsible for the internship at the host organisation.

The internship is carried out under the supervision of the consultant, who provides expert guidance and monitors the progress of the internship in accordance with the learning outcomes of the study programme.

: This course is one of six components of a capstone module that may be completed either as a research-oriented Diploma Thesis (variant A) or as a practice-oriented Final Professional Internship (variant B); in both cases it is designed to demonstrate the student's ability to apply knowledge, skills and competences in real clinical settings.

Formulates **clinical-expert recommendations/algorithms** considering risks and patient preferences.

Able to process the selected topic at the level of a scientific study; selects appropriate literature and methods.

Knowledge:

Clinical interpretation, decision ethics, **shared decision-making (SDM)**, implementation barriers.

Skills:

Procedure/technology design, **flow-chart** creation, writing the **Discussion & Limitations** section.

Syllabus (course structure):

Analysis → synthesis → procedure/technology design → manuscript v1 → feedback.

Preparation of the Introduction and Conclusion; reference list.

For variant B – Final Professional Internship:

- **synthesis of the experience** gained during the internship and identification of typical clinical situations encountered by the student;
- selection of **representative cases or activities** through which the student best demonstrates the application of knowledge, skills and competences;

- ongoing development of the textual parts of the **internship record/portfolio** (introduction, description of the workplace, description of activities, case reports, reflection);
- formulation of first **recommendations or proposals for improvements** to clinical practice at the host workplace, based on observations during the internship;
- continued cooperation with the consultant and the responsible person at the host site in refining the content and structure of the record/portfolio;
- interim evaluation of how far the internship contributes to the **learning outcomes of the study programme**.

Recommended literature:

Internal Regulation No. 32/2023 – Rector's Directive of Comenius University on the essentials of theses, control of originality, storage and accessibility.

Internal Regulation No. 31/2023 – Study Code of the Faculty of Medicine, CU.

Literature selected according to the thesis topic.

Implementing regulations of Comenius University in Bratislava and the Faculty of Medicine governing final theses and final professional internships (once issued), in their up-to-date wording as published on the official websites of Comenius University and the Faculty of Medicine.

The language needed to pass the course: English

Another course information:

The course is designed as a **universal capstone module** of the study programme, which may be completed either in the form of a Diploma Thesis or as a Final Professional Internship, in accordance with the current Slovak higher-education legislation on the final internship as an alternative to a written thesis.

The detailed requirements for both forms (approval of internship sites, responsible person at the host organisation, appointment and role of the academic consultant, structure of the internship record and assessments) will follow the implementing internal regulations of Comenius University in Bratislava and the Faculty of Medicine once issued.

The course is also aligned with **Directive 2005/36/EC** of the European Parliament and of the Council on the recognition of professional qualifications, where it will be identified under the "**Clinical practice**" category.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers: prof. Peter Stanko, MD, PhD.; Assoc. prof. Andrej Thurzo, MD, PhD., MPH, MHA; Michaela Lifková, MD, PhD

Lectures: According to the thesis topic at the clinical department

Practicals: According to the thesis topic at the clinical department

Last update: 11.11.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Diploma Thesis 5 / Final Professional Internship 5
Type, scope and method of educational activities: <i>Consultations: 90 h/semester</i> <i>Clinical internship: 80 h/semester</i> <i>Independent study: 5 h/semester</i> <i>Delivery: on-site (distance learning is excluded) The above contact hours and credits apply equally to both variants, Diploma Thesis and Final Professional Internship.</i>	
Number of earned credits: 4 ECTS	
Recommended semester/trimester of the study: 9th semester (winter)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Diploma Work 4	
Grading policy: The course is one of six parts of a coherent capstone module that can be completed in two equivalent forms: variant A – Diploma Thesis (a research-oriented written thesis) and variant B – Final Professional Internship (a practice-oriented final internship at an approved workplace with a structured professional record/portfolio). Both variants carry the same number of credits and workload and are alternative ways of meeting the final requirements of the study programme in line with current Slovak higher-education legislation on the final internship. Assessment (variant A – Diploma Thesis) - Graded Credit: Methodology/QA 30%, Data Quality and Reliability 30%, Interpretation 30%, Colloquium 10%. Grading Scale: A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx < 60% • Complete results, clinical discussion, camera-ready manuscript/portfolio; attendance ≥ 85%; • Assessment weighting: data quality & analyses 30%, clinical discussion 30%, manuscript/portfolio 30%, presentation 10%. (A–Fx scale.) • Ongoing supervisor communication and presentation of agreed outputs. Assessment (variant B – Final Professional Internship) - Graded Credit: Grading uses the same A–Fx scale as for the thesis variant (H – graded credit). The assessment is based on:	

- **33%** written assessment from the clinical workplace/host organisation, prepared by the **responsible person at the host site**, confirming the activities actually performed by the student in the prescribed scope;
- **67%** assessment by the **consultant** (academic staff member of the Faculty of Medicine, Comenius University), who evaluates the quality of the **video report** and the **ongoing electronic record/logbook of the internship** (course of the internship, activities performed, and reflection on the application of knowledge, skills and competences);
- **minimum attendance at the internship: $\geq 85\%$.**

The Final Professional Internship may be undertaken only after prior approval by the Faculty of Medicine of both

(i) the internship site and

(ii) the person responsible for the internship at the host organisation.

The internship is carried out under the supervision of the consultant, who provides expert guidance and monitors the progress of the internship in accordance with the learning outcomes of the study programme.

: This course is one of six components of a capstone module that may be completed either as a research-oriented Diploma Thesis (variant A) or as a practice-oriented Final Professional Internship (variant B); in both cases it is designed to demonstrate the student's ability to apply knowledge, skills and competences in real clinical settings.

Produces a **clinical-expert portfolio** (cases, metrics, decisions) ready for **pre-defence**; finalises the thesis in AIS2.

Knowledge:

Reporting standards (**CONSORT/STROBE/PRISMA** as applicable), bias/limitations, translation to practice.

Skills:

Finalising manuscript/portfolio, preparation for review/opponent, graphical and data clarity.

Syllabus (course structure):

Final analysis → discussion → conclusions → formalities & checks → pre-defence.

Abstract in Slovak and English; Introduction; Conclusion; References.

For variant B – Final Professional Internship:

- **final phase** of the student's work at the host workplace, with emphasis on more independent completion of assigned tasks under supervision;
- selection of **key clinical cases and activities** from the internship that best demonstrate the student's ability to apply knowledge, skills and competences;
- detailed processing of these cases and activities into the final form of the internship **record/portfolio** (description, clinical analysis, reflection, benefit for the workplace);

- structuring of the record/portfolio according to the template required by the Faculty of Medicine (introductory part, description of the workplace, activities, case reports, conclusions and recommendations);
- continuous quality and completeness checks of the record by the consultant and the responsible person at the host organisation;
- preparation of supporting documentation for the future assessments (overview of activities, scope of responsibilities, achieved outputs).

Recommended literature:

Internal Regulation No. 32/2023 – Rector's Directive of Comenius University on the essentials of theses, control of originality, storage and accessibility.

Internal Regulation No. 31/2023 – Study Code of the Faculty of Medicine, CU.

Literature selected according to the thesis topic.

Implementing regulations of Comenius University in Bratislava and the Faculty of Medicine governing final theses and final professional internships (once issued), in their up-to-date wording as published on the official websites of Comenius University and the Faculty of Medicine.

The language needed to pass the course: English

Another course information:

The course is designed as a **universal capstone module** of the study programme, which may be completed either in the form of a Diploma Thesis or as a Final Professional Internship, in accordance with the current Slovak higher-education legislation on the final internship as an alternative to a written thesis.

The detailed requirements for both forms (approval of internship sites, responsible person at the host organisation, appointment and role of the academic consultant, structure of the internship record and assessments) will follow the implementing internal regulations of Comenius University in Bratislava and the Faculty of Medicine once issued.

The course is also aligned with **Directive 2005/36/EC** of the European Parliament and of the Council on the recognition of professional qualifications, where it will be identified under the "**Clinical practice**" category.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers: prof. Peter Stanko, MD, PhD.; Assoc. prof. Andrej Thurzo, MD, PhD., MPH, MHA; Michaela Lifková, MD, PhD

Lectures: According to the thesis topic at the clinical department

Practicals: According to the thesis topic at the clinical department

Last update: 11.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Diploma Thesis 6 / Final Professional Internship 6
Type, scope and method of educational activities: <i>Consultations: 90 h/semester</i> <i>Clinical internship: 80 h/semester</i> <i>Independent study: 55 h/semester</i> <i>Delivery: on-site (distance learning is excluded) The above contact hours and credits apply equally to both variants, Diploma Thesis and Final Professional Internship.</i>	
Number of earned credits: 5 ECTS	
Recommended semester/trimester of the study: 10th semester (summer)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Diploma Work 5</i>	
Grading policy: The course is one of six parts of a coherent capstone module that can be completed in two equivalent forms: variant A – Diploma Thesis (a research-oriented written thesis) and variant B – Final Professional Internship (a practice-oriented final internship at an approved workplace with a structured professional record/portfolio). Both variants carry the same number of credits and workload and are alternative ways of meeting the final requirements of the study programme in line with current Slovak higher-education legislation on the final internship. Assessment (variant A – Diploma Thesis) - Graded Credit: Methodology/QA 30%, Data Quality and Reliability 30%, Interpretation 30%, Colloquium 10%. Grading Scale: A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx < 60% • Completion of the thesis/portfolio, internal pre-defence, readiness for AIS submission; attendance ≥ 85%. • Assessment weighting: final outputs & protocol/report concordance 35%, defence 35%, formal requirements 20%, collaboration & deadlines 10%. (A–Fx scale.) Assessment (variant B – Final Professional Internship) - Graded Credit: Grading uses the same A–Fx scale as for the thesis variant (H – graded credit). The assessment is based on:	

- **33%** written assessment from the clinical workplace/host organisation, prepared by the **responsible person at the host site**, confirming the activities actually performed by the student in the prescribed scope;
- **67%** assessment by the **consultant** (academic staff member of the Faculty of Medicine, Comenius University), who evaluates the quality of the **video report** and the **ongoing electronic record/logbook of the internship** (course of the internship, activities performed, and reflection on the application of knowledge, skills and competences);
- **minimum attendance at the internship: $\geq 85\%$.**

The Final Professional Internship may be undertaken only after prior approval by the Faculty of Medicine of both

(i) the internship site and

(ii) the person responsible for the internship at the host organisation.

The internship is carried out under the supervision of the consultant, who provides expert guidance and monitors the progress of the internship in accordance with the learning outcomes of the study programme.

: This course is one of six components of a capstone module that may be completed either as a research-oriented Diploma Thesis (variant A) or as a practice-oriented Final Professional Internship (variant B); in both cases it is designed to demonstrate the student's ability to apply knowledge, skills and competences in real clinical settings.

Manages the entire **clinical-expert** cycle through to **defence**, including committee communication and responses to the opponent's review.

Knowledge:

Integration and presentation skills; principles of defence and working with feedback.

Skills:

Final delivery, time management, professional argumentation, and ethics.

Syllabus (course structure):

Consolidation → internal defence → final edits → submission → preparation for the state defence.

Preparation for the final defence at state-exam level.

For variant B – Final Professional Internship:

- finalisation of the **internship record/portfolio** in accordance with the requirements of Comenius University and the Faculty of Medicine;
- obtaining and integrating the **two assessments** required for the final internship:
 - the assessment by the **consultant** (academic staff member), and
 - the assessment by the **responsible person at the host organisation**, confirming the activities actually performed by the student in line with § 83;

- preparation of a **structured presentation** of the course and outcomes of the internship at state-exam level;
- rehearsal of the **"viva"** on the internship (formulation of key contributions, limitations and recommendations for practice);
- incorporation of feedback from an internal pre-defence (within the clinic/department) into the final version of the presentation and record/portfolio;
- administrative completion of the internship according to internal rules (submission of the record/portfolio and both assessments in the required format).

Recommended literature:

Internal Regulation No. 32/2023 – Rector's Directive of Comenius University on the essentials of theses, control of originality, storage and accessibility.

Internal Regulation No. 31/2023 – Study Code of the Faculty of Medicine, CU.

Literature selected according to the thesis topic.

Implementing regulations of Comenius University in Bratislava and the Faculty of Medicine governing final theses and final professional internships (once issued), in their up-to-date wording as published on the official websites of Comenius University and the Faculty of Medicine.

The language needed to pass the course: English

Another course information:

The course is designed as a **universal capstone module** of the study programme, which may be completed either in the form of a Diploma Thesis or as a Final Professional Internship, in accordance with the current Slovak higher-education legislation on the final internship as an alternative to a written thesis.

The detailed requirements for both forms (approval of internship sites, responsible person at the host organisation, appointment and role of the academic consultant, structure of the internship record and assessments) will follow the implementing internal regulations of Comenius University in Bratislava and the Faculty of Medicine once issued.

The course is also aligned with **Directive 2005/36/EC** of the European Parliament and of the Council on the recognition of professional qualifications, where it will be identified under the **"Clinical practice"** category.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers: prof. Peter Stanko, MD, PhD.; Assoc. prof. Andrej Thurzo, MD, PhD., MPH, MHA; Michaela Lifková, MD, PhD

Lectures: According to the thesis topic at the clinical department

Practicals: According to the thesis topic at the clinical department

Last update: 11.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course Title: First aid
Educational activities: Type of activities: lectures, practicals Lectures: 6 hours/semester (3x2 hours) Practicals/Clinical practice: 12 hours/semester (6x2 hours) Weekly : 2 hours Self-study: 10 hours/semester (self study for exam – written test) Form of education: combined – on-site learning, on-line learning distance learning 2 hours, virtual learning in Simulation centre 2 hours .	
Number of credits: 1	
Recommended semester: 2nd semester , 1st year	
Educational level: joined 1 st and 2 nd level	
Prerequisites: none	
Course requirements: - 100% attendance at the practicals - more than 60 % attendance at the lectures - written test (minimum 60% of correct answers) Final exam: - practical exam: BLS providing on the manikin , AED , airway management, mouth- to mouth breathing, chest compressions, stabile and Fowler, position, asphyxia management. - theoretical exam: written test - FIRST AID , basic life support and emergencies) <u>Test evaluation:</u> A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: <i>Basic principles of providing First Aid. Ethical and legal background when providing first aid. Vital functions, evaluation of clinical state, recognition of the failure of vital functions. Cardiac arrest , recognition and basic life support. Defibrillation Understanding the pathophysiology, pharmacology and clinical importance of basic life support (BLS) . Respiratory arrest, Airway management, Asphyxia, aspiration and its management, Coma, stabile position, Thermal injury, Bleeding and shock, trauma, fractures, acute abdomen, acute coronary syndrome, acute stroke. Activation of emergency system – dispatch.</i> <u>Knowledge:</u> theoretical knowledge - basics in first aid. Resuscitation principles of basic life support , according syllabus. Advanced life support according ERC Guidelines 2025. Defibrillation, intoxication inhaled, alimentary, emergencies and its management.	

Skills/Practicals:

Recognition of cardiac arrest. Evaluation of basic vital functions, Coma, apnoea, asphyxia, cardiovascular collapse, Airway management, double manouver, basics of respiratory management, mouth-to-mouth breathing, manual and artificial ventilation, management of respiratory failure, advanced life support training on the manikin, team work in simulation center. Principles of therapy of circulatory shock, antishock position, stable position. Stop bleeding, clinical monitoring of vital functions, communication and team, emergencies in acute stroke, acute coronary syndrome, bleeding and trauma. Thermal and electric injury. First aid in allergic reaction, anaphylaxis, intoxication.

Syllabus:

1. FIRST AID – targets, ethical and legal principles, position in pre-hospital medicine.
2. Resuscitation and urgent medicine – pathophysiology and rationale background.
3. Vital functions – early recognition of cardiac arrest and respiratory arrest.
4. Basic life support - principles and algorithm.
5. Chest compressions, airway management. Mouth-to-mouth breathing
6. Basic Life support - use of automated external defibrillation (AED).
7. Asphyxia, Heimlich manouver, Gordon manouver
8. Emergencies - acute stroke, acute coronary syndrome, anaphylaxis
9. Coma – evaluation, Glasgow coma score, management and stable position
10. Intoxication, inhaled and alimentary. Diagnostics and management,
11. Advanced Life support – leader in team work. ERC guidelines 2025.
12. Drowning, electric injury, thermal injury.

Recommended literature:

Resuscitation (2021) 1–80: European Resuscitation Council Guidelines for Resuscitation 2025. (www.erc.edu). ERC Guidelines 2025. Circulation 2025 October
 Butterworth JF, Mackey D.C, Wasnick J.D. – Morgan & Mikhail's Clinical Anesthesiology, 5th Edition 2013, Lange medical book 2013, p. 1366, ISBN 978-0-07-181669-4
 Allman K.G, Wilson I.H, Oxford handbook of ANAESTHESIA, third edition, OXFORD university Press, p. 1203, 2014, ISBN 978-0-19-856609-0

Language necessary to complete the course: English

Notes:**Past grade distribution:**

Total number of evaluated students: 30

A	B	C	D	E	FX
a	b	c	d	e	f

Lecturers:

Assoc. Prof. Dr. Roman Záhorec, CSC. – lectures and practicals

Main responsible teacher: Assoc. Prof. Dr. Roman Záhorec, CSC.

Lectures: Assoc. Prof. Dr. Roman Záhorec, CSC.

Practicals/seminars: MUDr. Tomáš Veselovský, MUDr. Daniel Cintula

Date of last change: 30th October 2025

Approved by:

prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM, dekan LF U

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: Basic Clinical Skills, Ethics and Communication
Type, range and form of educational activities: Oral lectures: 12 hours/semester Practical: 30 hours/semester Individual study: 50 hours/semester Method of education: combined - Lectures, e-learning, flipped classroom - On-site learning: simulations and training of professional procedures - Self-study with online support	
Number of credits: 1	
Recommended semester: 1 th semester	
Prerequisites: -	
Subject requirements: - 100% attendance at the practicals - Final exam: practical exam with checklist 100%	
Learning outcomes: By the end of the course, students will be able to: Knowledge 1. Explain the principles of safe, patient-centered clinical care, interprofessional cooperation. 2. Describe the structure and purpose of ABCDE approach, ISBAR, NEWS2, SOCRATES, SOAP 3. Identify the indications, risks, and basic steps of common clinical procedures performed by healthcare teams. Skills 4. Demonstrate correct hand hygiene and use of personal protective equipment (PPE) according to infection control guidelines. 5. Perform accurate measurement and documentation of vital signs (temperature, pulse, blood pressure, respiratory rate, oxygen saturation). 6. Conduct a structured patient assessment using the ABCDE approach in simulated scenarios. 7. Use the ISBAR tool to communicate clinical information effectively during handover or when escalating care. 8. Collect biological samples (blood, urine, swabs) using safe and standardized techniques. 9. Demonstrate safe techniques for administering medications	

10. Document clinical observations and procedures accurately in patient charts. Attitudes & Professionalism 10. Exhibit professional behavior, empathy, and respect when interacting with patients, simulated patients, and healthcare team members. Basic communication skills. 11. Apply safety principles for both patients and healthcare providers in all clinical interactions. 12.
Subject syllabus summary: Introduction to Clinical Skills in Medical Practice Introduction to Clinical Skills in Medical Education - Role of clinical skills in early medical training Patient and Provider Safety - Hand hygiene and infection prevention, Personal protective equipment (PPE), Principles of safe practice and error prevention Introduction to Clinical Communication - Basic communication skills - ISBAR communication tool Structured Clinical Assessment - ABCDE approach: overview and rationale - Recognizing signs of clinical deterioration Vital Signs and Early Warning Signs - Physiology, measurement, and interpretation - Integrating vital signs into patient assessment Specimen Collection and Medication Administration Safety - Blood, urine, and swab collection - Medication Administration Routes Professionalism and Ethics - Confidentiality, respect, empathy, informed consent - Basics of Medical Ethics Documentation Practice - Recording vital signs, procedure notes, observations, imaging Simulation Medicine Basics
Recommended literature: Bickley, L. S. (2020). <i>Bates' guide to physical examination and history taking</i> (13th ed.). Wolters Kluwer. Grežďová, I., Polhorská, M. 2018. Professional nursing procedures 1. Textbook for general medicine study programme. Slovak Academic Press s.r.o., Bratislava, 2018. Polhorská, M. Grežďová, I., 2018. Professional nursing procedures 2. Textbook for general medicine study programme. Slovak Academic Press s.r.o., Bratislava, 2018.
Language necessary to complete the course: English
Notes:
Past grade distribution: Total number of evaluated students:

A	B	C	D	E	FX
a	b	c	d	e	f
.					
Lecturers: <u>Main responsible teacher:</u> MUDr. Silvia Hnilicová, PhD. <u>Lectures and practicals:</u> MUDr. Silvia Hnilicová, PhD., PhDr. Eva Dobiášová, PhD., PhDr. Iveta Grežďová, PhD., doc. PhDr. Anna Mazalánová, PhD., PhDr. Miriam Polhorská, PhD., PhDr. Ivana Vojteková, PhD., Mgr. Mariana Bachanová, doc. RNDr. Pavol Vitovič, PhD., Mgr. Mária Kolesárová, PhD., Mgr. Tomáš Chudý					
Last change: 28.10.2025					
Approved by: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM, dekan LF UK					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: General and Dental Radiology
Type, scope and method of educational activities: Oral lectures: 14 hours/semester Practical: 14 hours/semester Individual study: 50hours/semester Method of education: combined	
Number of earned credits: 3	
Recommended semester/trimester of the study: 6 th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: General Radiology	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Medical Report preparing Assessment of one intraoral and one panoramic X-ray Total grade will be calculated as an average of partial results.	
Courses objectives: <u>Knowledge:</u> - basic principles of radiation protection for dentists - imaging methods used in dentistry - indications and contraindications of intraoral and extraoral X-rays - radiologic anatomy of maxillofacial region and dental tissues - pathological changes in maxillofacial region and dental tissues on X-rays <u>Skills:</u> - assessment of normal panoramic and intraoral X-rays - diagnosis of pathologies in maxillofacial region and dental pathologies based on X-rays - methods and techniques of intraoral and panoramic X-rays	
Syllabus (course structure): Dental X-ray machines. Technical requirements for dental X-ray station. Radiological anatomy of the facial skeleton. General characteristics and classification of pathologies in maxillofacial region (radiolucency/radioopacity), foreign bodies, infections, cysts. Radiology of orthodontic anomalies. Pathology of maxillary sinuses and salivary glands. Fractures in maxillofacial region, systemic disease. Tumors in maxillofacial region. Importance of	

radiology in reconstructive dentistry. Basic criteria for an X-ray image in periodontology.
Radiology of temporo-mandibular joint. Radiology in pediatric dentistry.

Recommended literature:

Anil Ghom: Textbook of Oral Radiology, 2009

Stuart C. White, Michael J. Pharaoh: Oral Radiology Principles and Interpretation 7th edition, 2013

Robert Langlais: Exercises in Oral Radiology and Interpretation 4th edition, 2003

The language needed to pass the course: *English*

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: prof. Viera Lehotská, MD, PhD., MUDr. Vladimír Javorka, PhD.

Practicals: Lucia Vanovčanová, MD, PhD, Richard Lago, MD.

Last update: 30.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course Title: General anesthesiology and anesthetics and sedatives in dentistry
Educational activities: Type of activities: lectures, seminars Lectures: 12 hours/semester Practicals/ seminars: 12 hours/semester Self-study: 20 hours/semester Form of education: combined – on-site learning, on-line learning , seminars, consultations	
Number of credits: 1	
Recommended semester: 5. , 3rd class - winter semester	
Educational level: joined 1 st and 2 nd level	
Prerequisites: <i>First Aid, Physiology and Physics 2</i>	
Course requirements: - 100% attendance at the seminars - 50% attendance on the lectures - 1 written test (minimum 60% of correct answers) Final exam: - seminar exam: writing medical report (anesthetics, analgetics, sedatives) - theoretical exam: 2 question (1 anesthesiology, 1 algesiologiy and procedural sedation) <u>Test evaluation:</u> A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: After the course the student should know principles of anesthesia, analgesia and procedural sedation. How to provide general and locoregional anesthesia, side effects. Management of allergic reaction, side effects of analgetics and sedatives. <u>Knowledge:</u> Basic pharmacology of general and local anesthetics, preparing for anesthesia, principles of procedural sedation and analgesia (PSA), administration of sedatives , side effects and its management. <u>Skills:</u> <i>Airway management, oxygen therapy, routes of administration of the drugs, anesthetics, analgetics, sedatives and hypnotics , dosage, anti-dota. Side-effercts, management of complications</i>	
Syllabus: 1. <i>Introduction, principles of general and locoregional anesthesia. History, novel approaches, applying for dentistry and maxillofacial surgery</i>	

2. *Preparing the patients for anesthesia, sedation and procedural analgesia, Patient's safety – Helsinki declaration of patient safety.*
3. *General and local anesthetics, mechanisms of anesthesia, premedication*
4. *Regional and local anesthesia, safety issues, prevention of complications*
5. *Procedural sedation and analgesia (PSA) in stomatology, protocols for therapy*
6. *Analgetics and sedatives used for PSA, side effects, management of complications. Use of Entonox, practical issues of PSA (procedural sedation and analgesia)*
7. *Airway management in obstruction, asphyxia and apnoea. Basic life support, use of automated external defibrillation,*
8. *Emergencies on ambulance of stomatology: syncope, collapse, allergy, management of toxic reaction to local anesthesia, oxygen supplementation*

Recommended literature:

Butterworth JF, Mackey D.C, Wasnick J.D. – Morgan & Mikhail's Clinical Anesthesiology, 5th Edition 2013, Lange medical book 2013, p. 1366, ISBN 978-0-07-181669-4
 Allman K.G, Wilson I.H, Oxford handbook of ANAESTHESIA, third edition, OXFORD university Press, p. 1203, 2014, ISBN 978-0-19-856609-0

Language necessary to complete the course: English

Notes:

Past grade distribution:

Total number of evaluated students: 30

A	B	C	D	E	FX
a	b	c	d	e	f

Lecturers:

Assoc. Prof. Roman Záhorec, CSc.

Lectures: doc. MUDr. Roman Záhorec, CSc.

Practicals/seminars: MUDr. Tomáš Veselovský, MUDr. Daniel Cintula

Date of last change: 30.10.2025

Approved by: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM, dekan LF UK

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: General pathology and pathological physiology
Type, scope and method of educational activities: Lectures: 30 hours/semester Internships: 50 hours/semester Duration of teaching 2 weeks Number of hours in the first week: 16 hours of lectures (8x2 hours / 21 hours of seminars (7x3 hours), 3 hours of consultations, 1x test Number of hours in the second week: 14 hours of lectures (7x2 hours / 24 hours of seminars (8x3 hours) 2 hours of consultations 1x test Independent study: 20 hours/semester Method of educational activities: combined Full-time teaching	
Number of earned credits: 4	
Recommended semester/trimester of the study: 3rd semester – winter semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Physiology and Physics 1	
Grading policy: 2x written test – at least over 60% 25 questions – “multiple choice” Test rating: A:91-100%, B:81– 99%, C:73 – 80%, D:66 – 72%, E: 60 – 65%, Fx: 59% and less	
Courses objectives: <u>Knowledge:</u> The student will acquire a summary of basic knowledge about the etiopathogenetic mechanisms of the origin and course of diseases and disease states, the basics of general pathophysiology and pathophysiology of individual systems, - the student is able to analyze the relationship between disorders of certain systems and their clinical manifestations, - based on the understanding of causal relationships, the student is able to explain the principles of therapeutic interventions.	

Skills:

The student is able to actively interfere with theoretical and practical models of the function of basic disease states and modify them by applying changed conditions as a result of therapeutic intervention, - The student is able to process the algorithm of the origin and development of basic diseases, - The student is able to integrate knowledge from all completed theoretical disciplines into a complex picture of the origin and development of basic diseases, - Completing pathophysiology develops the student's cognitive skills towards the use of logical and creative thinking, - Practical exercises develop the student's practical skills in using devices for measuring basic clinical parameters, - The student is able to search for and assess the credibility of various sources of scientific and clinical research results.

Course outline (syllabus):

Lectures:

Pathogenesis of heart failure – left and right heart failure.

Pathomechanisms of heart failure therapy.

Ischemic heart disease, myocardial infarction.

Blood pressure regulation, hypertension.

Collapse, shock

Risk factors of cardiovascular diseases

Acute and chronic renal failure.

Hyper and hypothyroidism.

Parathyroid diseases, regulation of calcium metabolism

Diseases of the adrenal glands, hypothalamus and pituitary gland.

Diabetes mellitus, macrovascular and microvascular complications

Cirrhosis and liver failure.

Anemic syndrome, anemias.

General adaptation syndrome, stress.

Cardiac arrhythmias, sudden death.

Seminars:

Disorders of water and electrolyte metabolism (sodium, potassium, calcium, magnesium).

Inflammation, fever, pain.

Acid-base imbalance.

Carcinogenesis. Pathophysiology of malignant tumors.

Pathomechanisms of heart failure and its therapy

Congenital and acquired valvular defects

Endothelial dysfunction, atherosclerosis, stable and unstable AS plaque, complications of AS.

Pulmonary embolism, pulmonary hypertension, cor pulmonale

Obstructive and restrictive lung diseases, pneumonia and respiratory insufficiency.

Hematuria, proteinuria. Nephrotic and nephritic syndrome.

Insulin resistance, diabetes mellitus.

Obesity, metabolic syndrome.

Gastric and duodenal ulcer disease, pancreatitis, ileus.
Leukocyte, platelet and coagulation disorders diseases.
Molecular medicine, intracellular signaling

Recommended literature:

- McPhee, S.J. et al.: Pathophysiology of Disease: Introduction to Clinical Medicine (McGrawHill/LANGE; 2019, 8th edition). - Norris, T.L.: Porth's Pathophysiology: Concepts of Altered Health States. 10th ed. Wolters Kluwer 2019; ISBN 978-1-4963-7755-5. - Silbernagel, S., Lang, F.: Color Atlas of Pathophysiology. New York: Thieme Verl., 2000, 406 p. ISBN 80-7169-968-3. -

The language needed to pass the course: English language

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	B	c	d	e	f

.

Teachers:

Responsible teacher: Prof. MUDr. Fedor Šimko, CSc.

Lectures/seminars: Prof. MUDr. Fedor Šimko, CSc.

Last update: October 28th, 2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: General Psychology, Psychopathology, Neuropathology, and Basics of Communication
Type, scope and method of educational activities: Oral lectures: 24 hours/semester (online) Practical: 24 hours/semester (in person, online) Individual study: 27 hours/semester Method of education: combined	
Number of earned credits: 3	
Recommended semester of the study: 5th semester - winter semester, 3rd year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: No	
Grading policy: 100% attendance at the practicals 1 written test – minimum 60% of correct answers Case study processing and evaluation based on a checklist – minimal achievement 60% Test and case study evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less. The final grade represents the weighted average of the examination (60%) and the case study (40%).	
Courses objectives: Upon successful completion of the course, the student will be able to: • understands the psychological effects influencing patient behaviour and cooperation in dentistry and can use them appropriately in clinical communication, • conduct a focused patient interview and identify relevant anamnestic information regarding potential mental disorders, • differentiate the severity of psychopathological symptoms requiring procedural modification or patient referral. • knows the management of a patient with a mental disorder and the role of the dentist in it, • understand the basic mechanisms of pain (including neuropathic) in the orofacial region and is able to take a focused pain history, • apply the principles of effective, assertive, empathetic and safe communication in typical and challenging clinical situations, • know the methods for stabilising a patient's mental state,	

- collaborate effectively within a team, use the strategies for conflict prevention and de-escalation,
- know the principles and implications of forensic assessment of patients with mental disorders relevant to dentistry.

Knowledge (in terms of knowledge, the student will know and explain):

- The basics of general and developmental psychology, psychology of the patient, the clinician, and the healthcare environment, specifically relevant to dentistry, the personality defence mechanisms.
- Psychopathology with a specific focus on its application in dental practice.
- The aetiology, pathogenesis, epidemiology, and clinical manifestations of mental disorders, along with diagnostic and differential diagnostic procedures for mental disorders relevant to the dentistry (especially anxiety disorders, depressive disorders, eating disorders, and substance use disorders).
- Acute states in psychiatry, the warning signs of suicidality.
- The principles of patient management, the patient journey through the healthcare system, and the specific role of the dentist in the care of patients with mental disorders.
- Forensic principles for the assessment of mental disorders relevant to dentistry.
- The neurobiology and neuropathology of pain in the cranial nerve region: distinguishing between nociceptive and neuropathic pain, central sensitisation, the trigeminal system, Temporomandibular Disorders (TMD), trigeminal neuralgia, Persistent Idiopathic Facial Pain (PIFP), Burning Mouth Syndrome (BMS), and post-procedural neuropathies (IAN/LN).
- Diagnostic and therapeutic interventions in psychiatry, including the mutual influence with dental practice.
- The principles of healthcare communication: establishing rapport, empathy, non-verbal communication, assertive communication, shared decision-making, informed consent, cultural sensitivity, communication with children and patients with special needs, management of conflict, de-escalation techniques, and professional team communication.
- Stabilisation of the patient's mental state within the dental practice, and the principles of anxiety management.

Skills (student is able to):

- Conduct a focused interview with the patient (including a child/parent). Demonstrate the ability to identify relevant data from the patient history (anamnesis) and assess its potential correlation with psychopathological symptoms.
- Identify psychopathological symptoms.
- Assess biological and psychotherapeutic options for influencing mental disorders with a focus on dental practice.
- Know the journey of a patient with a mental disorder in the healthcare system and the role of the dentist in patient management.

- Conduct a structured pain history of orofacial pain, identify signs of neuropathic pain, and indicate referral.
- Educate the patient, disclose unfavourable information, communicate effectively within a team, and use de-escalation techniques.
- Document communication and informed consent clearly and in a legally defensible manner.

Syllabus (course structure):

Lectures (12 × 2 h, 24 h)

1. Introduction to psychology and medical psychology for dental medicine.
2. Developmental psychology, personality, coping mechanisms, adherence; patient typologies.
3. Psychopathology: an overview of mental functions and the identification of their disturbances.
4. Overview of mental disorders and patient management focusing on the dentist's role and potential involvement.
5. Acute states in psychiatry with a focus on dental practice, suicidality, and the aggressive patient.
6. Child patient with a mental disorder and its specifics focusing on the dentist's context.
7. Neuropsychology and neurophysiology of pain.
8. Neuropathology of cranial nerves: the trigeminal system, temporomandibular disorders (TMD), neuralgias, persistent idiopathic facial pain (PIFP), and burning mouth syndrome (BMS).
9. Post-procedural neuropathies (inferior alveolar nerve/lingual nerve - IAN/LN), complex regional pain syndrome (CRPS); prognosis and communication of uncertainty.
10. Healthcare communication I: specifics of communication with a patient with a mental disorder, informed consent, shared decision-making, and cultural competence.
11. Healthcare communication II: complaints, conflicts, the aggressive/frustrated patient, assertiveness, de-escalation.
12. Healthcare communication III: communication in team, self-reflection, managing own emotions, and burnout prevention.

Practicals (5 × 4 h + 4 hours distance learning, 24 h):

1. The journey of a patient with a mental disorder within the healthcare system and the involvement of the dentist.
2. Taking a history from a patient with a mental disorder, conducting an interview, effective communication, explaining risks, prognosis and uncertainties, communicating adverse news, documentation and consent.
3. Identification of psychopathological symptoms in patients with anxiety and mood disorders, and in patients presenting with orofacial pain. Management of acute anxiety in the dentistry.

4. Practice of de-escalation techniques, simulated interview with patient focused on conflict de-escalation, and a personal mental hygiene plan.
5. Child patient with a mental disorder, conducting interview with the patient and the parent.

Self-Study / Independent Study: (27 h): Study modules/chapters, preparation for simulated learning/education, and short case reports.

Recommended literature:

Cernitanu M., Etco C.: Medical Psychology. Editorial-Polygraphic Center Medicina, Chisinau, 2011 (online).

Kolibáš, E. a kol.: Introduction to clinical psychiatry. Bratislava: Asklepios, 1996. 107 pp. ISBN 80-967610-0-5.

Semple, D. – Smyth, R.: Oxford Handbook of Psychiatry, 3rd Edition. Oxford University Press, 2013. 1057 pp. ISBN 978-0-19-969388-7.

Sadock, B. J. – Sadock, V. A.: Kaplan and Sadock's Synopsis of Psychiatry, 10th Edition. Lippincott Williams & Wilkins, 2010. 1470 pp. ISBN 9780781773270 (or newer edition).

Current study materials, articles, and video presentations provided by teachers as part of e-learning.

The language needed to pass the course: English

Another course information:

The course is delivered within the Dental Medicine programme (English language) only during the winter semester. The practicals are provided via block teaching, and the course assessment is conducted only after the completion of course during the examination period.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Lectures: prof. MUDr. Ján Pečenák, CSc., doc. MUDr. Ľubomíra Izáková, PhD., doc. MUDr. Mária Kráľová, CSc., doc. Mgr. Michal Hajdúk, PhD., doc. MUDr. Jana Trebatická, PhD., doc. MUDr. Andrej Thurzo, PhD., MPH, MHA.

Practicals: prof. MUDr. Ján Pečenák, CSc., doc. MUDr. Ľubomíra Izáková, PhD., doc. MUDr. Mária Kráľová, CSc., doc. Mgr. Michal Hajdúk, PhD., doc. MUDr. Jana Trebatická, PhD., MUDr. Zuzana Matzová, PhD., MUDr. Vanda Valkučáková, MPH., MUDr. Gabriela Bezáková, MUDr. Nana Halajová, Mgr. Daniel Dančík, PhD., Mgr. Natália Čavojská, PhD.

Last update: 25.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: General Surgery 1
Type, scope and method of educational activities: <i>Lectures/consultations: 24 hours/semester</i> <i>Practical classes/seminars: 35 hours/semester</i> <i>Self-study: 16 hours/semester</i> <i>Delivery: on-site; in exceptional cases blended (on-site + distance). Any exceptional distance sessions are synchronous only.</i> <i>(Primarily on-site: 24 h lectures + 35 h practicals; distance only exceptionally and synchronously.)</i>	
Number of earned credits: 3	
Recommended semester/trimester of the study: <i>5th semester (winter), 3rd year</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Immunology, Fundamentals of Clinical Medicine, Ethics and Communication	
Grading policy: Credit awarded for attendance (ABS), no exam. Minimum 90% attendance in practicals; active participation. Completion of mini-case reports/checklists (history, physical exam, asepsis).	
Courses objectives: <i>Understands pre-/peri-/post-operative care, performs basic surgical assessment (ABCDE), manages wounds and shock at entry level, applies asepsis/antisepsis, hemostasis, infection prevention, basics of fluid therapy, transfusion medicine, analgesia and antibiotic prophylaxis.</i> Knowledge: Asepsis/antisepsis; wound types and first aid; shock and basic resuscitation; hemostasis and bleeding; blood products; peri-operative analgesia and antibiotic prophylaxis; fluids/electrolytes; patient safety (WHO checklist); common complications and prevention. Skills: Surgical history and basic physical exam (incl. vitals, ABCDE); sterile field preparation and dressings; venipuncture/IV access on models; basic knot-tying and suturing on simulators; drafting simple DDx and post-op watchlists.	
Syllabus (course structure): <i>Introduction to Surgery and Patient Safety (WHO SSC). Asepsis/Antisepsis; Hand Hygiene; Barrier Precautions. Wounds – Types, Primary Treatment, Tetanus. Bleeding and Hemostasis; Coagulation – Basics. Shock, ABCDE, Overview of Resuscitation Procedures. Fluids and Electrolytes; Perioperative Hydration. Transfusion Products and Indications. Analgesia and</i>	

Basic Principles of Sedation (Overview). Antibiotic Prophylaxis; Antimicrobial Strategy. Perioperative Care and Complications (PONV, SSI, VTE). Basics of Traumatology – Primary Triage and Immobilization. Practicals: Knots, Suturing, Dressings, IV Access – possibly simulation center.*

Recommended literature:

- *Cameron, J.: Current Surgical Therapy. 8th ed. London: Churchill Livingstone, 2004,*
- *Coran G. Arnold et al.: Pediatric Surgery, Vol. 1, 2, Elsevier 2012,*
- *Sabiston Textbook of Surgery 20th Edition, Elsevier 2016*
- *Zacharias Zachariou: Pediatric Surgery Digest, Springer 2009*

Core textbooks

- ***Sabiston Textbook of Surgery*** (Elsevier). Comprehensive, evidence-based core for general surgery.
- ***Schwartz's Principles of Surgery*** (McGraw Hill). Classic foundations text; strong on physiology and decision-making.
- ***Bailey & Love's Short Practice of Surgery*** (CRC Press/Taylor & Francis). Concise, clinically oriented overview.
- ***Current Surgical Therapy*** — Cameron & Cameron (Elsevier). Treatment-focused, chaptered by condition ("what to do now").

Operations & practical skills

- ***Kirk's General Surgical Operations*** (Elsevier). Step-by-step operative guidance; good complement to ward/OR exposure.
- ***Kirk's Basic Surgical Techniques*** (Elsevier). Knots, suturing, tissue handling—ideal for simulation practice.

Handbooks / quick reference

- ***Oxford Handbook of Clinical Surgery*** (OUP). Pocketable peri-/post-op management, emergencies, procedures.
- ***The Washington Manual of Surgery*** (Wolters Kluwer). Concise algorithms for common surgical problems.

Trauma & acute care

- ***ATLS® Student Course Manual*** (American College of Surgeons). Standard for initial trauma assessment (ABCDE) and early management.

Infection & perioperative antimicrobials

- **The Sanford Guide to Antimicrobial Therapy** (annual). Practical empiric/targeted therapy and prophylaxis tables.

The language needed to pass the course: *English*

Another course information:

*First term is **credit only (ABS)**; the follow-up course ends with an **exam**.*

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Dr. h. c. Prof. Štefan Durdík, MD, PhD, MHA, MPH

Lectures: Assoc. Prof. R. Králik, MD, PhD; Prof. J. Koller, MD, CSc.; Assoc. Prof. R. Záhorec, MD, CSc.; Prof. Š. Durdík, MD, PhD; Prof. M. Kokavec, MD, PhD; Assoc. Prof. M. Sabol, MD, PhD; Assoc. Prof. Ľ. Danihel, MD, PhD; J. Sekáč, MD, PhD; D. Dyttert, MD, PhD; R. Donát, MD, PhD.

Practicals: J. Sekáč, MD, PhD; I. Majeský, MD, PhD; R. Muránska, MD; P. Štefánik, MD; I. Lajmonová, MD; M. Ježovít, MD; P. Levčík, MD; J. Bujňáková, MD.

Last update: 24.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: General Surgery 2
Type, scope and method of educational activities: <i>Lectures/consultations: 24 hours/semester</i> <i>Practical classes/seminars: 35 hours/semester</i> <i>Self-study: 40 hours/semester</i> <i>Delivery: on-site; in exceptional cases blended (on-site + distance). Any exceptional distance sessions are synchronous only</i>	
Number of earned credits: 4	
Recommended semester/trimester of the study: <i>6th semester (summer), 3rd year</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: General Surgery 1	
Grading policy: <i>Final exam (S): written + oral.</i> <i>At least 60% in the written part to proceed to the oral.</i> Grading (written): A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx ≤59%. <i>Final grade combines written and oral components.</i>	
Courses objectives: <i>Integrates knowledge to perform basic independent surgical assessment, recognises life-threatening states, proposes initial management, understands peri-operative anticoagulation/antiplatelet management for minor procedures and basics of surgical infectiology, sepsis, VTE and post-operative complications.</i>	
Knowledge: Principles of acute abdomen; sepsis and antibiotic strategy; VTE and prophylaxis; peri-operative management of comorbidities; burns and soft-tissue trauma; post-op complications ; basics of surgical oncology (staging, nodes).	
Skills: Focused surgical exam and triage ; outline of initial treatment and safe referral; dressings/drains on models; rational ATB prophylaxis ; anticoagulation handling for minor surgical procedures.	
Syllabus (course structure): <i>Acute Conditions in Surgery – Principles (without organ-specific details). Sepsis and Surgical Infectiology; Specimen Collection; Antibiotic (ATB) Strategy. VTE (Venous Thromboembolism): Risk Stratification and Prophylaxis. Perioperative Management of DM (Diabetes Mellitus),</i>	

Steroids, Anticoagulants/Antiplatelets. Postoperative Complications: Bleeding, SSI (Surgical Site Infection), PONV (Postoperative Nausea and Vomiting), DVT/PE (Deep Vein Thrombosis/Pulmonary Embolism). Burns – Classification and Initial Management. Soft Tissue Injuries, Basic Principles of Immobilization. Basics of Oncosurgery (Staging, Ro/R1, Sentinel) – for Clinical Reasoning. Practicals: Wound Complications, Drains, Dressings, Documentation. OSCE-style Practice: ABCDE, Triage, Communication during Referral. (Selection from former "Surgery 1–3" without special surgery; supplemented with anticoagulation and safety standards.)

Recommended literature: Cameron, J.: *Current Surgical Therapy*. 8th ed. London: Churchill Livingstone, 2004,

- Coran G. Arnold et al.: *Pediatric Surgery*, Vol. 1, 2, Elsevier 2012,
- *Sabiston Textbook of Surgery* 20th Edition, Elsevier 2016
- Zacharias Zachariou: *Pediatric Surgery Digest*, Springer 2009

Core textbooks

- ***Sabiston Textbook of Surgery*** (Elsevier). Comprehensive, evidence-based core for general surgery.
- ***Schwartz's Principles of Surgery*** (McGraw Hill). Classic foundations text; strong on physiology and decision-making.
- ***Bailey & Love's Short Practice of Surgery*** (CRC Press/Taylor & Francis). Concise, clinically oriented overview.
- ***Current Surgical Therapy*** — Cameron & Cameron (Elsevier). Treatment-focused, chaptered by condition ("what to do now").

Operations & practical skills

- ***Kirk's General Surgical Operations*** (Elsevier). Step-by-step operative guidance; good complement to ward/OR exposure.
- ***Kirk's Basic Surgical Techniques*** (Elsevier). Knots, suturing, tissue handling—ideal for simulation practice.

Handbooks / quick reference

- ***Oxford Handbook of Clinical Surgery*** (OUP). Pocketable peri-/post-op management, emergencies, procedures.
- ***The Washington Manual of Surgery*** (Wolters Kluwer). Concise algorithms for common surgical problems.

Trauma & acute care

- **ATLS® Student Course Manual** (American College of Surgeons). Standard for initial trauma assessment (ABCDE) and early management.

Infection & perioperative antimicrobials

- **The Sanford Guide to Antimicrobial Therapy** (annual). Practical empiric/targeted therapy and prophylaxis tables.

The language needed to pass the course: *English*

Another course information:

*First term is **credit only (ABS)**; the follow-up course ends with an **exam**.*

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Dr. h. c. Prof. Štefan Durdík, MD, PhD, MHA, MPH

Lectures: Assoc. Prof. G. Prochotský, MD, PhD; Prof. J. Koller, MD, CSc.; Assoc. Prof. R. Záhorec, MD, CSc.; Prof. Š. Durdík, MD, PhD; Prof. M. Kokavec, MD, PhD; Assoc. Prof. M. Sabol, MD, PhD; Assoc. Prof. L. Danihel, MD, PhD; Štefan Nemergut, MD; D. Dyttert, MD, PhD; R. Donát, MD, PhD.

Practicals: J. Sekáč, MD, PhD; I. Majeský, MD, PhD; R. Muránska, MD; P. Štefánik, MD; I. Lajmonová, MD; M. Ježovít, MD; P. Levčík, MD; J. Bujňáková, MD.

Last update: 24.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: <i>Gnathology and basics of prosthetics (bite and jaw function)</i>
Type, scope and method of educational activities: Lectures: <i>12 hours /semester</i> Practicals: <i>24 hours /semester</i> Individual study: <i>65 hours /semester</i> Method of education: <i>combined</i>	
Number of credits: 4	
Recommended semester/trimester of study: 5th semester	
Study degree: 1 st + 2 nd level	
Prerequisite courses: <i>Dental materials, equipment and simulations 4</i>	
Grading policy: - 100 % attendance at practicals - Oral exam with 2 questions, student has 10 min. for prepare	
Courses objectives: <u>Knowledge:</u> <i>Defects of dental arch, conservative and periodontologic preprosthetic prepare.</i> <u>Skills:</u> <i>Model analysis, impression types.</i>	
Syllabus (course structure): Lectures: <i>Gnathology, basic knowledge about prosthetic dentistry, defects of dental arch.</i> Practicals: <i>Work with facial arch. Hygienic and disinfection programme in terms of dental prosthetics.</i>	
Recommended literature: - <i>Shillingburg, Jr, H. T., Sather Jr, D. A., Wilson Jr, E. L., Cain J. R., Mitchell D. L., Blanco L. J., Kessler J.</i> <i>C.: Fundamentals of Fixed Prosthodontics. 2012, Quintessence Publishing.</i> Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. 13th ed. St. Louis, MO: Elsevier; 2016. Eaton K, Ower P. Practical Periodontics. 1st ed. Edinburgh, UK: Elsevier; 2015. Hargreav -Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. 13th ed. St. Louis, MO: Elsevier; 2016. -Carr A.B., Brown D.T.: McCracen's Partial Removable Prosthodontics. 13th ed. 2016 Elsevier. -Mitchell L., Mitchell A.D., McCaul L. : Oxford Handbook of Clinical Dentistry. 5th ed. Oxford , Oxford University Press, 2009, 761 pp. ISBN 978-0-19-955330-3	

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201for

Edentulous Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012

for Edentulous Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012

for Edentulous Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201

for Edentulous Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 20

The language needed to pass the course: English

Notes: *subject provided in summer semester only*

Evaluation of course:

Number of students:

A	B	C	D	E	FX

Teachers:

Lectures: *prof. MUDr. Peter Stanko, PhD., MDDr. Michaela Lifková, PhD.*

Practicals: *MDDr. Michaela Lifková, PhD., MUDr. Halyna Pruts, PhD., MDDr. Nikos Leptos, MUDr. Peter Rendek*

Last update: : 28.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Immunology
Type, scope and method of educational activities: Oral lectures: 24 hours/semester Practical: 18 hours/semester Individual study: 35 hours/semester Method of education: combined (in-person instruction + study materials provided in MS Teams)	
Number of earned credits: 3	
Recommended semester/trimester of the study: 3rd semester - winter, 2nd year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: No prerequisite course is required.	
Grading policy: Attendance at practical classes is mandatory; one excused absence is permitted. In addition to attendance during the semester, students are required to complete two tests, each with a minimum passing score of 70%. The final examination is conducted in a dual format: a written MCQ test (minimum 75%) and an oral examination (successful answers to two randomly selected questions). The final grade is determined as the average of the written and oral exam results.	
Courses objectives: <u>Knowledge:</u> The aim is for the student, upon completing the course, to be able to: -explain the fundamental principles of innate and adaptive immunity and their role in maintaining organismal homeostasis, -describe the cellular and molecular mechanisms of the immune response, -characterize the main types of hypersensitivity reactions, autoimmune, and immunodeficiency diseases, -clarify the role of the immune system in the etiopathogenesis of inflammatory processes and infections in the oral cavity, - explain the immunological principles of vaccination, transplantation, and immunotherapy.	
<u>Skills:</u> -recognize and practically manage the treatment of an anaphylactic reaction,	

- interpret basic results of immunological laboratory tests (e.g., determination of immunoglobulin levels, CRP, or presence of autoantibodies),
- apply immunological knowledge in the diagnosis and treatment of oral infections, periodontal diseases, and allergic reactions,
- identify clinical situations in which immunological testing of a patient is indicated,
- apply principles of scientific and critical thinking when evaluating new immunological findings relevant to dentistry.

Syllabus (course structure):

1.
Introduction to the study of immunology. Immune system – definition, structure, and function. Characteristics of innate and adaptive immune responses. Organs, tissues, cells, and molecules of the immune system. Antigen – characteristics and properties.
2.
B lymphocytes. Structure and function of individual classes of immunoglobulins. Primary and secondary antibody response. Fundamentals of antibody formation. Disorders of antibody production. Monoclonal and polyclonal antibodies.
3.
Complement system – classical, alternative, and lectin activation pathways. Vasoactive and chemotactic substances. Regulatory proteins. Receptors for individual components and fragments. Biological significance of the complement system. Disorders of the complement system. Participation of complement in immunopathological reactions.
4.
The process of phagocytosis (chemotaxis, opsonization, ingestion, killing mechanisms). NETosis. Origin and differentiation of macrophages. Molecular patterns of microorganisms (PAMPs), alarmins, and DAMPs, and their recognition (PRRs). Inflammation – infectious and non-infectious. Acute-phase proteins of inflammation.
5.
Major membrane molecules and their significance. Genetic map of the HLA complex, HLA molecules – biochemical structure, distribution, and inheritance. Biological and medical importance of the HLA complex. Role of the HLA complex in transplant immunology.
6.
T lymphocytes and their subpopulations. Regulatory and memory lymphocytes. ILCs and unconventional lymphocytes. Endogenous and exogenous pathways of protein antigen presentation. Other modes of antigen presentation.
7.
General characteristics and classification of cytokines. Cytokines regulating innate immunity. Pro-inflammatory, anti-inflammatory, and regulatory cytokines. Systemic inflammation, sepsis, severe sepsis, and septic shock. Chemokines and growth factors.
8.
Cytokines of adaptive immunity. Cytokines involved in Th lymphocyte polarization. Role of

cytokines in the development of immune responses. Adaptive cellular and humoral immune responses. Th1, Th2, Th9, Th17, and Th22 immunity. Defense mechanisms against intracellular and extracellular microorganisms, viruses, and fungi.

9.

Definition and classification of hypersensitivity states. Type I hypersensitivity reactions – pathophysiology. Atopy, allergy, allergens. Mediators of allergic reactions. Clinical manifestations of allergy. Anaphylactic shock and non-IgE-mediated pseudoallergies (anaphylactoid reactions). Treatment of allergies and anaphylactic shock. Histamine intolerance.

10.

Type II hypersensitivity reactions – drug reactions, post-transfusion reactions, Rh incompatibility and its prevention. Type III hypersensitivity reactions – serum sickness, Arthus reaction. Type IV hypersensitivity reactions – contact and photoallergic dermatitis. Type V hypersensitivity reactions – Graves' disease and myasthenia gravis.

11.

Central and peripheral tolerance. Physiological and pathogenic autoimmunity. Pathogenetic mechanisms of autoimmune processes and the role of antigens. Organ-specific and non-specific autoimmune disorders. Genetic predisposition to autoimmune diseases. Manifestations of autoimmunity in the oral cavity. Autoinflammatory diseases.

12.

General manifestations, occurrence, and classification of immunodeficiencies. Congenital immune disorders. Acquired immunodeficiency conditions. AIDS. Characteristics and genes of HIV. Interaction of HIV with immune system cells. Clinical stages of HIV infection and AIDS. Laboratory diagnosis and therapy of HIV infection. Mechanisms of immunity in the oral cavity. Manifestations of immunodeficiency conditions in the oral cavity.

Recommended literature:

Buc M., Javor J.: Basic and Clinical Immunology for Dentistry Students. Bratislava: Comenius University 2017, 315 pp.

Shawkatová I. et al. Laboratory methods in Immunology, Bratislava: Comenius University 2014, 128 pp.

Video presentations and pdf files of lectures in MS Teams.

The language needed to pass the course: English

Another course information:

Vyučujúci:

Prednášky: doc.MUDr. Richard Imrich, DrSc, doc. RNDr. Vladimíra Ďurmanová, PhD., doc. Mgr. Ivana Shawkatová, PhD., MUDr. Juraj Javor, PhD.

Praktická výučba: MUDr. Juraj Javor, PhD., MUDr. Michalela Kopčová, PhD., MUDr. Zuzana Párnická, PhD., MUDr. Magda Suchánková

Last update: 27.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Internal and Pediatric Medicine 1
Lectures: 36 hours/semester Practical sessions/clinical placements: 45 hours/semester Independent study: 40 hours/semester Teaching methods: Combined (lectures, seminars, clinical training)	
Number of earned credits: 5	
Recommended semester/trimester of the study: 5th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: General pathology and pathophysiology, Chemistry and Biochemistry 2	
Grading policy: 100% attendance at practicals and clinical placements Passing the midterm test with at least 60% Successful completion of the final test Grading scale: A: 91–100%, B: 81–90%, C: 73–80%, D: 66–72%, E: 60–65%, Fx: 59% and below	
Courses objectives: Knowledge: The student demonstrates understanding of the fundamental diseases of internal organs in both adults and children that are relevant to dental practice. In particular, the student masters the principles of clinical propedeutics, including medical history taking and physical examination in adults and children; understands the mechanisms of homeostasis, inflammation, fever, and pain; comprehends the etiology, pathophysiology, clinical manifestations, basic diagnostics, and treatment of respiratory, cardiovascular, and hematopoietic disorders; knows the principles of acid-base and electrolyte imbalances; understands the fundamentals of metabolic diseases (such as diabetes mellitus, dyslipidemia, and obesity) and their relationship to oral health; is familiar with common infectious diseases relevant to dentistry (including head and neck infections, streptococcal infections, endocarditis, viral hepatitis, HIV infection, tuberculosis, and upper respiratory tract infections); understands the basics of antimicrobial therapy and antibiotic prophylaxis in dental practice; understands the fundamentals of hematology (including anemias, hemostatic disorders, and bleeding risks associated with dental procedures); understands the basics of pediatric physiology, growth, nutrition, and immunity, as well as the specific	

characteristics of childhood diseases; and is aware of genetic disorders affecting the orofacial region and tooth development in children.

Skills:

The student is able to: perform a basic physical examination (general, cardiac, respiratory, abdominal, and neurological); assess vital signs (pulse, blood pressure, respiratory rate, oxygen saturation, and body temperature) and interpret deviations from normal values; evaluate the general condition of patients and identify individuals at high risk prior to dental procedures; interpret basic laboratory parameters (hemoglobin, leukocyte count, C-reactive protein, glucose, creatinine, ALT, AST); understand the principles and indications for referral to internal medicine or pediatric consultation; apply infection prevention and patient safety principles; and communicate effectively with pediatric patients and their parents, using an approach appropriate to the child's age and clinical situation.

Syllabus (course structure):

The course provides an overview of the fundamental principles of internal medicine and pediatrics relevant to dental practice. Students are introduced to clinical propedeutics, physical examination techniques, and the recognition of key symptoms of internal diseases in adults and children. Core pathophysiological mechanisms—including fever, inflammation, pain, and disturbances of homeostasis—are discussed with emphasis on their clinical relevance.

Major topics encompass cardiovascular, respiratory, hematologic, metabolic, and infectious diseases, particularly those that affect oral health or have implications for dental procedures. The pediatric component focuses on the specific features of child physiology, growth and development, nutrition, immunity, and common acute and infectious diseases. Practical training emphasizes the acquisition of essential clinical skills, including physical examination, assessment of vital signs, interpretation of laboratory findings, evaluation of patient risk, and effective communication. Principles of infection control and patient safety are integral elements of the course.

Recommended literature:

Internal medicine:

Jameson J. L., Fauci A. S., Kasper D. L., Hauser S. L., Longo D. L., Loscalzo J. *Harrison's Manual of Medicine*. 20th Edition. New York: McGraw-Hill Education, 2020.

Longmore M., Wilkinson I., Baldwin A., Wallin E. *Oxford Handbook of Clinical Medicine*. 11th Edition. Oxford: Oxford University Press, 2024.

Pediatrics:

Tasker R. C., Acerini C. L., Holloway E., Shah A., Lillitos P. *Oxford Handbook of Paediatrics*. 3rd Edition. Oxford: Oxford University Press, 2021.

Marc Dante K. J., Kliegman R. M., Schuh A. *Nelson Essentials of Pediatrics*. 9th Edition. Philadelphia: Elsevier, 2022.

The language needed to pass the course: <i>English</i>					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
.					
Teachers: Teachers: Lectures: Internal medicine: Prof. MUDr. Peter Pontůch, CSc., Assoc. Prof. MUDr. Peter Sabaka, PhD, Assoc. Prof. MUDr. Igor Stankovič, MUDr. Miroslav Budaj, PhD, MUDr. Matej Bendžala, PhD, Prof. MUDr. Angelika Bátorová, CSc., Assoc. Prof. MUDr. Peter Rohoň, PhD., Assoc. Prof. MUDr. Mária Tamášová, CSc., MUDr. Helena Novosadová, PhD., Practicals: Assoc. Prof. MUDr. Jozef Kalužay, PhD., MUDr. Patrícia Dragunová, MUDr. Nikoleta Hulajová, MUDr. Karol Laktiš, CSc., MUDr. Svetlana Bodíková, PhD., MPH, MUDr. Veronika Pokorná, PhD., MUDr. Margita Pirošová, MUDr. MUDr. Ján Jurenka., MUDr. Mohammad Dababseh, MUDr. Miroslav Budaj, PhD., Firas Farkaš, PhD., MUDr. Katarína Slezáková, PhD, MUDr. Eva Tedlová, PhD., MUDr. Zuzana Štrbová, PhD. Pediatrics: Lectures: Prof. MUDr. Ľ. Podracká, CSc., Assoc. Prof. MUDr. P. Čižnár, PhD., Assoc. Prof. MUDr. T. Dallos, PhD., Assoc. Prof. MUDr. J. Staník. PhD., MUDr. Z. Pribilincová, PhD, MUDr. E. Vitáriušová, PhD., MUDr. Ľ. Tichá, PhD., Prof. MUDr. Brucknerová, PhD., MUDr. Hornová, PhD. Practicals: MUDr. K. Repová, PhD., MUDr. D. Lobotková, PhD., MUDr. E. Vitáriušová, PhD, MUDr. J. Hornová, PhD., MUDr. Ľ. Tichá, PhD., MUDr. K. Karľová, PhD., MUDr. D. Csomai, PhD, MUDr. Z. Pribilincová, PhD., MUDr.L. Krajčovičová, MUDr. S. Smahová Garants (or Course Coordinators/Heads): Assoc. Prof. MUDr. Peter Sabaka, PhD. (Internal medicine) Assoc. Prof. MUDr. Tomáš Dallos, PhD. (Pediatrics)					
Last update: 24.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Internal and Pediatric Medicine 2
· Lectures: 36 hours/semester · Practical sessions/clinical placements: 45 hours/semester · Independent study: 40 hours/semester · Teaching methods: Combined (lectures, seminars, clinical training)	
Number of earned credits: 5	
Recommended semester/trimester of the study: 6 th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Internal Medicine and Pediatrics 1</i>	
Grading policy: 100% attendance at practicals and clinical placements Passing the midterm test with at least 60% Successful completion of the final test Grading scale: A: 91–100%, B: 81–90%, C: 73–80%, D: 66–72%, E: 60–65%, Fx: 59% and below	
Courses objectives: <u>Knowledge:</u> The student understands the fundamental diseases of internal organs in adults and children that are relevant to dental practice. Specifically, the student masters the principles of clinical propedeutics, including medical history taking and physical examination in adults and children; understands the mechanisms of homeostasis, inflammation, fever, and pain; comprehends the etiology, pathophysiology, clinical manifestations, and basic diagnostics and treatment of respiratory, cardiovascular, and hematopoietic disorders; knows the principles of acid–base and electrolyte imbalances; understands metabolic diseases (such as diabetes mellitus, dyslipidemia, and obesity) and their relationship to oral health; is familiar with common infectious diseases relevant to dentistry (including head and neck infections, streptococcal infections, endocarditis, viral hepatitis, HIV infection, tuberculosis, and upper respiratory tract infections); understands the principles of antimicrobial therapy and antibiotic prophylaxis in dentistry; knows the basics of hematology (including anemias, hemostatic disorders, and bleeding risks in dental procedures); understands pediatric physiology, growth, nutrition, immunity, and specific	

characteristics of childhood diseases; is aware of genetic disorders affecting the orofacial region and tooth development in children.

Skills: The student is able to: perform a basic physical examination (general, cardiac, respiratory, abdominal, and neurological); assess vital signs (pulse, blood pressure, respiratory rate, oxygen saturation, and body temperature) and interpret deviations from normal values; evaluate the general condition of patients and identify high-risk individuals prior to dental procedures; interpret basic laboratory parameters (hemoglobin, leukocyte count, C-reactive protein, glucose, creatinine, ALT, AST); understand the principles and indications for referral to internal medicine or pediatric consultation; apply infection prevention and patient safety principles; and communicate effectively with pediatric patients and their parents, using an approach appropriate to the child's age and clinical situation.

Syllabus (course structure):

The course introduces the fundamental principles of internal medicine and pediatrics relevant to dental practice. Students learn the basics of clinical propedeutics, physical examination, and the recognition of key symptoms of internal diseases in adults and children. Core pathophysiological mechanisms—such as fever, inflammation, pain, and disturbances of homeostasis—are presented with emphasis on their clinical relevance.

Major topics include cardiovascular, respiratory, hematologic, metabolic, and infectious diseases, particularly those that affect oral health or influence the management of dental procedures. The pediatric component focuses on the specific aspects of child physiology, growth and development, nutrition, immunity, and common acute and infectious diseases.

Practical training highlights the development of essential clinical skills, including physical examination, assessment of vital signs, interpretation of laboratory findings, risk evaluation, and effective communication. Principles of infection prevention and patient safety form an integral part of the course.

Recommended literature:

Internal medicine:

Jameson J. L., Fauci A. S., Kasper D. L., Hauser S. L., Longo D. L., Loscalzo J. *Harrison's Manual of Medicine*. 20th Edition. New York: McGraw-Hill Education, 2020.

Longmore M., Wilkinson I., Baldwin A., Wallin E. *Oxford Handbook of Clinical Medicine*. 11th Edition. Oxford: Oxford University Press, 2024.

Pediatrics:

Tasker R. C., Acerini C. L., Holloway E., Shah A., Lillitos P. *Oxford Handbook of Paediatrics*. 3rd Edition. Oxford: Oxford University Press, 2021.

Marcdante K. J., Kliegman R. M., Schuh A. *Nelson Essentials of Pediatrics*. 9th Edition. Philadelphia: Elsevier, 2022.

The language needed to pass the course: <i>English</i>					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
.					
Teachers:					
Lectures:					
Internal medicine: Prof. MUDr. Peter Pontúch, CSc., Assoc. Prof. MUDr. Peter Sabaka, PhD, Assoc. Prof. MUDr. Igor Stankovič, MUDr. Miroslav Budaj, PhD, MUDr. Matej Bendžala, PhD, Prof. MUDr. Angelika Bátorová, CSc., Assoc. Prof. MUDr. Peter Rohoň, PhD., Assoc. Prof. MUDr. Mária Tamášová, CSc., MUDr. Helena Novosadová, PhD.,					
Practicals: Assoc. Prof. MUDr. Jozef Kalužay, PhD., MUDr. Patrícia Dragunová, MUDr. Nikoleta Hulajová, MUDr. Karol Laktiš, CSc., MUDr. Svetlana Bodíková, PhD., MPH, MUDr. Veronika Pokorná, PhD., MUDr. Margita Pirošová, MUDr. MUDr. Ján Jurenka., MUDr. Mohammad Dababseh, MUDr. Miroslav Budaj, PhD., Firas Farkaš, PhD., MUDr. Katarína Slezáková, PhD, MUDr. Eva Tedlová, PhD., MUDr. Zuzana Štrbová, PhD.					
Pediatrics: Lectures: Prof. MUDr. Ľ. Podracká, CSc., Assoc. Prof. MUDr. P. Čižnár, PhD., Assoc. Prof. MUDr. T. Dallos, PhD., Assoc. Prof. MUDr. J. Staník. PhD., MUDr. Z. Pribilincová, PhD, MUDr. E. Vitáriušová, PhD., MUDr. Ľ. Tichá, PhD., Prof. MUDr. Brucknerová, PhD., MUDr. J. Hornová, PhD.					
Practicals: MUDr. K. Repová, PhD., MUDr. D. Lobotková, PhD., MUDr. E. Vitáriušová, PhD, MUDr. J. Hornová, PhD., MUDr. Ľ. Tichá, PhD., MUDr. K. Karl'ová, PhD., MUDr. D. Csomai, PhD, MUDr. Z. Pribilincová, PhD., MUDr.L. Krajčovičová, MUDr. S. Smahová					
<u>Garants</u> (or Course Coordinators/Heads): Assoc. Prof. MUDr. Peter Sabaka, PhD. (Internal medicine) Assoc. Prof. MUDr. Tomáš Dallos, PhD. (Pediatrics)					
Last update: 24.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Medical microbiology
Type, scope and method of educational activities: Oral lectures: 24 hours/semester Practical: 36 hours/semester Individual study: 90 hours/semester Method of education: combined Type of activities: lecture / practicals Form of the course: in person	
Number of earned credits: 6	
Recommended semester of the study: 4th semester (summer), 2nd year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Biology, genetics and regenerative medicine 2	
Grading policy: Practicals: - 100% attendance at the practicals - 2 written credit tests (minimum 75%) Final exam: - written test (general and special microbiology, clinical microbiology, microbiology of the oral cavity) Test evaluation: A: 96 - 100%, B: 90 - 95%, C: 85 - 89%, D: 80 - 84%, E: 75 - 79%, Fx: 74% and less. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: Knowledge: Knowledge of the morphology, structure, and physiology of microorganisms. Information on the relationship between microorganisms and humans, on the virulence factors of microorganisms and their role in the pathogenesis of infectious diseases. Knowledge of the defence against microorganisms and the prevention of infectious diseases (disinfection, sterilisation, antimicrobial agents, active and passive immunization, immunomodulators of microbial origin). Knowledge of individual pathogens of infectious diseases with an emphasis on important microorganisms in dentistry. Basic overview of pathogens of infectious diseases of individual organ systems, the methods of their transmission, and the possibilities of prevention and therapy. Knowledge of the oral microbiota and its role in oral cavity infections (dental caries, periodontal diseases), head and neck infections and systemic infections of odontogenic aetiology. Knowledge of the collection and transport of material for microbiological diagnostics, basic algorithms of microbiological diagnostics, and interpretation of microbiological examination results.	

Skills:

Collection of biological material for microbiological examination. Evaluation of microscopic preparations from biological material and from pure cultures of bacteria and fungi. Inoculation of biological samples on culture media, evaluation of bacterial growth on selective and diagnostic culture media. Evaluation of simple biochemical and other identification tests. Evaluation and interpretation of antimicrobial drug sensitivity tests. Evaluation and interpretation of immunochemical tests. Evaluation and interpretation of microbiological tests used in the diagnostics of diseases of microbial aetiology in dentistry and infectious diseases of individual organ systems (using the example of model patients).

Syllabus (course structure):**Lectures:**

Basic characteristics of microorganisms, human microbiota and its importance, the origin and course of diseases caused by microorganisms.

Basic classification of antimicrobial drugs. Principles of rational antimicrobial treatment.

Basics of medical bacteriology (brief overview of bacteria important for dentistry) and antibacterial drugs.

Basics of medical virology and antiviral drugs.

Basics of medical mycology and antifungal drugs.

Basics of medical parasitology.

Bacterial, viral, and fungal infections of the oral cavity. Manifestations of systemic infections in the oral cavity.

Brief overview of organ infections and physiological microbiota (with emphasis on the microbiota in the head and neck area, carriership of pathogenic microorganisms).

Oral immunity. Dental plaque, dental caries, pulpitis.

Periodontal diseases. Periimplantitis. Salivary gland infections.

Infections of soft tissues, jawbone, paranasal sinuses, and orbit. Systemic infections of odontogenic origin.

Nosocomial infections. Infections transmitted in the dental office. Active and passive immunisation.

Practicals:

Introduction to practicals, laboratory of clinical microbiology, general principles of microbiological diagnostics and specimen handling.

Disinfection and sterilisation in dentistry and methods of their control.

Rapid non-culture microbiological diagnostics.

Examination of clinical specimens by cultivation and identification of isolated bacteria.

Susceptibility testing to antibacterial agents.

Direct and indirect serological diagnostics of microbial infections.

Viral and fungal infections.

Microbiological diagnostics of infections of selected organ systems.

Microbiota of the oral cavity.

Gingival and periodontal diseases, pulpitis.

Infections of salivary glands and soft tissue, and bone infections connected to the infectious process in oral cavity.

Severe infections of odontogenic origin. Infections related to treatment in a medical facility.
Recommended literature: LIPTÁKOVÁ A., et. al. General Microbiology for Dental Students, 1st ed. Bratislava: Comenius University, 2024. 2210 p. Textbook. ISBN 978-80-8229-040-3 LIPTÁKOVÁ A., et. al. Microbiological Diagnostics for Students of Medicine, 1st ed. Bratislava: Comenius University, 2018. 246 s. Textbook. ISBN 978-80-223-4287-2 SAMARANAYAKE, L.P. Essential Microbiology for Dentistry. 6th ed. New York: Churchill Livingstone Elsevier, 2025, ©2025. 392 p. ISBN 978044317213.
The language needed to pass the course: English
Teachers: doc. MUDr. Adriana Liptáková, PhD., MPH, Mgr. Hana Dibalová, PhD., RNDr. Martina Dubinová, PhD., MUDr. Ján Koreň, PhD., Mgr. Marek Straka, PhD., Mgr. Monika Janíková, PhD.
Last update: 24.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Oral implantology
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 24 hours/semester Individual study: 65 hours/semester Method of education: presentive	
Number of earned credits: 4	
Recommended semester/trimester of the study: 9th semester - 5th year, winter semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Special surgery: oral 1,2,3.</i>	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Oral examination	
Courses objectives: <i>basic knowledge of dental implantology, main aim, process of osteintegration, indications, choosing and evaluation of the patients, evaluation of the OPG, CBCT, basic surgical technique, introduction of implants, prosthetic rehabilitation</i> Knowledge: choosing the patients, indication of implantation, management of complication Skills: local anesthesia, basic knowleges of manipulation with soft tissues, sutures	
Syllabus (course structure): Basic knowledge of dental implantology, types of implants, basic surgical techniques, <i>osteointegration, postoperative management, prosthetic rehabilitation</i>	
Recommended literature: Misch, C. E. (2014). Contemporary Implant Dentistry (4th ed.). Why: The core book covering your entire syllabus (evaluation, surgery, prosthetics). Lang, N. P., & Lindhe, J. (Eds.). (2021). Clinical Periodontology and Implant Dentistry (7th ed.). Why: Best for the biological basis of osseointegration and soft tissue management. The ITI Treatment Guide Series. Why: Practical, step-by-step clinical guides for surgical and prosthetic techniques. Jovanovic, S. A. (Ed.). (2019). Color Atlas of Implantology (3rd ed.). Why: An excellent visual atlas for learning surgical techniques and "manipulation with soft tissues."	

5. **Hupp, J. R. (2018). Contemporary Oral and Maxillofacial Surgery (7th ed.).**

- **Why:** Strong resource for linking your prerequisite surgery knowledge to implantology.

The language needed to pass the course: English

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
A	b	c	d	e	f

Teachers:

Lectures: prof.MUDr. Dušan Hirjak, PhD

Practicals: MUDr. K Kocsisivá, MDDr. Z Drobná, MDDr. M Záhorák, MUDr. D Hollý, PhD.,
MDDr. M Podmanický,

Last update: 30.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Orthodontics 1
Type, scope and method of educational activities: <i>Lectures/consultations: 8 hours/semester</i> <i>Practical classes/seminars: 40 hours/semester</i> <i>Independent study: 30 hours/semester</i> <i>Delivery: on-site (in-person); exceptionally blended (on-site + distance). Any exceptional distance teaching is always synchronous.</i>	
Number of earned credits: 3	
Recommended semester/trimester of the study: <i>7.semester (winter), Year 4</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Formally none; recommended: Dental Radiology, Gnathology & Basics of Prosthodontics, Dental Materials & Simulations, Conservative Dentistry 1.</i>	
Grading policy: <i>Course completion (H – graded assessment):</i> <i>Written test (≥ 60 % to pass) – 60 %.</i> <i>Practical tasks (records, model measurements, basic 2D cephalometry, safe data handling, small AI exercises) – 40 %.</i> <i>Attendance ≥ 85 % of practicals.</i> <i>Grades: A 91–100 %, B 81–90 %, C 73–80 %, D 66–72 %, E 60–65 %, Fx < 60 %.</i>	
Courses objectives: <i>Understands core malocclusion classes; performs standard records; carries out basic model and 2D measurements; orients in 3D data; pilots tele-monitoring and AI tools with decision logging and GDPR compliance.</i>	
Knowledge: Craniofacial growth; dental vs skeletal age; treatment timing. Classifications and aetiology of malocclusions. Basics of 2D and intro to 3D cephalometry (indications/limits). AI in measurements (validation, bias, auditability, GDPR). Tele-monitoring fundamentals (protocols, frequency, triage).	
Skills: Complete basic orthodontic record. Basic model & 2D cephalometric measurements; 3D orientation. Safe data workflows; pilot tele-monitoring setup.	

Critical appraisal of AI outputs with decision logs.																	
Syllabus (course structure): <i>Orthodontics in oral health care; interdisciplinary links.</i> <i>Growth & development; dental/skeletal age; timing.</i> <i>Classifications; aetiology.</i> <i>Records: photos, scans, radiographs; quality & radiation protection.</i> 2D cephalometry – principles and common indices. <i>Intro to 3D cephalometry/CBCT – indications & limits.</i> <i>Model measurements; digital workflows.</i> Tele-monitoring: patient-reported photos; triage. AI in orthodontics: measurements, limits, auditability. <i>Data security, GDPR; clinical "why-log".</i>																	
Recommended literature: <i>Proffit; Fields; Larson; Sarver. Contemporary Orthodontics.</i> <i>Graber et al. Orthodontics: Current Principles & Techniques.</i> <i>Recent reviews on AI/tele-monitoring/3D cephalometry.</i>																	
The language needed to pass the course: <i>English</i>																	
Another course information: <i>Course is replacing parts of legacy "Orthodontics 1–5". Hands-on "work in the mouth" is performed under supervision; emphasis on safe AI and tele-monitoring integration.</i>																	
Grading history: Number of students: <table border="1"> <tr> <td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>FX</td></tr> <tr> <td>a</td><td>b</td><td>c</td><td>d</td><td>e</td><td>f</td></tr> </table>						A	B	C	D	E	FX	a	b	c	d	e	f
A	B	C	D	E	FX												
a	b	c	d	e	f												
Teachers: <i>Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA.</i> Lectures: <i>Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA., DMD Lucia Richterova MPH, DMD Martin Strunga, DMD Daniela Tichá, DMD, MD Juraj Tomášik PhD, DMD Ľubica Oravcová, MD et MD Juraj Lysý, PhD, MHA, DMD Soňa Pintešová, PhD,</i> Practicals/Seminars/Internships: <i>Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA., DMD Lucia Richterova MPH, DMD Martin Strunga, DMD Daniela Tichá, DMD Michaela Lepišová, DMD Marcel Paľovčík, DMD Katarína Janáková, DMD Barbora Heribanová, DMD, MD Juraj Tomášik PhD, DMD Ľubica Oravcová, MD et MD Juraj Lysý, PhD, MHA, DMD Soňa Pintešová, PhD, DMD Nora Kelecsényiová,</i>																	
Last update: 25.10.2025																	
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU																	

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Orthodontics 2
Type, scope and method of educational activities: <i>Lectures/consultations: 8 hours/semester</i> <i>Practical classes/seminars: 80 hours/semester</i> <i>Independent study: 60 hours/semester</i> <i>Delivery: on-site (in-person); exceptionally blended (on-site + distance). Any exceptional distance teaching is always synchronous.</i>	
Number of earned credits: 6	
Recommended semester/trimester of the study: <i>8.semester (summer), Year 4</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Orthodontics 1 (direct). Recommended: Specialty Oral Surgery, Conservative Dentistry, Gnathology & Basics of Prosthodontics.	
Grading policy: <i>Part I – Electronic Examination (70 pts): Focused on demonstrating practical skills: identification of malocclusion, proposal of interprofessional cooperation, and an outline of the treatment procedure in the context of orthodontics and other specializations in dentistry. (Progression limit ≥ 60%).</i> <i>Part II – Oral Examination (30 pts): Answering the examiner's questions from the list of questions for the oral exam.</i> <i>Attendance min. 85%.</i> <i>Grading scale: A 91–100%, B 81–90%, C 73–80%, D 66–72%, E 60–65%, Fx < 60%.</i>	
Courses objectives: <i>Plans management of common malocclusions (Class II/III, transverse/vertical issues, eruption problems); knows indications/contra-indications for removable, fixed and aligner appliances; sets up safe tele-monitoring; employs AI (measurements, triage, adherence); understands digital/robotic workflows.</i> Knowledge: Biomechanics, anchorage, mini-implants; aligner biomechanics. Diagnostics & therapy of Class II/III, transverse/vertical discrepancies; eruption disturbances. Adult treatment, interdisciplinary care, orthognathic basics. Retention/relapse; long-term tele-monitoring & adherence. AI & semi-automated/robotic solutions; validation & ethics.	

Skills:

Diagnostic protocol and multi-option treatment plan.
 Audit-ready **2D/3D cephalometry** (incl. AI "why-logs").
 Practical **tele-monitoring** setup in active and retention phases.
 Interdisciplinary referral reporting.

Syllabus (course structure):

Biomechanics of fixed/removable/aligner appliances; anchorage.
 Class II – differential diagnosis & management.
 Class III – growing vs adult; face mask, mini-implants, orthognathics.
 Transverse/vertical discrepancies (expansion; open/closed bite).
 Eruption disturbances, impactions; interceptive strategies.
 Adult orthodontics – perio/restorative interfaces; aesthetics.
 Advanced **AI & 3D cephalometry**; validation & "why-logs".
Tele-monitoring & adherence tracking; safety & ethics.
Digital/robotic workflows: IOS, 3D printing, guides, mini-implants.
Retention & relapse management (monitoring in retention).

Recommended literature:

Proffit; Fields; Larson; Sarver. Contemporary Orthodontics.
Graber et al. Orthodontics: Current Principles & Techniques.
Reviews on aligner biomechanics, mini-implants, AI, tele-monitoring.

The language needed to pass the course: *English*

Another course information:

Strong focus on decision auditability and safe AI use.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers: *Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA.*

Lectures: *Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA., DMD Lucia Richterova MPH, DMD Martin Strunga, DMD Daniela Tichá, DMD, MD Juraj Tomášik PhD, DMD Ľubica Oravcová, MD et MD Juraj Lysý, PhD, MHA, DMD Soňa Pintešová, PhD,*

Practicals/Seminars/Internships: *Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA., DMD Lucia Richterova MPH, DMD Martin Strunga, DMD Daniela Tichá, DMD Michaela Lepišová, DMD Marcel Paľovčík, DMD Katarína Janáková, DMD Barbora Heribanová, DMD, MD Juraj Tomášik PhD, DMD Ľubica Oravcová, MD et MD Juraj Lysý, PhD, MHA, DMD Soňa Pintešová, PhD, DMD Nora Kelecsényiová,*

Last update: 25.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Otorhinolaryngology - head and neck surgery
Type, scope and method of educational activities: Oral lectures: 18 hours/semester Practical: 25 hours/semester Individual study: 35 hours/semester Method of education: combined	
Number of earned credits: 3	
Recommended semester/trimester of the study: 7th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses:	
Grading policy: 100% attendance at the practicals Medical Report preparing 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Practical test	
Courses objectives: <u>Knowledge:</u> Deep theoretical knowledge of the anatomy and physiology of ENT organs and adjacent anatomical areas; knowledge of the etiology, pathophysiology, diagnosis, and treatment of diseases of ENT organs. Basics of pharmacotherapy of infectious diseases of ENT organs. Theoretical knowledge of examination procedures in otorhinolaryngology focusing on the organs of the oral cavity, nose, paranasal sinuses, and neck; principles of endoscopic techniques in ENT; audiological knowledge of the physiology and pathophysiology of hearing disorders and their examination; principles of the functioning of the paranasal sinus system; basics of radiodiagnostics; basics of the diagnosis of oncological diseases of ENT organs. Diseases of the thyroid, parathyroid, and salivary glands. Voice and swallowing disorders. <u>Skills:</u> Focused history taking, ENT examination, otoscopy, rhinoscopy, laryngoscopy, eipharyngoscopy, examination of oral cavity and oropharynx, palpation of the neck, flecible endoscopy. Audiometry and tympanometry assesment, principles of neonatal screening of	

hearing, evaluation of CT and MRI of paranasal sinuses and neck. Ability to establish the diagnosis and request further examination tests and suggest treatment.

Syllabus (course structure):

Basics of clinical anatomy and physiology of ENT organs.

Basic ENT examination methods, including audiology and newborn hearing screening.

Symptomatology of diseases of ENT organs.

Diseases of the ear, nose, paranasal sinuses, pharynx, larynx, esophagus, and cervical lymph nodes. Tracheotomy, cricothyrotomy, intubation.

Care of patients after tracheotomy, laryngectomy, nasal and ear surgeries, and after tonsillectomy. First aid in cases of choking, nosebleeds, bleeding from the respiratory and digestive tracts, removal of foreign bodies from the airways and digestive tract.

Diseases of the thyroid, parathyroid, and salivary glands. Strategy for the treatment of malignant tumors of the head and neck.

Head and neck injuries. Voice and swallowing disorders.

Recommended literature:

Tedla et al.: Basic otorhinolaryngology (Vydavateľstvo UK, 2017, 262 s)

The language needed to pass the course: English

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: prof. MUDr. Miroslav Tedla, PhD, MPH, prof. MUDr. M. Profant, CSc., doc. MUDr. Z. Kabátová, CSc., doc. MUDr. RNDr. Lukáš, Varga, PhD, MUDr. Zuzana Javorská, PhD, PhDr. Žofia Korim, PhD, MUDr. Irina Goljerová, CSc,

Practicals: prof. MUDr. Miroslav Tedla, PhD, MPH, prof. MUDr. M. Profant, CSc., doc. MUDr. Z. Kabátová, CSc., doc. MUDr. RNDr. L. Varga, PhD., MUDr. J. Antalová, MUDr. Mohamad Alsaeid, PhDr. Žofia Korim, PhD, MUDr. Henrieta Hajdúová Sallay

Last update: 1.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Pathological anatomy
Type, scope and method of educational activities: Oral lectures: 40 hours / semester Practical: 40 hours /semester Individual study: 45 hours/semester Method of education: combined	
Number of earned credits: 5	
Recommended semester/trimester of the study: 3rd semester (winter), 2. year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Anatomy 2, Histology	
Course requirements: 100% histopathology class attendance Overall evaluation of the course: Final written test (min. 75% in each part) Test scoring: A: 95-100 %, B: 91-94 %, C: 90-85 %, D: 84-80 %, E: 79-75 %, Fx: <75 %	
Courses objectives: Knowledge: The connection between pathophysiological mechanisms and morphological changes in tissue damage, reversible and irreversible regressive changes, adaptive changes, inflammation, progressive changes, regeneration and repair, tumour classification and the basics of oncogenesis, grading, and staging. The role of the pathologist in diagnosing pathological changes, understanding basic diagnostic methods, their significance, possibilities, and limitations in diagnosis. The role of the Health Care Surveillance Authority, the legal framework and the importance of autopsy. Skills: The student can recognise and morphologically describe basic pathological processes, including tissue damage, inflammation, healing, and tumour growth. They can use basic histological and macroscopic techniques to identify pathological changes and are familiar with the diagnostic methods used in pathology. They can compile a basic pathological-anatomical protocol, classify diagnoses, and understand the legal and medical significance of autopsies.	
Syllabus (course structure): Practical classes: <i>Basic histological techniques. Methods in pathology. Morphology of cell damage. Blood circulation and lymphatic disorders. Inflammation. Healing. General oncology. Fundamentals of oncology – dysplasia, precancerous changes. Demonstration autopsy – Death and postmortem changes. Fundamentals of macroscopic description of autopsied tissues and</i>	

organs, External examination and internal examination (general). Pathological autopsy protocol. Classification of diagnoses.

Lectures:

Methods in pathology . Cell pathology; regressive and progressive changes; necrosis; atrophy; dystrophy; metabolic disorders; blood circulation and lymph disorders; inflammation—acute, chronic, granulomatous; developmental disorders; nutritional disorders; immunopathology; transplant pathology; environmental pathology; genetically determined diseases; molecular basis of diseases. Nomenclature and taxonomy of tumours, precancerous conditions, carcinogenesis, tumour growth and overall consequences for the organism, benign and malignant tumours, histological diagnosis, grading and staging, invasion and metastasis.

Recommended literature:

Robbins and Cotran Pathologic Basis of Disease, 11th Edition, ELSEVIER 2022, 840 s.
Damjanov I.: Atlas of Histopathology, Jaypee Brothers Medical Publishers, 2012, 399s.
Sapp P.J.: Contemporary Oral and Maxillofacial Pathology, 2 edition, MOSBY 2003, 450s.

The language needed to pass the course: *English*

Another course information:

The exam from Pathological anatomy (General) can only be taken after passing the prerequisite exams. Attendance at lectures and seminars will be permitted even without passing the prerequisite exams.

Ideally, in block teaching, Immunology and Microbiology should be taken first.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers:

Lectures: prof. MUDr. Ľ. Danihel, PhD., prof. MUDr. P. Babál, CSc., doc. MUDr. P. Janega, PhD., CSc. MUDr. M. Palkovič, PhD., MUDr. A. Janegová, PhD., MUDr. K. Mikuš Kuracinová, PhD., MUDr. K. Letkovská, PhD., MUDr. H. Štubňová, PhD., MUDr. S. Horák, PhD., MUDr. L. Krivošíková, PhD.

Practicals: doc. MUDr. P. Janega, PhD., MUDr. M. Palkovič, PhD., MUDr. A. Janegová, PhD., MUDr. Mgr. V. Šišovský, PhD., MUDr. H. Štubňová, PhD., MUDr. S. Horák, PhD., MUDr. L. Krivošíková, PhD., MUDr. K. Mikuš Kuracinová, PhD., MUDr. K. Mosná, PhD., MUDr. K. Letkovská, PhD., MUDr. M. Bollová,

Last update: 1.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Paediatric Dentistry
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 32 hours/semester Individual study: 56 hours/semester Method of education: combined	
Number of earned credits: 4	
Recommended semester/trimester of the study: 7th semester - winter	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Restorative Dentistry 2	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Performing the prescribed number of procedures and submitting records of treated patients. Final exam: - 2 questions (diagnosis and treatment of hard and soft tissue diseases of the oral cavity in children and adolescents) The overall rating is determined from the average of the ratings obtained.	
Courses objectives: Knowledge: Basics of diagnosis, prevention, and treatment of teeth and oral diseases in children and adolescents. Skills: Treatment procedures adapted to children's age	
Syllabus (course structure): Developmental and preventive aspects of conservative and endodontic treatment in the oral cavity of children and adolescents. Manifestations of systemic diseases in the oral cavity of children and adolescents.	
Recommended literature: Vinay Kumar Srivastava - Modern Pediatric Dentistry Soraya Coelho Leal, Eliana Mitsue Takeshita - Pediatric Restorative Dentistry Badrinatheswar, G.V. Pedodontics: Practice and Management. Koch, G., Poulsen, S., Espelid, I., and Haubec, D., eds. Pediatric Dentistry: A Clinical Approach.	

Welbury, R.W., Duggal, M.S., and Hosey, M.T. Paediatric Dentistry.

Andlaw, R.J. and Rock, W.P. A Manual of Paediatric Dentistry.

The language needed to pass the course: English

Another course information:

Teachers:

Lectures: MUDr. Andrea Nováková, PhD., MUDr. Amir Amiry Manesh, PhD., MDDr. Marek Matajs, PhD., MUDr. Bohuslav Novák, PhD., MDDr. Alessandro Emanuele Sangalli

Last update: 29.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Periodontology 1
Type, scope and method of educational activities: Type of activities: lectures, practicals Lectures: 14 hours/semester Practicals/Clinical practice: 24 hours/semester Self-study: 12 hours/semester Form of education: combined – 14 hours lectures, 24 hours of practicals.	
Number of earned credits: 2.	
Recommended semester/trimester of the study: 7th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses:	
Grading policy: - 100% attendance at the practicals - 1 written test at the end of semester (minimum 60% of correct answers) <u>Test evaluation:</u> A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: <u>Knowledge:</u> the student has a basic knowledge of the anatomy and histology of the periodontium, the influence of local and general factors, as well as bacteria on the development of periodontal diseases. The student is familiar with the prevention, classification, therapy of periodontal disease (conservative and surgical) and the follow-up (recall) system. <u>Skills:</u> is able to examine a patient at a basic level using periodontal indices, clinically establish a diagnosis.	
Syllabus (course structure): Anatomy and histology of periodontal tissues. Gingivitis - division, clinical picture, general principles of therapy. Dental microbial plaque and calculus in the etiology of periodontal diseases. Oral hygiene and home care in the treatment of periodontal diseases. Types of periodontal pockets, periodontal abscess. General and local factors in periodontology. Professional calculus and plaque (pigment) removal, methods and techniques. Periodontal documentation. Radiographic methods in periodontology. Basic periodontal instruments. Traumatic occlusion. Treatment plan of periodontal diseases. Principles of prosthetic treatment of teeth with affected periodontium, splinting of teeth. Recessus and bone resorption. Fundamentals of mucogingival surgery. Periodontal flaps. Suturing material and suturing techniques. Classification of augmentation materials and membranes. GTR, principles and classification. Classification of periodontal diseases.	

Recommended literature:

NEWMAN, M. et al. Newman and Carranza's Clinical periodontology, 13th Edition, 2018, Elsevier Books, 944 s. ISBN 9780323523004

The language needed to pass the course: *English*

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers:

Zodpovedný vyučujúci: MUDr. R. Edelstein PhD.

Lectures: Dr. Emad Kosarieh, MUDr. A.A. Manesh PhD, MUDr. R. Edelstein PhD., MDDr. B.N. Pham, MDDr. Nikola Borovanová

Practicals: Dr. Emad Kosarieh, MUDr. R. Edelstein PhD., MDDr. B.N. Pham, MDDr. Nikola Borovanová, MUDr. A.A. Manesh PhD.

Last update: 30.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Periodontology 2
Type, scope and method of educational activities: Type of activities: lectures, practicals and self-study Lectures: 14 hours/semester Practical/Clinical practice: 24 hours/semester Self-study: 37 hours/semester Form of education: combined –lectures : 14 hours, 24 hours of practicals – present form.	
Number of earned credits: 3	
Recommended semester/trimester of the study: 8th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Periodontology 1	
Grading policy: - 100% attendance at the practicals - 1 written test at the end of semester (minimum 60% of correct answers) <u>Test evaluation:</u> A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: <u>Knowledge:</u> the graduate has a comprehensive knowledge of the anatomy and physiology of the soft tissues of the oral cavity. The student is familiar with the clinical picture, diagnosis and therapy of inflammatory, infectious and general diseases of the oral cavity, as well as precancerous conditions, malignancies of the mucous membranes of the oral cavity and salivary glands. <u>Skills:</u> is able to expertly examine the patient and select the correct treatment on the basis of the patient's history, clinical examination and additional investigative methods.	
Syllabus (course structure): Normal anatomical variations and developmental abnormalities in oral cavity. Depistage and dispensarization of precancerous conditions of oral mucosa. Invasive and non-invasive examination methods. White lesions in oral cavity. Red lesions in oral cavity. Oral lichen planus. Oral leucoplakia. Erythema multiforme. Manifestations of systemic diseases in oral cavity. Oral manifestations of blood disorders. Manifestations of vitamin disorders and endocrinopathies in oral cavity. Ulcerative gingivitis (ANUG), periodontitis and stomatitis and other bacterial infections of oral cavity. Diseases of tongue. Xerostomia, lip diseases. Foetor ex ore, Halitosis. Fungal diseases in oral cavity. Drug-induced changes in oral mucosa. Glossodynia a stomatodynia. Manifestations of autoimmune diseases in oral cavity. Aphthous lesion in oral cavity. Gingivitis desquamativa. Manifestations of allergic reactions in oral cavity. Viral diseases in oral cavity. Manifestations of HIV infection and AIDS in oral cavity.	

Recommended literature:

BRUCH J.M. et al. Clinical Oral Medicine and Pathology, 2nd Edition, Springer, 2017, 207 s.
ISBN 978-3319297675

The language needed to pass the course: *English*

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers:

Lectures: Dr. Emad Kosarieh, MUDr. A.A. Manesh PhD, MUDr. R. Edelstein PhD, MDDr. B.N. Pham, MDDr. N. Borovanová

Practicals: Dr. Emd Kosarieh, MUDr. R. Edelstein PhD., MDDr. B.N. Pham, MDDr. Nikola Borovanová, MUDr. A.A. Manesh PhD.

Last update: 30. 10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Periodontology 3
Type, scope and method of educational activities: Type of activities: practicals and self-study Lectures: 2 hours/semester Practical/Clinical practice: 36 hours/semester Self-study: 20 hours/semester Form of education: combined, lectures: 2 hours in-person/distance learning, lectures: 36 hours in-person	
Number of earned credits: 2	
Recommended semester/trimester of the study: 9. semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Periodontology 2	
Grading policy: - 100% attendance at the practicals Final Exam: - theoretical part - 2 questions from periodontology	
Courses objectives: <u>Knowledge:</u> the student has a advanced knowledge of the anatomy and histology of the periodontium, the influence of local and general factors, as well as bacteria on the development of periodontal diseases. The student is familiar with the prevention, classification, therapy of periodontal disease (conservative and surgical) and the follow-up (recall) system. <u>Skills:</u> is able to examine a patient at advanced level using periodontal indices, clinically establish a diagnosis.	
Syllabus (course structure): the student has advanced knowledge of the anatomy and histology of the periodontium, the influence of local and general factors, as well as bacteria on the development of periodontal diseases. The student is familiar with the prevention, classification, therapy of periodontal disease (conservative and surgical) and the follow-up (recall) system. He/she is able to examine the patient, make a diagnosis, select and perform the correct therapy.	
Recommended literature: NEWMAN, M. et al. Newman and Carranza's Clinical periodontology, 13th Edition, 2018, Elsevier Books, 944 s. ISBN 9780323523004	
The language needed to pass the course: <i>English</i>	
Another course information:	
Grading history: Number of students:	

A	B	C	D	E	FX
a	b	c	d	e	f
.					
Teachers: Lectures: Dr. Emad Kosarieh, MUDr. R. Edelstein PhD., MUDr. A.A. Manesh PhD., MDDr. B.N. Pham, MDDr. N. Borovanová Practicals: Dr. Emad Kosarieh, MUDr. R. Edelstein PhD., MUDr. A.A. Manesh PhD., MDDr. B.N. Pham, MDDr. N. Borovanová					
Last update: 30.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Pharmacology
Type, scope and method of educational activities: Oral lectures: 48 hours/semester Practical: 36 hours/semester Individual study: 41 hours/semester Method of education: on site-learning	
Number of earned credits: 5	
Recommended semester/trimester of the study: 5th semester - winter, 3rd year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Physiology and Physics 2, Biochemistry	
Grading policy: 1 written classification test – minimal 60% of correct answers Elaboration and presentation of the seminar essay. Final exam: - written part – test (minimum 60% of correct answers), - oral part of exam: 3 questions (basic pharmacology, special pharmacology, selected drugs). Evaluation of the tests: A: 91 - 100%, B: 81 – 90%, C: 73 – 80%, D: 66 – 72%, E: 60 – 65%, Fx: 59 – 0%. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: <u>Knowledge:</u> To acquire knowledge about drugs within specific pharmacodynamic groups (emphasis on the medical use in dentistry) with a focus on: - mechanism of action, - pharmacokinetic properties, - clinical use, contraindications, - adverse effects, - interactions with drugs, OTC products and other substances. <u>Skills:</u> To learn how to apply knowledge of pharmacology in clinical disciplines. To learn to assess the risk-benefit ratio of drugs in individual patient with emphasis on medical pharmacology in dentistry.	
Syllabus (course structure): Medicines and society. Drug information sources. Nomenclature. Principles of drug prescription. Types of drug actions. Mechanisms of drug actions on molecular level.	

Receptors. Basic principles of drug movement in the body. Basic pharmacokinetic concepts. Pharmacogenetics. Pharmacoepidemiology. Pharmacoeconomics. Pharmacovigilance. Adverse drug reactions. Clinical and preclinical drug evaluation. GLP. GCP. Pharmacology of autonomic nervous system. Sympathetic nervous system. Parasympathetic nervous system. Local and general anesthetics. Types of local anesthesia. Pharmacotherapy of pain in dentistry. Non-opioid and opioid analgesics. Co-analgesics. Pharmacotherapy of inflammation. Autacoids. Non-steroidal anti-inflammatory drugs. Antirheumatics. Immunopharmaceuticals. Biological drugs. Cytostatics. Pharmacology of the respiratory system. Antiasthmatic agents. Drugs used in the treatment of allergic diseases. Drugs used in the treatment of anaphylactic shock. Drugs affecting GIT. Antiulcer substances. Prokinetics. Antiemetics. Toxicology. Principles of antidote therapy. Pharmacology of cardiovascular system. Antihypertensives. Vasodilators. Drugs used in the therapy of heart failure. Cardiotonics. Antidysrhythmics. Drugs used in the therapy of ischemic heart disease. Antianginal drugs. Hypolipidemics. Antithrombotic agents in relation to dentistry. CNS drugs. Neurotransmitters in the CNS. Antidepressants. Antipsychotics. Anxiolytics and hypnotics. Antiepileptics. Antiparkinsonian agents. Cognitive enhancers. Pharmacology of the endocrine system. Antidiabetics. Drugs used in the treatment of hypoglycaemia. Pituitary hormones as drugs. Thyroid hormones. Glucocorticoids. Female and male hormones. Contraceptives. Hormone replacement therapy. Drugs used in the treatment of osteoporosis. Antimicrobials used in dentistry. β -lactam antibiotics, macrolides, tetracyclines, quinolones and lincosamides. Antituberculotics. Antivirals. Drugs used in the therapy of HIV infection. Antifungals. Antiparasitics. Principles of drug effect evaluation in individualized therapy. Interactions of drugs most commonly used in dentistry and their clinical significance.

Recommended literature:

Shanbhag, T.V., Shenoy, S., Nayak, V. Pharmacology for Dentistry, 4th ed. Elsevier India, 2021. 436 p.

Stevens, C.W. Brenner and Stevens' Pharmacology, 6th ed. Elsevier, 2022. 624 p.

J. Rang and Dale's Pharmacology. 10th ed. Elsevier, Churchill Livingstone, 2023. 872 p.

Wecker, L., Taylor, D.A., Theobald, R.J.Jr. Brody's Human Pharmacology. Mechanism-Based Therapeutics. 6th ed. Philadelphia: Elsevier Mosby, 2018. 728 p.

Whalen, K. Pharmacology. Lippincott Illustrated Reviews. 8th ed. Wolters Kluwer, 2022. 704 p.

Katzung's Basic & Clinical Pharmacology, 16th ed. McGraw Hill, 2024. 1368 p.

WHO Model Lists of Essential Medicines. 23rd ed. 2023.

The language needed to pass the course: English

Another course information:

Dentistry – English learning

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Lectures: Prof. PharmDr. Ján Kyselovič, CSc., Doc. PharmDr. A. Gažová, PhD., Doc. MUDr. M. Laššánová, PhD., Doc. MUDr. J. Tisoňová, PhD., MUDr. K. Hudecová, PhD., MUDr. M. Petrová, PhD., MUDr. R. Vojtko, PhD.

Practicals: Doc. PharmDr. A. Gažová, PhD., Doc. MUDr. M. Laššánová, PhD., Doc. MUDr. J. Tisoňová, PhD., MUDr. K. Hudecová, PhD., MUDr. M. Petrová, PhD., MUDr. A. Raganová, PhD., MUDr. R. Vojtko, PhD.

Last update: 2.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course title: Physiology and Physics 1
Type, scope and method of educational activities: Lectures: 36 hours/semester (24 hours lectures+12 hours consultations) Practicals: 36 hours/semester Self-study: 28 hours/semester Method of education: combined – on-site learning, on-line learning	
Number of credits: 4	
Recommended semester of study: 2 nd semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses:	
Grading policy: - 100% attendance in the practicals, seminars, Team Based Learning - to complete all written assignments and presentations - to pass successfully 3 written credit tests after each chapter (in each test - max. 40 points, minimum for successful passing – 70%, i. e. 28 points in each test) Overall evaluation: H - Usually on the last day of teaching based on sum of points from 3 successfully passed written credit tests: A: 120 - 114, B: 113 - 106, C: 105 - 98, D: 97 - 90, E: 89 - 84, Fx: 83 and less.	
Course objectives: Knowledge: Mastery of basic facts and understanding of their connections from physiology and related physics of the internal environment, blood, excitable tissues, respiration, metabolism and thermoregulation. Acquiring relevant basic knowledge about the prevention of the most common diseases and about a healthy lifestyle. Skills: Ability to obtain, record and evaluate the results of selected basic examinations of the blood, respiratory system and metabolism; acquisition of basic laboratory skills (e. g. microscopy, pipetting); mastering basic medical skills and measurements (determination of hematocrit, hemoglobin concentration, blood cell counts, determination of blood groups, basic spirometry examination, pulse oximetry, determination of basal metabolic rate, etc.). The ability to apply physical and physiological principles in the solution of simulated clinical cases and in the interpretation of clinical manifestations, as well as in the field of healthy lifestyle and disease prevention.	
Syllabus (course structure): Physical quantities and their units. Overview of the use of physical processes in dentistry. Internal environment – homeostasis and its components, regulatory principles and mechanisms, diffusion, osmosis, osmotic and oncotic pressure, transport of substances through the cell membrane.	

Blood – physical properties of blood, blood plasma and its components, blood elements and their functions, blood an maintenance of pH, physiological principles and factors of hemostasis, anticoagulation and antiaggregation agents, blood groups and compatibility, hemopoiesis. Clinical interpretation of blood parameters (blood element counts, glycemia, pH, hemocoagulation, erythrocyte sedimentation rate, etc.). Excitable tissues – electrical polarization of the cell membrane, depolarization, hyperpolarization, resting membrane potential, action potential, receptor potential, coding of stimulus intensity, synapses, functional properties of receptors, nerves and muscles. Electric current and its effects on the organism. Basic functions of the autonomic nervous system.

Breathing – atmospheric pressure and partial pressures of O₂ and CO₂, biomechanics of breathing, functions of the respiratory tract, ventilation and its changes, and exchange of respiratory gases, lung volumes and capacities, transport of O₂ and CO₂, breathing and maintenance of pH, regulation of breathing.

Metabolism and thermoregulation – energy and its forms, energy intake and expenditure, energy balance, basal and total metabolism, aerobic and anaerobic metabolism, oxygen debt, energy value of nutrients (physical and physiological), regulation of metabolism.

Body temperature and its biorhythms, heat production and mechanisms of heat conduction and dissipation, mechanisms of thermoregulation.

Recommended literature:

- OSTATNÍKOVÁ, D. et al. Basics of Medical Physiology. Bratislava: Comenius University, 2021. 298 p. ISBN 978-80-223-5129-4.
- OSTATNÍKOVÁ, D. et al. Physiology Pracical. Bratislava: Comenius University, 2024. 248 p. ISBN 978-80-223-5681-7.
- KAMRAN, A. et al. Essential Physiology for Dental Students. Wiley-Blackwell, 2019, 256 p. ISBN 978-11-192-7171-0
- DAVIDOVITS, P. Physics in Biology and Medicine, Academic Press, 2019, p, ISBN 978-0-12-813716-1
- KOEPPEN, B.M. and STANTON, B.A., eds. Berne & Levy Physiology. 8th ed. Philadelphia: Elsevier, 2024. 864 p. ISBN 978-03-234-4338-8

The language needed to pass the course: English

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Main responsible teacher - guarantor: Prof. MUDr. K. Babinská, PhD.

Lectures: Prof. MUDr. D. Ostatníková, PhD., Prof. MUDr. B. Mravec, PhD., Prof. MUDr. K. Babinská, PhD., Prof. MUDr. J. Radošinská, PhD., Doc. MUDr. A. Tomova, PhD., Doc. PharmDr. Z. Pirník, PhD., Doc. RNDr. J. Bakoš, PhD., doc. RNDr. Monika Barteková, PhD., doc. RNDr. Jaroslava Babková, PhD.

Practical exercises/seminars: Doc. PharmDr. Z. Pirník, PhD., MUDr. R. Važan, PhD.

Last update: 12.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Vysoká škola: Univerzita Komenského v Bratislave	
Fakulta: Lekárska fakulta v Bratislave	
Kód predmetu:	Názov predmetu: Fyziológia a fyzika 2
Druh, rozsah a metóda vzdelávacích činností: Prednášky a konzultácie: 36 hodín/semester (prednášky 24 hodín, konzultácie 12 hodín) Praktické cvičenia: 36 hodín/semester Samoštúdium: 78 hodín/semester Metóda vzdelávacích činností: kombinovaná (prezenčná, dištančná)	
Počet kreditov: 6	
Odporúčaný semester štúdia: 3. semester	
Stupeň štúdia: 1. + 2. stupeň	
Podmieňujúce predmety: Anatómia 2, Fyziológia a fyzika 1	
Podmienky na absolvovanie predmetu: - 100% účasť na praktických cvičeniach, seminároch, Team Based Learning - vypracovanie zadaných písomných prác a prezentácií - úspešné absolvovanie 4 písomných testov po ukončení tematických celkov (max. počet bodov v 1 teste – 40, pre úspešné absolvovanie sa vyžaduje dosiahnuť minimálne 70 % v každom teste – čiže 28 bodov). Sumárne hodnotenie písomných testov: na základe sumy bodov zo 4 úspešne absolvovaných testov: A: 160 - 151, B: 150 - 141, C: 140 - 131, D: 130 - 121, E: 120 - 112, Fx: 111 a menej. Záverečné hodnotenie: S - záverečná skúška v osobitný deň. Záverečná skúška zahŕňa problematiku kurzu Fyziológia a fyzika 1 aj kurzu Fyziológia a fyzika 2, ako jeho nadstavby. Záverečná skúška - súčasti: - komplexný písomný test (10 otázok, max. počet bodov 40, pre úspešné absolvovanie sa vyžaduje dosiahnuť minimálne 70 % – čiže 28 bodov), úspešne absolvovaný komplexný skúškový test je súčasne kvalifikáciou na ústnu časť skúšky - ústna časť skúšky: 3 vylosované otázky z Fyziológie a fyziky (z 3 rôznych kapitol) Najväčšiu váhu pri záverečnom hodnotení má ústna časť skúšky, s prihliadnutím na písomnú časť skúšky a sumárne hodnotenia písomných testov na konci výučby predmetov Fyziológia a fyzika 1 a 2	
Výsledky vzdelávania: Vedomosti: Ovládanie základných faktov a porozumenie ich súvislostiam z fyziológie a súvisiacej fyziky tráviaceho systému so špeciálnym zameraním na funkcie a procesy v ústnej dutine a prehĺtanie, výživa jej vplyv na štruktúry v ústnej dutine, funkcie kardiovaskulárneho systému a lymfatického systému, vylučovania, endokrinného systému a rozmnožovania, zmyslových orgánov, nocicepcia a mechanizmy analgézie a hyperalgie, fyziológia centrálného nervového systému so zameraním na hlavové nervy,	

základy rádiologickej fyziky. Získanie príslušných základných vedomostí o prevencii najčastejších ochorení a o zdravom životnom štýle.

Zručnosti: Schopnosť získať, zaznamenať a vyhodnotiť výsledky vybraných základných vyšetrení stavu a spôsobu výživy, kardiovaskulárneho systému, zmyslových orgánov a centrálneho nervového systému a endokrinného systému; zvládnutie základných medicínskych zručností a meraní (posúdenie výživy, vyšetrenie glykémie, artériového pulzu, krvného tlaku, EKG, zrakovej ostrosti, očného pozadia, zorného poľa, otoskopia a audiometria, vyšetrenie základných reflexov). Schopnosť prezentovať odborné informácie a informácie o prevencii ochorení a zdravom životnom štýle formou krátkej prednášky a diskusie. Schopnosť aplikovať fyzikálne a fyziologické princípy pri riešení simulovaných klinických prípadov a v interpretácii klinických prejavov chorôb.

Osnova (syllabus) predmetu:

Tráviaci systém – salivácia a jej regulácia, zloženie a funkcie slín. Fyziológia žuvania, fyzikálne vlastnosti zubov, žuvanie a zubné náhrady. Hltanie, motilita žalúdka a vracanie, motilita tenkého a hrubého čreva, funkcie tráviacich štiav, vstrebávanie živín, funkcie pečene, črevná mikrobiota, regulácia tráviaceho systému.

Výživa - princípy racionálnej výživy, vplyv výživy a ústnej mikrobioty na štruktúry ústnej dutiny.

Srdcovo-cievny a lymfatický systém – fyzikálne zákonitosti v kardiovaskulárnom systéme (tlaky, objemy, hemodynamika, elektrické a akustické fenomény), fyziologické vlastnosti srdcového svalu. Srdcový cyklus a srdcové ozvy. Pulz, EKG, krvný tlak - fyziologické princípy a interpretácia hodnôt (rytmus, srdcová frekvencia, hodnoty tlaku). Prúdenie krvi v cievach, transkapilárna výmena látok, význam lymfatického systému a sleziny. Regulácia kardiovaskulárneho systému.

Vylučovanie – telové tekutiny a ich iónová štruktúra, glomerulárna filtrácia a tubulárne procesy, acidobázická rovnováha, tvorba a vylučovanie moču, regulácia činnosti obličiek.

Endokrinný systém a rozmnožovanie – mechanizmy účinku hormónov, hierarchia endokrinného systému, základné charakteristiky hormónov jednotlivých endokrinných žliaz. Regulácia endokrinného systému. Endokrinné a reprodukčné funkcie pohlavných orgánov.

Žiarenie a jeho vplyvy na organizmus. Základy rádiologickej fyziky. Zmyslové orgány – fyzikálne charakteristiky svetla a zvuku, základy optiky a akustiky. Funkčné a morfogické charakteristiky štruktúr podieľajúcich sa na zraku, sluchu, chuti, čuchu, statokinetickom zmysle, kožnej mechanocepcii a termocepcii, na nocicepcii a propiocepcii. Bolesť a možnosti jej tlmenia, mechanizmy analgézie a hyperalgézie, nocicepčná senzibilizácia, princípy anestézie.

Centrálny nervový systém – funkcie hlavových nervov, senzácia a percepcia podnetu, reflex, reflexný oblúk, regulácia pohybu, spánok, vyššie nervové funkcie - pamäť, emócie, učenie, reč. Stresová reakcia. Monitorovanie vitálnych funkcií.

Odporúčaná literatúra:

- Ostatníková, D. a kol. Základy lekárskej fyziológie. 4. doplnené vyd. Bratislava: Univerzita Komenského v Bratislave, 2022. 370 s. ISBN 978-80-223-5458-5

- Navrátil L., Rosina J. a kol. Medicínska biofyzika. Praha, Grada, 2019, ISBN 9788027102099 - Ostatníková, D. a kol. Fyziologické praktikum. 1. vyd. Bratislava: Univerzita Komenského, 2021. 236 s. ISBN 978-80-223-5171-3					
Jazyk, ktorého znalosť je potrebná na absolvovanie predmetu: slovenský					
Poznámky:					
Hodnotenie predmetov: Celkový počet hodnotených študentov:					
A	B	C	D	E	FX
a	b	c	d	e	f
Vyučujúci: Zodpovedný pedagóg - garant: Prof. MUDr. K. Babinská, PhD. Prednášky: Prof. MUDr. D. Ostatníková, PhD., Prof. MUDr. B. Mravec, PhD., Prof. MUDr. K. Babinská, PhD., Prof. MUDr. J. Radošinská, PhD., Doc. MUDr. A. Tomova, PhD., Doc. PharmDr. Z. Pirník, PhD., Doc. RNDr. J. Bakoš, PhD., doc. RNDr. Monika Barteková, PhD., doc. RNDr. J. Babková, PhD. Praktické cvičenia/semináre: Doc. PharmDr. Z. Pirník, PhD., MUDr. R. Važan, PhD.					
Dátum poslednej zmeny: 12.11.2025					
Schválil: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM, dekan LF UK					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Physiotherapy
Type, scope and method of educational activities: <i>Lectures/consultations: 6 hours/semester</i> <i>Seminars/practical classes: 6 hours/semester</i> <i>Self-study (guided and independent): 13 hours/semester</i> <i>Teaching method: on-site (face-to-face)</i> <i>Character of instruction:</i> • <i>interactive lectures and demonstration seminars,</i> • <i>practical training integrated into dental clinical practice, including selected intra-oral soft-tissue techniques and temporomandibular joint mobilisation – counted as "work in the mouth" within clinical practice.</i>	
Number of earned credits: 1	
Recommended semester/trimester of the study: <i>6th semester - summer, 3rd year</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None. The course builds particularly on (recommended): Anatomy 1–2 Physiology and Physics 1–2 General Pathology and Pathophysiology Internal Medicine and Paediatrics 1–2	
Grading policy: <i>Mode of completion in the curriculum: H – continuous course assessment.</i> • Attendance: ○ <i>100 % attendance at practical classes; one properly justified absence is tolerated.</i> ○ <i>Additional absences result in failure of the course and repetition in the following year.</i> • Practical skills (mini-OSCE): ○ <i>One practical skills check (approx. 10–15 minutes per student):</i> <i>basic physiotherapeutic assessment of posture and cervical spine in a dentist/patient with TMD,</i> <i>demonstration and teaching of a simple home exercise programme (cervico-scapular exercises + basic TMJ exercises).</i> ○ <i>Assessed on a pass/fail basis.</i>	

- **Written test:**

- One end-of-semester written test (minimum 20 questions – MCQ + short open questions).
- A minimum score of **80 %** is required to pass.
- Grading scale:
 1. A: 97 – 100 %
 2. B: 93 – 96 %
 3. C: 89 – 92 %
 4. D: 85 – 88 %
 5. E: 80 – 84 %
 6. Fx: 79 % and below.

- **Final assessment:**

- Credit is awarded only if:
 1. attendance requirements are fulfilled,
 2. the practical skills check is passed,
 3. the written test score is ≥ 80 %.
- The final grade is determined by the written test percentage (provided the practical part is passed).

Suggested assessment categories for the clinical supervisor:

- *theoretical preparedness (understanding of TMJ, cervical spine and posture),*
- *technical performance of examination (safety, positioning, manual skills),*
- *ability to explain and teach the exercise programme to the patient,*
- *adherence to ergonomic and safety principles during clinical work,*
- *professional behaviour, communication and interprofessional collaboration (dentist–physiotherapist).*

Courses objectives:

After completing the course, the student: understands the relationship between posture, cervical spine and temporomandibular disorders, knows basic physiotherapeutic approaches to TMD and other musculoskeletal dysfunctions relevant for dental practice, can identify typical work-related overload in dentists and propose a preventive exercise programme, can formulate indications for physiotherapy and communicate effectively with physiotherapists within an interprofessional care team.

Knowledge:

On successful completion of the course, the student:

- explains basic principles of physiotherapy and its role in the management of dental patients (TMD, post-traumatic and post-operative orofacial conditions, cervicogenic headache),
- describes the anatomical and functional connections of the cranio-cervico-mandibular system – masticatory muscles, cervical muscles, shoulder girdle, head posture and spinal alignment,
- characterises main physiotherapeutic interventions in TMD and cervical syndrome (manual therapy, therapeutic exercises, physical modalities, patient education) at an introductory level,
- outlines key ergonomic principles of the dental workplace and recommended operator/patient positioning,
- explains the importance of physical activity, compensatory exercises and breaks during dental work for prevention of musculoskeletal disorders.

Skills:

The student is able to:

- perform a simple screening examination of posture and cervical spine (observation, palpation, basic functional tests) in a patient or colleague,
- perform an orienting functional assessment of the TMJ (range of opening, deviation, palpation of masticatory muscles),
- demonstrate and teach the patient:
 - basic exercises for relaxation and strengthening of cervical spine and shoulder girdle,
 - a simple home exercise programme for TMJ (controlled opening, lateral movements, relaxation techniques),
- apply ergonomic principles during dental clinical work (chair and unit adjustment, operator/patient positioning, use of micro-breaks),
- justify a referral to physiotherapy and write a brief interprofessional report for the physiotherapist (main problem, goals, dental treatment context).

Syllabus (course structure):

Lectures (6 h):

1. *Introduction to physiotherapy in dentistry (2 h)*
 - *physiotherapy within the dental curriculum,*
 - *common musculoskeletal problems in dental patients and dentists,*
 - *basic principles of a biopsychosocial approach to chronic pain.*
2. *Physiotherapy of temporomandibular disorders and orofacial pain (2 h)*
 - *anatomy and function of the TMJ, masticatory muscles and cranio-cervical system,*
 - *pathophysiology of TMD, links with cervical spine and posture,*

- overview of physiotherapeutic approaches: manual therapy, exercise therapy, physical agents, education and self-management.
- 3. *Physiotherapy and ergonomics for dentists (2 h)*
 - prevalence of neck, back and shoulder pain in dental students and practitioners,
 - ergonomic principles for the dental workplace (operator/patient position, instrument layout, breaks),
 - model preventive exercise programme for dentists.

Seminars / practical classes (6 h):

1. *Posture and cervical spine screening (2 h)*
 - practical training in posture analysis (sagittal/frontal plane),
 - basic mobility tests of cervical spine and shoulder girdle,
 - discussion of students' own posture (experiential learning).
2. *Physiotherapy of TMD – practical skills (2 h)*
 - palpation of masticatory muscles and the TMJ region,
 - training simple intra-oral and extra-oral release techniques (low-force, safety rules),
 - designing and demonstrating a short home exercise programme for a patient with myogenous TMD.
3. *Ergonomics and prevention of work-related overload (2 h)*
 - correct adjustment of dental chair and operator position,
 - training of "micro-breaks" and short compensatory exercises during a working day,
 - case discussions: physiotherapy recommendations for a dentist with neck or low-back pain.

Recommended literature:

- Okeson J.P. *Management of Temporomandibular Disorders and Occlusion.*
- de Leeuw R., Klasser G.D. *Orofacial Pain: Guidelines for Assessment, Diagnosis, and Management.*
- Selected chapters from physiotherapy textbooks covering "Physiotherapy in dentistry / TMJ rehabilitation".
- Review papers on musculoskeletal disorders and ergonomic strategies in dentists.
- Relevant European legislation on dental education (study programme – physiotherapy component).

The language needed to pass the course: *English*

Another course information:

The content is aligned with current European requirements and inspired by "Physiotherapy in dentistry" courses in European dental curricula.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f
.					
Teachers: Lectures: <i>Darina Slezáková, MD, PhD., assoc.prof. Andrej Thurzo, MD., PhD., MPH, MHA.</i> Practicals: <i>Darina Slezáková, MD, PhD., assoc.prof. Andrej Thurzo, MD., PhD., MPH, MHA.</i>					
Last update: 31.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Preventive Medicine, Hygiene and Dental Public Health
Type, scope and method of educational activities: <i>Oral lectures: 50 hours /semester</i> <i>Practical: 55 hours/semester</i> <i>Individual study: 55 hours/semester</i> <i>Method of education: combined</i>	
Number of earned credits: 5	
Recommended semester of the study: 7th semester (winter)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: General pathology and pathophysiology, General pathological anatomy, Medical microbiology	
Grading policy: - 100 % attendance at the practicals 1 written test – minimal 75 % of correct answers - Test evaluation: A: 100–96 %, B: 95–91 %, C: 90–86 %, D: 85–81 %, E: 80–75%, Fx: 75 % and less - oral exam consists of 3 questions student has 20 minutes for preparation - overall evaluation is an average of combined evaluation	
Courses objectives: Knowledge: - Determinants of health - Impact of the environment on the health status of the population - Principles of primary, secondary, and tertiary prevention - Importance, methods, and evaluation of the effectiveness of vaccination, screening, and health education - Nutrition and oral health, preventive programs for children and adults, promotion of a healthy lifestyle - Epidemiology of major oral diseases, oral health indicators - General principles of personal, occupational, and community hygiene; principles of prevention of communicable diseases, disinfection, sterilization, and infection control in dental practice - Hygienic requirements and legal regulations for the operation of healthcare facilities Skills: - Plan and implement preventive measures aimed at promoting oral and overall health, including vaccination, screening programs, and health education	

- Assess basic health parameters and formulate evidence-based and scientifically sound recommendations for health promotion and disease prevention in individuals and population groups
- Evaluate patients' nutritional habits and provide recommendations to support oral health
- Assess health determinants in the internal and external environment
- Describe and analyze epidemiological data on the occurrence of oral diseases and use them in planning preventive programs
- Evaluate and describe the hygienic and epidemiological situation in dental practice and healthcare facilities
- Propose procedures for disinfection, sterilization, and infection control in dental practice to ensure hygienic standards of the work environment
- Communicate with individuals and the public in promoting oral health and implementing community-based preventive activities
- Cooperate with public health management professionals

Syllabus (course structure):

Determinants of Health and Disease Prevention:

Determinants of health and their impact on oral and overall health. Environmental factors and their relationship to chronic diseases. Water and morbidity, nutrition and oral health. Assessment of nutritional status and promotion of a healthy lifestyle. Principles of primary, secondary, and tertiary prevention.

Hygiene and Health Risks in Dental Practice:

Hygiene in the dental clinic and laboratory. The working environment of dentists: microclimatic, lighting, acoustic, and microbiological conditions. Ergonomic principles in dental work. Risk factors: noise, vibration, dust, chemical agents, allergens, heavy metals. Work regime and prevention of occupational diseases.

Infection Prevention and Hygiene Control:

The process of infection transmission in dental practice. Disinfection and sterilization: principles, methods, and efficacy control. Personal protective equipment for staff and patients. Nosocomial infections and their prevention. Hygienic principles in treating patients with infectious diseases.

Protection Against Physical and Chemical Risks:

Dental X-rays and principles of radiation protection. Hygienic requirements for working with X-ray devices. Risks of ionizing radiation and protection of workers' health.

Public Health and Health Risk Assessment:

Epidemiology of oral diseases, oral health indicators, epidemiological studies of oral health according to WHO standards. Health risk assessment. Health impact assessment. Hygienic measures in emergencies (disasters, epidemics). Health education and community programs for oral health promotion. Health literacy with a focus on oral health.

Lectures:

Introduction to Preventive Medicine and Hygiene. Environment and Health. Nutrition and Oral Health. Prevention of Chronic Diseases. Epidemiology and Indicators of Oral Health.

Prevention of Infectious Diseases and Infection Control in Dentistry. Hygiene in Dental Practice. Occupational Preventive Medicine – factors of the work and living environment, protection and promotion of workers' health. Radiation Protection in Dentistry. Public Health, Health Risk Assessment, and Emergency Situations.

Practical Exercises:

Determinants of health and their assessment. Basic environmental factors and their impact on health. Assessment of water, air, and microclimatic quality. Nutrition hygiene and assessment of nutritional status. Nutrition and oral health – analysis of patients' dietary habits. Epidemiological methods in practice – calculation and interpretation of oral health indicators. Assessment of hygiene in healthcare facilities and dental clinics. Disinfection, sterilization, and control of hygienic measures effectiveness. Infection prevention and use of personal protective equipment. Radiation protection in dentistry – principles, regulations, and risk assessment. Factors of the dental work environment and ergonomic principles of work. Health risk assessment and prevention in emergency situations.

Recommended literature:

Ševčíková L. and contributors: *Hygiene – Environmental Medicine*. Bratislava: Comenius University, 2011. 322 s. ISBN 978-80-223-2900-2.

Ševčíková L. and contributors: *Environmental Health – Hygiene*. Bratislava: Comenius University, 2015. 253 s. ISBN 978-80-223-3930-8

Babjaková J., Sekretár S. *Nutrition and Food Safety in Public Health*. Bratislava: Comenius University, 2015. 136 p. ISBN 978-80-223-3932-2

Fabiánová, E., Batora, I. *Occupational Health and Toxicology*. 1st Ed. Bratislava: Comenius University, 2015. 146 p. ISBN 978-80-223-3931-5.

Bražinová A. *Epidemiological methods*. Bratislava 2021

Špaleková, M. (Ed.) : *EPIDEMIOLOGY FOR STUDY OF PUBLIC HEALTH* - Vol. 1, 1. vydanie, Comenius University in Bratislava, 2015, 162 s, ISBN: 978-80-223-3933-9

Špaleková, M. (Ed.) : *EPIDEMIOLOGY FOR STUDY OF PUBLIC HEALTH* - Vol. 2, 1. vydanie, Comenius University in Bratislava, 2015, 86 s, ISBN: 978-80-223-3934-6

The language needed to pass the course: *English*

Another course information: *Subject is taught in winter semester*

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: *prof. MUDr. Ľubica Argalášová, PhD., MPH, prof. MUDr. Alexandra Bražinová, MUDr. Mgr. Miriam Fulová, PhD., RNDr. Jana Perželová, PhD., Mgr. Martina Kotrbancová, PhD. Mgr. Michaela Mikulová, PhD.*

Practicals: *MUDr. Jana Babjaková, PhD., MPH, RNDr. Diana Vondrová, PhD, Katarína Mayer Vargová, MSc., MUDr. Martin Soldán, Mgr. Alexandra Filová, PhD., MUDr. Ali Seyed Nazari, MUDr. Lucia Hadvinová, MSc., prof. MUDr. Alexandra Bražinová, PhD., MPH, MUDr. Mgr. Miriam Fulová, PhD., RNDr. Jana Perželová, PhD., Mgr. Martina Kotrbancová, PhD., Mgr. Michaela Mikulová, PhD., Mgr. Katarína Poloncová, PhD., Mgr. Patrik Macášek, PhD.*

Last update: 27th October 2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Professionalism, ethics and legislation
Type, scope and method of educational activities: <i>Scope and workload: 4 ECTS</i> <i>Lectures / Consultations: 18 hours/semester</i> <i>Practical training (seminars): 24 hours/semester</i> <i>Self-study: 65 hours/semester</i> <i>Method of educational activities: combined In-person and, under exceptional circumstances, distance learning.</i>	
Number of earned credits: 4	
Recommended semester/trimester of the study: <i>9th semester - winter, 5th year</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: 0	
Grading policy: • Electronic test: pass threshold >80% • Oral exam (after passing the e-test) • Attendance: 100% seminars; at least 80% lectures • Grading (e-test): A 97–100%, B 93–96%, C 89–92%, D 85–88%, E 81–84%, FX ≤80% • Overall grade: average of achieved components	
Courses objectives: Students: • <i>explain principles of bioethics and professional standards of conduct;</i> • <i>apply informed-consent rules and document patient counselling appropriately;</i> • <i>understand basics of civil liability and create defensible clinical documentation;</i> • <i>know core data-protection duties in healthcare;</i> • <i>identify unfair advertising and conflicts of interest and propose corrective measures;</i> • <i>manage complaints and insurance events using open-disclosure communication.</i> Knowledge: Professionalism & ethics: codes (SKZL, CED/FDI), academic integrity, digital footprint, online reputation. Civil law basics: contractual/tort liability, non-pecuniary harm, causation, standard of care. Informed consent: content, form, specifics for minors and vulnerable persons. Data protection: GDPR, incidents, data-subject rights, processor agreements. Advertising & conflicts of interest: permitted vs prohibited claims, transparency of collaborations. Patient safety & insurance events: complaints, documentation, post-event communication.	

Skills:

- Draft clear, defensible **informed consent** forms and records.
- Keep **legally robust clinical documentation** (timeline, notes, images).
- Prepare basic **internal policies** (records, complaints, GDPR, advertising).
- Compile **insurance notification packs** and conduct **open disclosure** with patients.

Syllabus (course structure):***Lectures/consultations (9 × 2 h):***

1. *Professionalism & ethical frameworks; standard of care.*
2. *Informed consent as a process; documentation and risk communication.*
3. *Civil law I: healthcare contracts and relationships.*
4. *Civil law II: liability, non-pecuniary harm, burden of proof.*
5. *Data protection & security essentials (incidents, DPIA "light").*
6. *Advertising, marketing & conflicts of interest (web, social media).*
7. *Complaints and insurance events; cooperation with insurers.*
8. *Ethics in teaching & research; imaging, authorship, data sharing.*
9. *Summary: good practice in dental settings (do's and don'ts).*

Practicals/seminars (12 × 2 h):

- *Model informed consent (extraction/implant).*
- *Core contractual clauses with suppliers; service & liability.*
- *"Evidence pack": what and how to record.*
- *Insurance notification requirements and attachments.*
- *GDPR in practice: data flows, access, incident handling.*
- *Review of advertising claims and corrections.*
- *Open-disclosure role-play after an adverse event.*
- *Liability case studies (endo/prosthodontics/orthodontics).*
- *Team communication & structured notes (SBAR).*
- *Final **compliance checklist** for the dental practice.*

Recommended literature:

- **Act No. 576/2004 Coll.**, Act No. 578/2004 Coll., Act No. 18/2018 Coll. + GDPR (EU 2016/679)
- **Act No. 147/2001 Coll.** (Advertising – health-services sections)
- **Civil Code** (liability; annotated editions)
- *Beauchamp & Childress: Principles of Biomedical Ethics*
- *FDI/CED guidance on professionalism and ethics*
- *MoH SR methodologies on patient safety and complaints*

The language needed to pass the course: English

Another course information:

The course is offered only in the winter semester

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers: Professor Marek Števček, Doctor of Law, DSc.

Lectures: Professor Marek Števček, Doctor of Law, DSc.; Associate Professor Andrej Thurzo, MD, PhD, MPH, MHA;

Seminars: Professor Marek Števček, Doctor of Law, DSc.; Associate Professor Andrej Thurzo, MD, PhD, MPH, MHA;

Last update: 23.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: <i>Prosthetic Dentistry 1</i>
Type, scope and method of educational activities: vyplní ústav/klinika Lectures: <i>14 hours /semester</i> Practicals: <i>54 hours /semester</i> Individual study: <i>7 hours /semester</i> Form of educational activities: <i>combined</i>	
Number of earned credits: 4	
Recommended semester of study: 7th semester	
Study degree: 1 st + 2 nd level	
Prerequisite courses: <i>Gnathology and Basics of Prosthodontics</i>	
Grading policy: vyplní ústav/klinika - 100 % attendance at practicals - written test minimal level 60 % - evaluation of test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less	
Courses objectives: vyplní ústav/klinika <u>Knowledge:</u> <i>Division of fixed dentures. Fixed bridges, abutment teeth and bridge pontics. Protection of abutment teeth, temporary bridges. Adhesive bridges, bridges saving hard dental tissues.</i> <u>Skills:</u> <i>Phases of crowns fabrication in dental office. Preparation of abutment teeth, parallellity. Impression technique by fixed bridges.</i>	
Syllabus (course structure): vyplní ústav/klinika Lectures: <i>Inlay, onlay, overlay. Basic types of crowns. Fixed bridges, abutment teeth and bridge pontics. Protection of abutment teeth, temporary bridges. Adhesive bridges, bridges saving hard dental tissues.</i> Practicals: <i>Full metallic crowns, aesthetic crowns, post crowns. Silicone impressions, wax bite by fixed bridges.</i>	
Recommended literature: vyplní ústav /klinika – LEN "EN" LITERATÚRU <i>-Shillingburg, Jr, H. T., Sather Jr, D. A., Wilson Jr, E. L., Cain J. R., Mitchell D. L., Blanco L. J., Kessler J.</i> <i>C.: Fundamentals of Fixed Prosthodontics. 2012, Quintessence Publishing.</i> <i>Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. 13th ed. St. Louis, MO: Elsevier;</i> <i>2016. Eaton K, Ower P. Practical Periodontics. 1st ed. Edinburgh, UK: Elsevier; 2015.</i> <i>Hargreav</i>	

-Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. 13th ed. St. Louis, MO: Elsevier; 2016. -Mitchell L., Mitchell A.D., McCaul L. : Oxford Handbook of Clinical Dentistry. 5th ed. Oxford , Oxford University Press, 2009, 761 pp. ISBN 978-0-19-955330-3 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012 for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012 for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 20					
The language needed to pass the course: English					
Notes: <i>subject provided in winter semester only</i>					
Evaluation of course:					
Number of students:					
A	B	C	D	E	FX
Teachers: <i>vyplní ústav/klinik – LEN VYUČUJÚCI v "EN"</i> Lectures: <i>prof. MUDr. Peter Stanko, PhD., MDDr. Michaela Lifková, PhD.</i> Practicals: <i>MDDr. Michaela Lifková, PhD., MUDr. Halyna Pruts, PhD., MDDr. Nikos Leptos, MUDr. Peter Rendek</i>					
Last update: 20.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: <i>Prosthetic Dentistry 2</i>
Type, scope and method of educational activities: <i>vyplní ústav/klinika</i> Lectures: <i>10 hours /semester</i> Practicals: <i>54 hours /semester</i> Individual study: <i>40 hours /semester</i> Form of educational activities: <i>combined</i>	
Number of earned credits: 4	
Recommended semester/trimester of study: <i>8th semester</i>	
Study degree: 1 st + 2 nd level	
Prerequisite courses: <i>vyplní ústav klinika</i> <i>Prosthetic Dentistry 1</i>	
Grading policy: <i>vyplní ústav/klinika</i> - <i>100 % attendance at practicals</i> <i>Oral exam with 2 questions, student has 10 min. for prepare</i>	
Courses objectives: <i>vyplní ústav/klinika</i> <u>Knowledge:</u> <i>Removable partial and total dentures. Steps by fabrication of denture – phases in office and dental laboratory. Artificial teeth arrangement in removable dentures.</i> <u>Skills:</u> <i>Impression making, wax trial of denture.</i>	
Syllabus (course structure): <i>vyplní ústav/klinika</i> Lectures: <i>Types of removable dentures, combined therapy with removable and fixed dentures. Conditions for fabrication of total denture, preprosthetic surgery. Treatment of congenital and aquired defects of jaws and face.</i> Practicals: <i>Various impression techniques, information of patient at delivery of denture, practical steps by rebasis of removable dentures. Evaluation of patient with cleft. Obturators. Approach to children.</i>	
Recommended literature: <i>vyplní ústav /klinika – LEN "EN" LITERATÚRU</i> - Carr A.B., Brown D.T.: <i>McCracken's Partial Removable Prosthodontics</i> . 13th ed. 2016 Elsevier. - Zarb G.A., Hobkirk J., Eckert S., Jacob R.: <i>Prosthodontic Treatment for Edentulous Patients. Total dentures and implant supported dentures</i> . 13th ed. Mosby 2012. Carr AB, Brown DT. <i>McCracken's Removable Partial Prosthodontics</i> . 13th ed. St. Louis, MO: Elsevier; 2016. Eaton K, Ower P. <i>Practical Periodontics</i> . 1st ed. Edinburgh, UK: Elsevier; 2015. Hargreav - Carr AB, Brown DT. <i>McCracken's Removable Partial Prosthodontics</i> . 13th ed. St. Louis, MO: Elsevier; 2016. - Mitchell L., Mitchell A.D., McCaul L. : <i>Oxford Handbook of Clinical Dentistry</i> . 5th ed. Oxford , Oxford University Press, 2009, 761 pp. ISBN 978-0-19-955330-3 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201	

Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012 for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012 for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 20					
The language needed to pass the course: English					
Notes: <i>subject provided in winter semester only</i>					
Evaluation of course: Number of students:					
A	B	C	D	E	FX
Teachers: Lectures: <i>prof. MUDr. Peter Stanko, PhD., MDDr. Michaela Lifková, PhD.</i> Practicals: <i>MDDr. Michaela Lifková, PhD., MUDr. Halyna Pruts, PhD., MDDr. Nikos Leptos, MUDr. Peter Rendek</i>					
Last update: 23.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: <i>Prosthetic Dentistry and Orthodontics</i>
Type, scope and method of educational activities: <i>vyplní ústav/klinika</i> Lectures: <i>14 hours /semester</i> Practicals: <i>70 hours /semester</i> Individual study: <i>116 hours /semester</i> Form of educational activities: <i>combined</i>	
Number of earned credits: 8	
Recommended semester/trimester of study: <i>10th semester</i>	
Study degree: 1 st + 2 nd level	
Prerequisite courses: <i>Prosthetic Dentistry 2, Orthodontics 2</i>	
Grading policy: <i>vyplní ústav/klinika</i> - <i>100 % attendance at practicals</i> - <i>Practical part of the state exam (treatment of one prosthetic patient with record; complex evaluation of one orthodontic patient with record).</i> - <i>Oral part of the state exam, consists of 3 questions, student has 15 min. for prepare</i>	
Courses objectives: <i>vyplní ústav/klinika</i> <u>Knowledge:</u> <i>Influence of parodontopathies on indications of prosthetic treatment. Basics of implantologic-prosthetic rehabilitation of patients. Functional anatomy of temporomandibular joint (TMJ), prosthetic aspects. Summary of complex knowledge before the State examination of prosthetics and orthodontics.</i> <u>Skills:</u> <i>Specifics of preparation in fixed dentures by periodonthologic patients. Evaluation of patient with disorders in TMJ region. Training of all prosthetic and orthodontic procedures before start of the postgradualional praxis.</i>	
Syllabus (course structure): <i>vyplní ústav/klinika</i> Lectures: <i>Prosthetic treatment of periodontopathies. Prosthetic indications of dental implants, fixed prosthetics and supported dentures on implants. Strategy in prosthetic therapy. Differential diagnostics of extracapsular and intracapsular TMJ disorders. Effect of prosthetics on TMJ. Prosthetic therapy by disorders of TMJ.</i> Practicals: <i>Combined treatmen of periodontopathies during prostehtic reconstruction. Prosthetic planning in dental implantology. Occlusal splints, various types, impression technique. Follow-up of patients with TMJ disorders. Clinical indications of various types of orthodontic devices.</i>	
Recommended literature: <i>vyplní ústav /klinika – LEN "EN" LITERATÚRU</i>	

-Bachratý A., Bachratá L.: *Introduction to Orthodontics*. 1997 Comenius University in Bratislava, 63

pp. ISBN 80-223-1121-9

-Graber L.W., Vanarsdall R.L., Vig K.W.L., Huang G.J.: *Orthodontics – Current Principles and Techniques*. 6th ed., 2017 Elsevier. ISBN 978-0-323-37832-1

-Shillingburg, Jr, H. T., Sather Jr, D. A., Wilson Jr, E. L., Cain J. R., Mitchell D. L., Blanco L. J., Kessler J.

C.: *Fundamentals of Fixed Prosthodontics*. 2012, Quintessence Publishing.

Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. 13th ed. St. Louis, MO: Elsevier;

2016. Eaton K, Ower P. Practical Periodontics. 1st ed. Edinburgh, UK: Elsevier; 2015.

Hargreav

-Carr AB, Brown DT. McCracken's Removable Partial Prosthodontics. 13th ed. St. Louis, MO: Elsevier;

2016.

-Carr A.B., Brown D.T.: *McCracken's Partial Removable Prosthodontics*. 13th ed. 2016 Elsevier.

-Zarb G.A., Hobkirk J., Eckert S., Jacob R.: *Prosthodontic Treatment for Edentulous Patients. Total dentures and implant supported dentures*. 13th ed. Mosby 2012.

-Mitchell L., Mitchell A.D., McCaul L. : *Oxford Handbook of Clinical Dentistry*. 5th ed. Oxford , Oxford University Press, 2009, 761 pp. ISBN 978-0-19-955330-3

-Gremillion H.A., Klasser G.D.: *Temporomandibular Disorders*. Springer 2017, 2017 pp.

-Misch C.E.: *Contemporary Implant Dentistry*. 3rd ed. Mosby 2008, , 1101 pp. ISBN 978-0-323-04373-1

-Proffit W.R., Fields H.W. Jr., Brent L., Larson B.E., Sarver D.M.: *Contemporary Orthodontics*. 6 th ed. Elsevier 2018, 744 pp. ISBN 9780323543873

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201

Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201for

Edentulous Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012

for Edentulous Patients: Complete

Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012

for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 2012 Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 201 for Edentulous Patients: Complete Dentures and Implant-Supported Protheses. 13th ed. St. Louis, MO: Mosby; 20					
The language needed to pass the course: English					
Notes: <i>subject provided in summer semester only</i>					
Evaluation of course:					
Number of students:					
A	B	C	D	E	FX
Teachers:					
Lectures: <i>doc. MUDr. Andrej Thurzo, PhD., MPH, MHA, MUDr. Juraj Lysý, PhD., MDDr. Michaela Lifková, PhD., MDDr. Martin Strunga</i>					
Practicals: <i>MDDr. Michaela Lifková, PhD., MUDr. Halyna Pruts, PhD., MDDr. Nikos Leptos, MUDr. Peter Rendek, MDDr. Martin Strunga</i>					
Last update: 23.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Regenerative dentistry
Type, scope and method of educational activities: Lectures/consultations: 4 hours/semester Practical classes/seminars: 24 hours/semester Self-study: 50 hours/semester Mode of delivery: blended learning • on-site lectures and seminars, • online lectures/guest-lectures, • multimedia demonstrations of 3D modelling and 3D printing of scaffolds, • e-learning case studies (biomimetic enamel-repair gels, tooth-regrowth concepts).	
Number of earned credits: 3	
Recommended semester of the study: <i>3rd year, 6th semester – summer semester</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: 0	
Grading policy: Form of assessment: S – examination (A–Fx) 1) Written - electronic test • MCQs, short-answer questions and case vignettes, • covers: biology of tissue regeneration, tissue engineering, biomaterials, cell-based therapies, biomimetic enamel remineralisation (gels/hydrogels, protein matrices), whole-tooth regrowth concepts (USAG-1, Takahashi), translation to clinical practice, ethics and regulation. • pass: ≥ 60 % 2) Oral examination • 1–2 questions/case discussions: ○ outline of a simple regenerative plan (e.g. for early enamel caries), ○ discussion of pulp/periodontal/bone regeneration options, ○ translational aspects of enamel-regenerating gels and tooth-regrowth drugs. Weighting: • written test: 60 %, oral part: 40 % • Grading scale: (A–Fx, 60 % cut-off).	
Courses objectives: Learning outcomes: The student: • understands principles of hard and soft oral tissue regeneration and their importance for minimally invasive dentistry,	

- is familiar with key concepts of tissue engineering (cells–scaffold–signals) in dentistry,
- has an overview of current regenerative therapies (vital pulp treatment, regenerative endodontics, periodontal and bone regeneration, biomimetic enamel therapies),
- can explain the concept and mechanism of **biomimetic enamel-repair gels and hydrogels**, including their ability to restore enamel structure and mechanical properties via organised mineral deposition,
- understands the biological rationale and clinical concept of **tooth-regrowth medicines** (USAG-1 inhibition, third dentition), including ongoing Japanese clinical trials,
- is aware of ethical, legal and regulatory frameworks for introducing regenerative therapies into routine practice,
- can communicate realistic expectations regarding regenerative dental treatments to patients.

Knowledge:

After completing the course, the student:

- knows the structure and physiology of enamel, dentine, pulp, cementum, periodontium and alveolar bone,
- understands tissue-engineering principles in dentistry (scaffolds, cell sources, growth factors),
- is familiar with concepts of pulp regeneration and revitalisation,
- knows the basis of periodontal and bone regeneration (GTR/GBR, membranes, grafts, bioactive materials),
- understands differences between conventional remineralisation (fluoride, CPP-ACP etc.) and **modern biomimetic systems** (protein-based matrices, enamel-mimicking hydrogels),
- knows key findings from recent studies on **protein-based biomimetic gels** that can regenerate demineralised human enamel,
- is familiar with **USAG-1 neutralising antibody therapy** and tooth-regrowth concepts for congenital tooth agenesis and possible future indications,
- understands ethical issues in regenerative dentistry (stem-cell use, enhancement vs. treatment, access to advanced therapies).

Skills:

The student is able to:

- analyse clinical cases with loss/damage of oral tissues and outline a regenerative concept (within student-level competence),
- critically read and interpret scientific articles in regenerative dentistry (including biomimetic enamel-repair and tooth-regrowth trials),
- propose a basic 3D scaffold design and understand its clinical purpose,
- integrate biomimetic remineralisation strategies into **minimal intervention management of early caries**,
- discuss complex cases with specialists in terms of potential regenerative options,
- recognise experimental/non-approved therapies and communicate their status clearly to patients.

Syllabus (course structure):

1. *Introduction to regenerative dentistry.*

2. *Biology of dental tissues and wound healing.*
3. *Principles of tissue engineering in dentistry.*
4. *Pulp and dentine regeneration.*
5. *Periodontal and bone regeneration.*
6. *Biomimetic enamel remineralisation – hydrogels, protein matrices, recent breakthroughs.*
7. *Soft-tissue regeneration in the oral cavity.*
8. *3D/4D printing in regenerative dentistry.*
9. *Stem-cell and cell-based therapies.*
10. *Biomimetic whole-tooth regeneration (USAG-1, "third dentition").*
11. *Translation, regulation and ethics.*
12. *Case-based seminars.*

Recommended literature:

Regenerative Approaches in Dentistry, Sepanta Hosseinpour, Laurence J. Walsh, Keyvan Moharamzadeh, Springer Nature Switzerland AG, 2022

Advanced Technologies in Orthodontics, © 2023, doc.Thurzo et al.,

https://docs.google.com/document/d/1SCYjsUeHjQXXau5euXExDOO81UH_mdWYasCxG8bEggE/
Hosseinpour S., Walsh L.J., Moharamzadeh K.: *Regenerative Approaches in Dentistry*. Springer, 2022.

Recent papers on biomimetic enamel-repair hydrogels and USAG-1 tooth-regrowth therapies (to be specified by teachers).

Thurzo A. et al.: *Clinical 3D Printing in Dentistry*.

The language needed to pass the course: English

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA,

Lectures: Assoc. Prof. Ľuboš Danišovič, RNDr., PhD., Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA, , MDDr. Martin Strunga

Last update: 1.11.2025

Approved by: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Restorative Dentistry 1
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 24 hours/semester Individual study: 14 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: 5. semester - zimný semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Dental Materials, Instruments and Simulations 4	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Performing the prescribed number of procedures and submitting records of treated patients. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: Knowledge: Developmental and acquired defects of hard dental tissues. Fundamentals of diagnosis and treatment of dental caries. Non-invasive and minimally invasive treatment of dental caries. Skills: Ability to examine and diagnose diseases of hard dental tissues with an emphasis on carious lesions. Ability to diagnostically and therapeutically address the issue of pulpo-periodontal lesions.	
Syllabus (course structure): Pathology of hard dental tissues. Developmental and congenital disorders and acquired changes in hard dental tissues. Dental caries: etiology, theories of origin, pathogenesis, prevention. Classification of dental caries, basic caries indices. Examination in conservative dentistry. Patient treatment plan. Treatment of dental caries - clinical principles of preparation. Classification of carious lesions and prepared cavities. Preparation procedures for the treatment of cavities of Black's classes I-V. Treatment of cavities with filling therapy. Indications for filling materials. Indirect and direct covering of the dental pulp. Dentin hyperesthesia. Non-carious lesions of hard dental tissues. Erosion, attrition, abrasion.	
Recommended literature: Thylstrup, A, Fejerskov, O.: Textbook of clinical cariology, 1994, ISBN 87 16 10916 3.	

Fejerskov O, Kidd E.: Dental caries. The disease and its Clinical Management, 2003, ISBN 9781405138895.

Pickard s Manual of Operative Dentistry , 2011, ISBN-10: 0199579156 , ISBN-13: 978 0199579150.

The language needed to pass the course: English

Another course information:

.

Teachers:

Lectures: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Practicals: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Last update: 29.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Restorative Dentistry 2
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 24 hours/semester Individual study: 14 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: 6th semester - summer	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Restorative Dentistry 1	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Performing the prescribed number of procedures and submitting records of treated patients. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: Knowledge: Diagnosis and treatment of hard dental tissue diseases, dental caries and its consequences on the dental pulp and periodontium. Pulpoperiodontal complex. Oral focal infection. Skills: Mastery of basic preparation techniques and filling therapy for carious and non-carious lesions of hard dental tissues. Ability to diagnostically and therapeutically address the issue of pulpoperiodontal lesions. Diagnosis of oral focal infection.	
Syllabus (course structure): As part of the clinical internship, perform all prescribed diagnostic and therapeutic procedures and tasks in the field of treatment of lesions and defects of hard dental tissues, dental caries, pulp and periodontal diseases. Patient treatment plan. Treatment of dental caries - clinical principles of preparation. Classification of carious lesions and prepared cavities. Preparation procedures for the treatment of cavities of Black's classes I-V. Treatment of cavities with filling therapy. Indications for filling materials. Indirect and direct covering of dental pulp. Dentin hyperesthesia. Non-carious lesions of hard dental tissues. Erosion, attrition, abrasion.	
Recommended literature: Thylstrup, A, Fejerskov, O.: Textbook of clinical cariology, 1994, ISBN 87 16 10916 3.	

Fejerskov O, Kidd E.: Dental caries. The disease and its Clinical Management, 2003, ISBN 9781405138895.

Pickard's Manual of Operative Dentistry , 2011, ISBN-10: 0199579156 , ISBN-13: 978 0199579150.

Pickard's Guide to Minimally Invasive Operative Dentistry 10th Edition, 2015, Oxford University Press

The language needed to pass the course: English

Another course information:

.

Teachers:

Lectures: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Practicals: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Last update: 29.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Restorative Dentistry 3
Type, scope and method of educational activities: Oral lectures: 6 hours/semester Practical: 32 hours/semester Individual study: 12 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: <i>uvádza sa odporúčaný semester štúdia</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Restorative Dentistry 2	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Performing the prescribed number of procedures and submitting records of treated patients. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: Knowledge: Diagnosis and treatment of hard dental tissue diseases, dental caries and its consequences on the dental pulp and periodontium. Pulpoperiodontal complex. Oral focal infection. Skills: Non-preparative treatment of initial caries. All preparative techniques and filling therapies for carious and non-carious lesions of hard dental tissues. Ability to diagnostically and therapeutically address the issue of pulpoperiodontal lesions. Diagnosis of oral focal infection.	
Syllabus (course structure): As part of the clinical internship, perform all prescribed diagnostic and therapeutic procedures and tasks in the field of treatment of lesions and defects of hard dental tissues, dental caries, pulp and periodontal diseases. Patient treatment plan. Treatment of dental caries - clinical principles of preparation. Classification of carious lesions and prepared cavities. Preparation procedures for the treatment of cavities of Black's classes I-V. Treatment of cavities with filling therapy. Indications for filling materials. Indirect and direct covering of dental pulp. Dentin hyperesthesia. Non-carious lesions of hard dental tissues. Erosion, attrition, abrasion.	

Recommended literature:

Fejerskov O, Kidd E.: Dental caries. The disease and its Clinical Management, 2003, ISBN 9781405138895.

Pickard's Manual of Operative Dentistry , 2011, ISBN-10: 0199579156 , ISBN-13: 978 0199579150.

Pickard's Guide to Minimally Invasive Operative Dentistry 10th Edition, 2015, Oxford University Press

The language needed to pass the course: English

Another course information:

Teachers:

Lectures: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Practicals: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Last update: 29.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Restorative Dentistry 4
Type, scope and method of educational activities: Oral lectures: 6 hours/semester Practical: 32 hours/semester Individual study: 40 hours/semester Method of education: combined	
Number of earned credits: 3	
Recommended semester of the study: 8th semester - summer	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Restorative Dentistry 3	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Performing the prescribed number of procedures and submitting records of treated patients. Successful completion of the oral exam.	
Courses objectives: <u>Knowledge:</u> Diagnosis and treatment of hard dental tissue diseases, dental caries and its consequences on the dental pulp and periodontium. Pulpoperiodontal complex. Oral focal infection. Comprehensive understanding of dental and oral cavity care in relation to the whole organism. <u>Skills:</u> Non-preparatory treatment of initial caries. All preparatory techniques and filling therapies for carious and non-carious lesions of hard dental tissues. Ability to diagnostically and therapeutically address the issue of pulpoperiodontal lesions. Diagnosis of oral focal infection. Determination of an individual's caries activity. Modification of eating habits. Methods of local fluoridation. Oral hygiene methodology. Fissure sealing.	
Syllabus (course structure): As part of the clinical internship, perform all prescribed diagnostic and therapeutic procedures and tasks in the field of treatment of lesions and defects of hard dental tissues, dental caries, diseases of the pulp and periodontium. Patient treatment plan. Treatment of dental caries - clinical principles of preparation. Classification of carious lesions and prepared cavities. Preparation procedures for the treatment of cavities of Black's classes I-V. Treatment of cavities with filling therapy. Indications for filling materials. Indirect and direct covering of dental pulp. Dentin hyperesthesia. Non-carious lesions of hard dental tissues. Erosion, attrition, abrasion.	

Recommended literature:

Fejerskov O, Kidd E.: Dental caries. The disease and its Clinical Management, 2003, ISBN 9781405138895.

Pickard's Manual of Operative Dentistry , 2011, ISBN-10: 0199579156 , ISBN-13: 978 0199579150.

Pickard's Guide to Minimally Invasive Operative Dentistry 10th Edition, 2015, Oxford University Press

The language needed to pass the course: English

Another course information:

Teachers:

Lectures: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Practicals: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Last update: 29.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Special orofacial Pathological Anatomy
Type, scope and method of educational activities: Oral lectures / consultations: 40 hours / semester Practical: 40 hours / semester Individual study: 70 hours/semester Method of education: combined	
Number of earned credits: 6	
Recommended semester/trimester of the study: 3rd semester (summer), 2. year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: General pathology and pathological physiology.	
Course requirements: 100% histopathology class attendance Overall evaluation of the course: Assessment of one case study (in writing) with description of a histopathological slide. Oral exam two questions None of the parts of the final exam can be evaluated as Fx.	
Courses objectives: Knowledge: Acquiring knowledge and practical experience with the possibilities of biopsy and cytological examinations in the orofacial region and their use in practice. Etiopathogenesis and morphology of neoplastic and non-neoplastic diseases of the orofacial region, especially the oral cavity, salivary glands, nasal cavities, and ear. Odontogenic and non-odontogenic cysts of the oral cavity, head, and neck. Developmental diseases of the head and neck. Systemic manifestations of diseases in the oral cavity. Skills: Use of modern histological, immunohistochemical, molecular biological, and ultrastructural methods in the diagnosis of disease processes. Principles of proper collection of material for biopsy and cytological examination and related administrative tasks. Differential diagnosis of oral cavity lesions.	
Course syllabus summary: Practical classes: <i>Tissue sampling, biopsy options. Pathology of the oral mucosa, gingiva, teeth, pulp, and periapical lesions. Pathology of the salivary glands – neoplastic and non-neoplastic pathological changes. Diseases of the tongue and lips. Diseases affecting the orofacial region. Pseudotumors of the orofacial region. Tumours of the orofacial region. Diseases of the temporomandibular joint. Systemic manifestations of diseases in the oral cavity. Developmental diseases of the head and neck.</i> Lectures:	

Diseases of the oral cavity and teeth - developmental anomalies of teeth, dental caries, diseases of the dental pulp, acute and chronic inflammation, disorders of dentin and enamel development, periodontal diseases, gingiva, diseases associated with dental plaque, bacterial and viral inflammations, diseases resulting from hormonal changes and other systemic diseases, and occlusal trauma. Diseases of the oral mucosa, tongue and lips, developmental disorders, inflammations, changes in general and systemic diseases, and vitamin deficiency. Diseases of the tissues of the orofacial region. Diseases of the temporomandibular joint. True and false tumours of the oral cavity, hyperplasia, odontogenic cysts, and non-odontogenic cysts. Diseases of the salivary glands - sialadenosis, sialolithiasis, sialadenitis, Sjögren's syndrome.

Recommended literature:

Robbins and Cotran Pathologic Basis of Disease, 11th Edition, ELSEVIER 2022, 840 s.
Damjanov I.: Atlas of Histopathology, Jaypee Brothers Medical Publishers, 2012, 399s.
Sapp P.J.: Contemporary Oral and Maxillofacial Pathology, 2 edition, MOSBY 2003, 450s.

The language needed to pass the course: *English*

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: prof. MUDr. Ľ. Danihel, PhD., prof. MUDr. P. Babál, CSc., doc. MUDr. P. Janega, PhD., MUDr. M. Palkovič, PhD., MUDr. A. Janegová, PhD., MUDr. K. Mikuš Kuracinová, PhD., MUDr. K. Letkovská, PhD., MUDr. H. Štubňová, PhD., MUDr. S. Horák, PhD., MUDr. L. Krivošíková, PhD.

Practicals: doc. MUDr. P. Janega, PhD., MUDr. M. Palkovič, PhD., MUDr. A. Janegová, PhD., MUDr. Mgr. V. Šišovský, PhD., MUDr. H. Štubňová, PhD., MUDr. S. Horák, PhD., MUDr. L. Krivošíková, PhD., MUDr. K. Mikuš Kuracinová, PhD., MUDr. K. Mosná, PhD., MUDr. K. Letkovská, PhD., MUDr. M. Bollová,

Last update: 28.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code: Vyplní studied odd.	Course Title: Special surgery: Maxillofacial surgery
Type, scope and method of educational activities: Lectures: 12 hours/semester Practical's: 60 hours/semester Individual study: 28 hours/semester Method of educational activities: Teaching only in the form of in-person classes	
Number of earned credits: 4	
Recommended semester/trimester of the study: 5th class, winter semester (9)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Special surgery: Oral surgery 3	
Grading policy: 100% attendance at practical's 1 written test – at least above 60% Test grading: · A: 91 – 100% · B: 81 – 90% · C: 73 – 80% · D: 66 – 72% · E: 60 – 65% · Fx: 59% and below	
Courses objectives: Knowledge: The student understands the fundamental principles of diagnosing and treating diseases and injuries in the maxillofacial region. They are familiar with the classification of maxillofacial fractures, traumatic conditions, congenital orofacial disorders, temporomandibular joint diseases, as well as neoplastic and inflammatory diseases of the head and neck. They have knowledge of preoperative preparation, indications and contraindications for surgical procedures. The student understands the principles of dentoalveolar surgery, implantology, surgical management of the temporomandibular joint, and reconstructive techniques. They are able to apply the principles of asepsis, hemostasis, and wound suturing.	

Skills:

The student is capable of independently performing a comprehensive examination of a patient in maxillofacial surgery. They can indicate and carry out simple procedures such as tooth extraction, incision, and wound suturing. They have mastered the practical steps of basic surgical techniques and the use of surgical instruments. The student is able to interpret basic imaging examinations (X-ray, CBCT) and apply them in diagnostics. They can work effectively as part of a team during clinical rotations and respect interdisciplinary collaboration. They are able to communicate with the patient, explain the treatment plan, and obtain informed consent.

Odporúčaná literatúra:

-MISCH, C.E.: Contemporary Implant Dentistry. 3rd ed., Mosby 2008, 1101 pp. ISBN 978-0-323-04373-1

-STANKO, P., PORUBAN. D., NOVOTŇÁKOVÁ, D., HOLLÝ, D.: Dentoalveolar and maxillofacial surgery. 2. vyd., Bratislava, Univerzita Komenského 2020, 398 s. ISBN 978-80-223-4824-9

The language needed to pass the course: English

Another course information:

Study program: Dentistry

The course is offered only in the winter semester.

The minimum and maximum number of students is not specified.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:**Practical teaching:**

- Assoc. Prof. Ladislav Czako, MD, PhD, MPH
- Branislav Gális, MDDr., PhD
- MDDr. Michal Vavro PhD.
- MDDr. Bronislava Dvoranová PhD.
- MUDr Ivana Vidová

Last update: 20.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava					
Faculty: Faculty of Medicine in Bratislava					
Course Code:			Course Title:		
			Special surgery: Oral 1		
Type, scope and method of educational activities:					
lectures/ seminars 10 hours/semester					
practicals/seminars 24 hours/semester					
Individual study: 20 hours/semester					
Education form: presentive form of study					
Number of earned credits: 2					
Recommended semester/trimester of the study: 6th semester - summer					
Study degree: 1 st + 2 nd degree 2					
Prerequisite courses: Anatomy					
Grading policy:					
100% attendance at the practicals					
1 written test – minimal 60% of correct answers					
Courses :					
Knowledge: anatomy of the oral cavity, function of oral cavity, saliva, evaluation of the teet, basis of radiology, evaluation of the OPG, CBCT. Local anesthesia, technique of application.					
Skills: evaluation of the patient, evaluation of the x-ray OPG, CBCT, diagnostic conclusion, treatment proposal					
Syllabus:					
<i>Anatomy of the oral cavity, evaluation of dentition , evaluation of the x-ray OPG, CBCT</i>					
The language needed to pass the course: English					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
Teachers:					
Lectures: prof.MUDr. Dušan Hirjak, PhD.					
Seminars: MUDr. K Kocsisivá, MDDr. Z Drobná					
Last update: 1.11.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava					
Faculty: Faculty of Medicine in Bratislava					
Course Code:			Course Title:		
			Special surgery: Oral 2		
Type, scope and method of educational activities:					
lectures/ seminars 12 hours/semester					
practicals/seminars 60 hours/semester					
Individual study: 28 hours/semester					
Education form: presentive form of study					
Number of earned credits: 4					
Recommended semester/trimester of the study: 7th semester - winter semester, 4th year					
Study degree: 1 st + 2 nd					
Prerequisite courses: Anatomy , Special surgery: Oral 1					
Grading policy:					
100% attendance at the practicals					
1 written test – minimal 60% of correct answers					
Courses :					
Knowledge: anatomy of the oral cavity, pathologic changes of the oral mucosa, dentition difficilis, local anesthesia, technique, sutures of mucosal wound					
Skills: evaluation of the patient, diagnostic conclusion, proposal of the treatment, mucosal incision, suture					
Syllabus (course structure):					
<i>Anatomy, evaluation of the patient, evaluation of the teeth and OPG, CBCT</i>					
The language needed to pass the course: English					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
.					
Teachers:					
Lectures: prof.MUDr. Dušan Hirjak, PhD					
Seminars: MUDr. K Kocsisivá, MDDr. Z Drobná					
Last update: 1.11.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava					
Faculty: Faculty of Medicine in Bratislava					
Course Code:			Course Title:		
			Special surgery: Oral 3		
Type, scope and method of educational activities:					
lectures/ seminars 12 hours/semester					
practicals/seminars 60 hours/semester					
Individual study: 55 hours/semester					
Education form: presentive form of study					
Number of earned credits: 5					
Recommended semester/trimester of the study: 8th semester - summer, 4th year					
Study degree: 1 st + 2 nd degree					
Prerequisite courses: Anatomy , Special surgery: Oral 1,2.					
Grading policy:					
100% attendance at the practicals					
1 written test – minimal 60% of correct answers					
Oral examination S					
Courses :					
Knowledge: anatomy of the oral cavity, function of saliva, oral cavity, evaluation of the dentition, OPG, CBCT, Local anesthesia, technique, mucosal incision, surgical extraction, dentitio difcilis, M3 extraction					
Skills: evaluation of the patient, OPG CBCT, aplication all types of local anesthesia, mucosal suture, simple and surgical extraction.					
Osnova predmetu (syllabus):					
<i>Anatomy, function of the oral cavity, saliva, evaluation of the dentition, OPG, CBCT, local anesthesia.</i>					
The language needed to pass the course: English					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
.					
Teachers:					
Lectures: prof.MUDr. Dušan Hirjak, PhD					

Seminars: MUDr. K Kocsisivá, MDDr. Z Drobná
Last update: 2.11.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code: Vyplní studied odd.	Course Title: Special surgery: Orálna and Maxillofacial surgery
Type, scope and method of educational activities: Lectures: 14 hours/semester Practical's: 70 hours/semester Individual study: 116 hours/semester Method of educational activities: Teaching only in the form of in-person classes	
Number of earned credits: 8	
Recommended semester/trimester of the study: 5th class, summer semester (10)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Special surgery: Maxillofacial surgery	
Grading policy: 100% attendance at practical's 1 written test – at least above 60% Test grading: · A: 91 – 100% · B: 81 – 90% · C: 73 – 80% · D: 66 – 72% · E: 60 – 65% · Fx: 59% and below Practical examination (practical dentoalveolar procedure, radiology, medical record) The final grade is determined by the average of the obtained evaluations. The state oral examination consists of 3 questions, and the student has 20 minutes to prepare.	
Courses objectives: Knowledge: The student understands the fundamental principles of diagnosing and treating diseases of the oral and maxillofacial region. They are familiar with the classification of maxillofacial fractures, traumatic conditions, congenital diseases of the orofacial area, as well as neoplastic and inflammatory diseases of the oral cavity, head, and neck. They have knowledge of preoperative preparation, indications and contraindications for surgical procedures. The student understands the principles of dentoalveolar surgery, implantology,	

surgical management of the temporomandibular joint, and reconstructive techniques. They are able to apply the principles of asepsis, hemostasis, and wound suturing.

Skills:

The student will gain practical skills in preparing the surgical field, handling microinstruments and suturing material when using surgical loupes and the microscope. They will be able to independently perform simple vascular and nerve anastomoses and practice hand–eye coordination under magnification.

By completing the course, the student will acquire basic experience with microvascular techniques, including performing vascular and nerve anastomoses on an experimental model.

Odporúčaná literatúra:

-MISCH, C.E.: Contemporary Implant Dentistry. 3rd ed., Mosby 2008, 1101 pp. ISBN 978-0-323-04373-1

-STANKO, P., PORUBAN. D., NOVOTŇÁKOVÁ, D., HOLLÝ, D.: Dentoalveolar and maxillofacial surgery. 2. vyd., Bratislava, Univerzita Komenského 2020, 398 s. ISBN 978-80-223-4824-9

The language needed to pass the course: English

Another course information:

Study program: Dentistry

The course is offered only in the summer semester.

The minimum and maximum number of students is not specified.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Practical teaching:

- Assoc. Prof. Ladislav Czakó, MD, PhD, MPH
- Branislav Gális, MDDr., PhD
- MDDr. Michal Vavro PhD.
- MDDr. Bronislava Dvoranová PhD.
- MUDr Ivana Vidová

Last update: 22.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Therapeutic dentistry 1
Type, scope and method of educational activities: Oral lectures: 10 hours/semester Practical: 60 hours/semester Individual study: 30 hours/semester Method of education: combined	
Number of earned credits: 4	
Recommended semester/trimester of the study: 9th semester - winter	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Restorative Dentistry 4	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Performing the prescribed number of procedures and submitting records of treated patients. The overall rating is determined from the average of the ratings obtained.	
Courses objectives: <u>Knowledge:</u> Diagnosis and treatment of hard dental tissue diseases, dental caries and its consequences on the dental pulp and periodontium. Pulpoperiodontal complex. Oral focal infection. Comprehensive understanding of dental and oral cavity care in relation to the whole organism. Skills: Non-preparatory treatment of initial caries. All preparatory techniques and filling therapies for carious and non-carious lesions of hard dental tissues. Ability to diagnostically and therapeutically address the issue of pulpoperiodontal lesions. Diagnosis of oral focal infection. Determination of an individual's caries activity. Modification of eating habits. Methods of local fluoridation. Oral hygiene methodology. Fissure sealing.	
Syllabus (course structure): As part of the clinical internship, perform all prescribed diagnostic and therapeutic procedures and tasks in the field of treatment of lesions and defects of hard dental tissues, dental caries, diseases of the pulp and periodontium. Patient treatment plan. Treatment of dental caries - clinical principles of preparation. Classification of carious lesions and prepared cavities. Preparation procedures for the treatment of cavities of Black's classes I-V. Treatment of cavities with filling therapy. Indications for filling materials. Indirect and direct covering of dental pulp. Dentin hyperesthesia. Non-carious lesions of hard dental tissues.	

Erosion, attrition, abrasion.
Recommended literature: Fejerskov O, Kidd E.: Dental caries. The disease and its Clinical Management, 2003, ISBN 9781405138895. Pickard's Manual of Operative Dentistry , 2011, ISBN-10: 0199579156 , ISBN-13: 978 0199579150. Pickard's Guide to Minimally Invasive Operative Dentistry 10th Edition, 2015, Oxford University Press
The language needed to pass the course: English
Another course information:

Teachers: Lectures: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli Practicals: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli
Last update: 29.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Therapeutic Dentistry 2
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 114 hours/semester Individual study: 75 hours/semester Method of education: combined	
Number of earned credits: 8	
Recommended semester/trimester of the study: 10th semester - summer	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Therapeutic Dentistry 1	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Performing the prescribed number of procedures and submitting records of treated patients. State exam: practical part: practical performance of conservative dentistry, evaluation of X-ray images, preparation of outpatient treatment cards theoretical part: 3 questions	
Courses objectives: Knowledge: Diagnosis and treatment of hard dental tissue diseases, dental caries and its consequences on the dental pulp and periodontium. Pulpoperiodontal complex. Oral focal infection. Pain in the orofacial region. Comprehensive understanding of dental and oral cavity care in relation to the whole organism. Dental treatment of medically compromised patients. Skills: Comprehensive examination and treatment plan for dental patients. Diagnosis of pain in the orofacial region. Treatment plan for dental patients with systemic diseases. Diagnosis of oral focal infection. External and internal tooth whitening. Non-preparative treatment of initial caries. All preparative techniques and filling therapies for carious and non-carious lesions of hard dental tissues. Ability to diagnostically and therapeutically address the issue of pulpoperiodontal lesions. Diagnosis of oral focal infection. Determination of an individual's caries activity. Modification of eating habits. Methods of local fluoridation. Oral hygiene methodology. Fissure sealing.	
Syllabus (course structure):	

Comprehensive examination of the patient and treatment plan for dental patients. X-ray examination in therapeutic dentistry. Radiovisiography and 3D examination. Symptoms of pain in the orofacial region. Issues in filling therapy. Modern endodontic diagnostic and therapeutic procedures. Defensive counter-indication mechanisms of enamel, dentin, and pulp. Discoloration of the tooth crown and hard dental tissues. Teeth whitening. Preventive and therapeutic aspects in therapeutic dentistry. The relationship between oral diseases and systemic diseases. Treatment of medically compromised patients.

ATB in the prophylaxis of transient bacteremia.

Recommended literature:

Fejerskov O, Kidd E.: Dental caries. The disease and its Clinical Management, 2003, ISBN 9781405138895.

Pickard's Manual of Operative Dentistry , 2011, ISBN-10: 0199579156 , ISBN-13: 978 0199579150.

Pickard's Guide to Minimally Invasive Operative Dentistry 10th Edition, 2015, Oxford University Press

The language needed to pass the course: English

Another course information:

Teachers:

Lectures: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Practicals: MUDr. Bohuslav Novák, PhD., MDDr. Marek Matajs, PhD., MUDr. Ján Kováč, PhD., MDDr. Alessandro Emanuele Sangalli

Last update: 29.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Compulsory practice

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Clinical practice - assistance and preventive dentistry
Type, scope and method of educational activities: <i>Lectures/consultations: 1 hour/semester</i> <i>Exercises/seminars (clinical practice): 70 hours/semester</i> <i>Self-study: 10 hours/semester</i> <i>Mode: on-site (chair-side) at university clinics and contracted practices; scope limited to assisting and simulation on models/typodonts; no independent patient treatment.</i>	
Number of earned credits: 3 ECTS	
Recommended semester/trimester of the study: Year 1 – Winter semester (Semester 1)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None (introductory clinical placement for first-year students).	
Grading policy: H – graded credit): ● Attendance: 100 % (1 excused day, must be made up). ● Written test: 1x; ≥ 80 % (A: 97–100 %, B: 93–96 %, C: 90–92 %, Fx: ≤ 89 %). ● Practical outputs (OSCE/skills): 1. Plaque disclosure and simple index recording on models, 2. Oral-hygiene instruction (Bass/Modified Bass, interdental aids) on typodonts, 3. Assisting during prophylaxis (suction, retraction, isolation, instrument transfer), 4. SBAR handover and brief SOAP observation note. ● Weighting: test 30 % OSCE/skills 40 % supervisor rating 30 %. ● Supervisor rubric: 1. Professionalism & punctuality (0–10),	

2. PPE & infection control (0–10),
3. Assisting in prophylaxis & ergonomics (0–20),
4. Patient education/OHI & motivation (0–15),
5. Documentation (SOAP, index record) (0–10),
6. SBAR handover (0–10),
7. Patient safety & risk reporting (0–5).

Courses objectives:

Assist in preventive/prophylaxis procedures applying ergonomic and four-handed principles.
Deliver OHI demonstrations on models/typodonts; recommend suitable aids; explain **fluoride** and dietary principles.

Perform **basic plaque indices** and record key **caries risk factors** (intro to CRA).

Knowledge:

- Fundamentals of **caries & biofilm, fluorides**, fissure-sealant **indications/contraindications (observation)**.
- Intro to **ICDAS** and **Caries Risk Assessment**.
- EBD basics for prevention (home care, diet, fluoride regimens).

Skills:

- Practical OHI instruction on models; selection of interdental aids.
- Plaque disclosure on models with simple index recording.
- Assisting during prophylaxis (no independent treatment).

Syllabus (course structure): Prevention overview, biofilm, caries & CRA basics.

Fluoridation: home vs professional regimens (indication framework).

OHI techniques (Bass/Modified Bass, interdental aids) – practice on typodonts.

Disclosure & simple indices – documentation.

Assisting in prophylaxis (suction, isolation, instrument transfer).

Fissure sealing – **observation** of indications and workflow.

Dietary counselling – interviewing & motivation.

SBAR + SOAP in prevention; OSCE/skills & reflection.

Recommended literature:

Fejerskov & Kidd: Dental Caries: The Disease and its Clinical Management (latest ed.).

Cochrane reviews on fluorides and OHI (selected).

ICDAS Quick Reference Guide; WHO Oral Health prevention resources.

Bird & Robinson: Modern Dental Assisting (selected chapters on prophylaxis & assisting).

The language needed to pass the course: *Slovak or English*

Another course information:

HBV immunisation recommended. Students bring personal protective eyewear/face shield and work shoes. On contracted sites, local SOPs apply.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Staff (course leads and instructors):

Course lead: *Prof. Peter Stanko, MD, PhD.*

Co-lead/Coordinator: *Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA.*

Practicals: According on particular clinical practise.

Last update: 31.10.2025

Approved by: *prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU*

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: <i>Clinical practice - Dental care within the framework of interprofessional cooperation and assistance</i>
Type, scope and method of educational activities: Lectures/consultations: 4 hours/semester Clinical practice (practical classes/seminars, chairside work): 80 hours/semester Self-study: 16 hours/semester Mode of delivery: on-site clinical training – chairside work in the oral cavity as part of clinical practice (university dental clinics and contracted dental practices)	
Number of earned credits: 4 ECTS	
Recommended semester/trimester of study: 4 th semester, summer, 2nd year	
Study degree: 1 st + 2 nd level	
Prerequisite courses: none	
Subjects requirements: examination (graded A–Fx). Requirements during the semester: ● minimum 90% attendance at clinical placements; absences must be compensated in agreement with the clinical tutor, ● active participation in all assigned activities at university clinics and contracted practices, ● completed and signed clinical logbook (signatures of tutors, evaluation of tasks), ● one written test covering occupational safety, infection control, basic assisting and principles of interprofessional collaboration – minimum 80% score. Final examination (S): ● consists of: ○ practical assessment by the clinical tutor (based on logbook and direct observation of chairside assistance), ○ short oral/written check of basic practical principles, safety rules and interprofessional collaboration. Proposed scoring scheme (max. 100 points): ● Attendance, punctuality, compliance with workplace rules: 20 points ● Professional behaviour and communication (with patients and team): 20 points ● Practical assisting skills and basic dental hygiene procedures: 30 points ● Written test (safety, infection control, team roles, basic procedures): 20 points ● Quality and completeness of the logbook + brief written reflection: 10 points	

Grading scale:

- A: 95 – 100 points
- B: 88 – 94 points
- C: 80 – 87 points
- D: 72 – 79 points
- E: 65 – 71 points
- Fx: < 65 points or failure to meet compulsory requirements (attendance, test, logbook).

Assessment criteria for clinical tutors:

- adherence to infection control and occupational safety rules,
- communication with patients (respect, empathy, confidentiality),
- teamwork with the dentist, dental hygienist, dental nurse/assistant and other healthcare professionals,
- level of chairside assisting during basic procedures (instrument transfer, suction, indirect vision, ergonomics),
- motivation to learn, preparation for sessions, ability to ask relevant questions.

Courses objectives:

On successful completion of the course, the student:

- *understands the organisation of dental care and the roles of members of the dental team,*
- *understands the principles of safe work in the oral cavity (asepsis, antisepsis, personal protection),*
- *is able, under supervision, to assist during simple dental examinations and procedures,*
- *understands the importance of **interprofessional collaboration** in the care of patients with common and chronic conditions,*
- *acquires initial clinical habits and basic assisting skills forming the basis for subsequent clinical courses and mandatory summer placements.*

Knowledge: After completing the course, the student:

- knows the basic types of dental care settings (university clinics, private practices, specialised units),
- knows the roles of the dentist, dental hygienist, dental nurse/assistant and other related professions,
- understands the principles of barrier techniques, disinfection, sterilisation and proper waste management,
- is familiar with basic preventive and diagnostic procedures (oral examination, simple hygiene indices, fluoride application, oral hygiene instruction),
- recognises basic instruments used in conservative dentistry and dental hygiene,

- understands basic principles of communication with patients and the concept of informed consent (at an introductory level appropriate for year 1).
- understands basic social determinants of oral health (poverty, housing, access to care) and their impact on the oral health status,
- is aware of specific aspects of communication and organisation of care for people experiencing homelessness, patients from marginalised communities and people with addictions (e.g. non-stigmatising and respectful approach, adequate attention to team safety, need for patience and clear agreement about the procedure),
- has basic orientation in local networks of support (general practitioners, low-threshold centres, social services, addiction services) and understands when it is appropriate to refer the patient for further medical or social support.

Skills:

After completing the course, the student is able to:

- *prepare himself/herself and the surgery for clinical work (work clothing, PPE, disinfection),*
- *assist during basic patient examination under supervision (instrument transfer, suction, use of mirror),*
- *ensure hygienic turnover of patients and maintain a clean working field,*
- *document the course of treatment in a simple form according to the dentist's instructions,*
- *cooperate with the dental hygienist during preventive procedures (instrument transfer, supporting explanation of basic hygiene principles to the patient under supervision),*
- *reflect on his/her own progress and difficulties and record them in the logbook.*

Syllabus (course structure):

1. *Introduction to clinical practice – structure of the Faculty of Medicine and university dental clinics; organisational rules.*
2. *The dental team – roles of individual professions; concept of interprofessional collaborative care.*
3. *Asepsis, antisepsis, personal protection, barrier techniques, occupational safety.*
4. *Organisation of the working day in a dental surgery – appointments, patient reception, surgery preparation, disinfection protocols.*
5. *Basics of assisting during initial examination – patient positioning, communication, basic instruments.*
6. *Ergonomics and four-handed dentistry – basic working positions and task distribution.*
7. *Basic instruments for conservative treatment and preventive procedures – identification and safe handling.*
8. *Introduction to dental hygiene – plaque removal, fluoride application, oral hygiene instruction (observation and simple assistance).*
9. *Interprofessional collaboration in patients with chronic diseases (diabetes, cardiovascular and oncological patients).*

10. *Basics of medical record keeping – patient chart, data protection (introductory GDPR orientation).*
11. *Patient communication – anxiety, child patient, older patient, cultural aspects.*
12. *Practical assistance at university dental clinics and contracted practices – rotation through departments (conservative dentistry, paediatric dentistry, dental hygiene, and, where possible, orthodontics).*
13. *Final reflection – evaluation of logbooks, student feedback, recommendations for further clinical training.*

Recommended literature:

- Bird DL, Robinson DS. *Modern Dental Assisting*. Latest edition.
- Hatrick CD, Eakle WS. *Dental Materials: Clinical Applications for Dental Assistants and Dental Hygienists*.
- Internal guidelines of the Faculty of Medicine and recommendations of the Ministry of Health on infection control in dentistry.
- Selected EFP/FDI recommendations on prevention and dental hygiene (as specified by course teachers).

The language needed to pass the course: English

Notes: *Clinical practice is organised in small groups under the supervision of experienced tutors.*

Students must comply with current requirements of the Faculty and partner institutions (vaccinations, occupational safety and fire safety training, hand hygiene training).

Allocation of students to clinical sites and rotation schedules is decided by the course guarantor in cooperation with the Vice-Dean for Dentistry.

Grading history:

Number of students:

A	B	C	D	E	FX

Teachers:

Prof. MD Peter Stanko, PhD, Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA., Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA, DMD Martin Strunga, DMD Michaela Lifková, PhD, MD Rastislav Edelstein, PhD, MD Amir Amiry Manesh, DMD Bich Pham Ngoc, DMD Richard Držík, DMD Nikola Držíková Borovanová, Emad Kosarieh

Last update: 1.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: <i>Clinical practice - Gerodontology and social aspects of dental care</i>
Type, scope and method of educational activities: Lectures: <i>8 hours /semester</i> Practicals/seminars: <i>72 hours /semester</i> Individual study: <i>45 hours /semester</i> Method of education: <i>combined</i>	
Number of earned credits: 5	
Recommended semester/trimester of study: 3 rd semester, winter, 2nd year	
Study degree: 1 st + 2 nd level	
Prerequisite courses: none	
Subjects requirements: - 100 % attendance at practicals - Oral exam with 2 questions, student has 10 min. for prepare	
Courses objectives: vyplní ústav/klinika <u>Knowledge:</u> <i>Specifics of dentistry topics in elderly patients.</i> <u>Skills:</u> <i>Restorative, periodontologic, oral surgical and prosthetic treatment of elderly patients.</i>	
Syllabus (course structure): <i>Human aging. Physiologic somatic and psychologic changes during aging. Aging changes in orofacial region. Polymorbidity and medication of elderly patients. Oral evaluation of elderly patients and treatment plan. Dental caries and hard tissue disorders in elderly . Decay of cementum. Endodontics in elderly . Xerostomia and disturbances of salivation in elderly individuals. Prosthetic therapy in elderly . Specifics of fixed and removable dentures. Increase of bite. Preprosthetic surgery in elderly . Periodontopathies at higher age. Oral surgery in elderly patients. Problems of handicapped patients. Dental implantology in elderly .</i>	
Recommended literature: -Stanko, P., Plachý, P. a kol.: Gerodontology/Gerodontológia. 1. vyd. P+M 2025, skriptá, 136 s. ISBN 978-80-89410-97-2 -Chiu-Man Leung K., Chun-Hung Ch., Spagnuolo G., Mashima I.: Dental Care for Older Adults. Int J Environ Res Public Health. 2023 Jan; 20(1): 214. doi: 10.3390/ijerph20010214 -United Nations. World Population Ageing 2019. Highlights. [(accessed on 14 October 2022)]. https://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2019-Highlights.pdf -Chan A.K.Y., Tamrakar M., Jiang C.M., Lo E.C.M., Leung K.C.M., Chu C.H. Common medical and dental problems of older people. <i>Geriatrics</i> . 2021;6:76. doi: 10.3390/geriatrics6030076	
The language needed to pass the course: English	

Notes: <i>subject provided in winter semester only</i>					
Grading history:					
Number of students:					
A	B	C	D	E	FX
Teachers: <i>vyplní ústav/klinik – LEN VYUČUJÚCI v "EN"</i>					
<u>Practicals/seminars:</u> <i>prof. MUDr. Peter Stanko, PhD., MUDr. Rastislav Edelstein, PhD., MUDr. Amir Amiry Manesh, PhD., MDDr. Bich Pham Ngoc, MDDr. Nikola Držíková Borovanová</i>					
Last update: 1.11.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Clinical practice – interprofessional collaboration and dental hygiene
Type, scope and method of educational activities: <i>Lectures/consultations: 1 hours/semester</i> <i>Exercises/seminars (clinical practice): 112 hours/semester</i> <i>Self-study: 5 hours/semester</i> <i>Mode: on-site (chair-side clinical practice – “work in the mouth”) conducted at university clinics and contracted practices under clinical instructors’ supervision.</i>	
Number of earned credits: 3 ECTS	
Recommended semester/trimester of the study: Year 1 – Winter semester (Semester 1)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None (introductory clinical placement for first-semester students).	
Grading policy: H – continuous assessment: ● Attendance: 100 % attendance required (1 excused day allowed; must be made up). ● Safety: Mandatory PPE and infection-control compliance; gross breach ⇒ Fx (fail) in that sitting. ● Written test (minimum requirement): 1 test; ≥80 % required for test recognition. 1. Test grading: A: 97–100 %, B: 93–96 %, C: 90–92 %, Fx: ≤89 %. ● Practical outputs: 1. OSCE/skills check (field isolation, four-handed assistance, suction, instrument transfer, ergonomics). 2. Documentation: short case/SOAP note from observation (anonymised, 1–2 pages) and reflective log (≥5 entries). ● Weighting: written test 30 %, OSCE/skills 30 %, clinical supervisor rating 40 %. ● Supervisor rubric (what to grade):	

1. Professionalism & punctuality (0–10), 2) PPE & infection control (0–10),
2. Communication with patient/team (SBAR) (0–10), 4) Four-handed assisting & ergonomics (0–20),
3. Materials/instruments & sterilisation flow (0–15), 6) Documentation (0–10),
4. Patient education (oral hygiene, motivation) (0–10), 8) Patient safety & proactive risk reporting (0–5).

Courses objectives:

Learning outcomes (students will be able to):

- *Explain the roles and competencies of dentists, dental hygienists, assistants and technicians; work safely chair-side.*
- *Assist effectively in basic outpatient procedures using four-handed dentistry and maintain a dry field.*
- *Prepare the operatory, process instruments along the sterilisation flow, and produce a simple SOAP note.*
- *Use SBAR for handover and provide basic oral-hygiene counselling.*

Knowledge:

- Team roles and referral pathways (periodontology, paediatric dentistry, oral & maxillofacial surgery).
- Foundations of infection control (disinfection, sterilisation, barrier techniques), OHS and radiation protection while observing imaging.
- Dental-hygiene basics: biofilm, plaque indices, aids and patient motivation.
- Ergonomics, four-handed dentistry, clinic organisation and patient flow.

Skills:

- Chair-side assisting (suction, retraction, isolation, instrument transfer).

- Operatory setup and materials handling; sharps safety and waste.
- Basic patient education (tooth-brushing techniques on models, device selection).
- Basic record-keeping and SBAR communication; teamwork in an interprofessional setting.

Syllabus (course structure):

Clinic induction, patient safety, PPE, protocols & briefing.

Infection control & sterilisation flow (prep, decon, packaging, sterilisation, storage).

Ergonomics & four-handed dentistry – positioning of patient and operator.

Assisting skills: suction, retraction, instrument transfer, field isolation.

Dental-hygiene basics: biofilm, motivation; techniques demonstrated on models.

Interprofessional collaboration: roles of hygienists, assistants, periodontists, paediatric dentists, OMFS; SBAR.

Documentation: SOAP notes, basic indications; patient communication.

Observation of selected procedures (no independent treatment): restorative, periodontal prophylaxis, paediatric care.

Patient flow and time management; ethics and communication.

OSCE/skills check + reflection & debrief.

Recommended literature:

Bird & Robinson: Modern Dental Assisting (Elsevier, latest ed.).

Miller & Palenik: Infection Control and Management of Hazardous Materials for the Dental Team.

Newman et al.: Carranza's Clinical Periodontology (selected hygiene/biofilm chapters).

CDC/WHO guidance on hand hygiene and infection control in dental settings.

The language needed to pass the course: Slovak or English

Another course information:

HBV immunisation recommended. Students bring personal protective eyewear/face shield and work shoes. On contracted sites, local SOPs apply.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers:

Staff (course leads and instructors):

- **Course lead:** Prof. Peter **Stanko**, MD, PhD.
- **Co-lead/Coordinator:** Assoc. Prof. Andrej **Thurzo**, MD, PhD, MPH, MHA.

Practicals: According on particular clinical practise.

Last update: 31.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Summer mandatory dental practice 1 - assistance
Type, scope and method of educational activities: <i>Lectures/consultations: 0 hours/semester</i> <i>Exercises/seminars (clinical practice): 125 hours/semester</i> <i>Self-study: 0 hours/semester</i> <i>Mode: on-site clinical placement ("work in the mouth") at university and contracted clinics.</i> <i>Organisation: placement runs in summer (July – first half of August); the student selects a clinical site under an experienced tutor; selection is approved by the Vice-Dean for Dentistry.</i> <i>Mode: on-site (chair-side) at university clinics and contracted practices; scope limited to assisting and simulation on models/typodonts; no independent patient treatment.</i>	
Number of earned credits: 6 ECTS	
Recommended semester/trimester of the study: Semester 2	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None (introductory clinical placement for first-year students).	
Grading policy: ABS – attendance-based pass): ● Attendance: completion of 125 hours at the approved site (recorded in a logbook). ● Safety & SOPs: adherence to PPE, infection-control and local SOPs (gross breach = FAIL). ● Student outputs: 1. Logbook with daily entries (≥10 brief entries + one final reflection), 2. Skills checklist (four-handed assisting, suction, retraction, field isolation, instrument transfer, basic materials handling, sterilisation flow) signed by the tutor, 3. Placement completion certificate (tutor signature + site stamp).	

- Grading: PASS/FAIL (ABS/NEABS) – no written test.
- Tutor rubric – recommended pass/fail anchors:
 1. Professionalism & punctuality, 2) PPE & infection control, 3) Communication (SBAR),
 2. Four-handed assisting & ergonomics, 5) Materials/instruments & sterilisation flow, 6) Records (logbook, simple SOAP).

Courses objectives:

*Assist in preventive/prophylaxis procedures applying ergonomic and four-handed principles. Deliver OHI demonstrations on models/typodonts; recommend suitable aids; explain **fluoride** and dietary principles.*

*Perform **basic plaque indices** and record key **caries risk factors** (intro to CRA).*

Knowledge:

- Fundamentals of **caries & biofilm, fluorides, fissure-sealant indications/contraindications (observation).**
- Intro to **ICDAS** and **Caries Risk Assessment.**
- EBD basics for prevention (home care, diet, fluoride regimens).

Skills:

- Practical OHI instruction on models; selection of interdental aids.
- Plaque disclosure on models with simple index recording.
- Assisting during prophylaxis (no independent treatment).

Syllabus (course structure):

Site induction, OHS, PPE, local SOPs.

Daily **chair-side assistance** in routine outpatient procedures (suction, retraction, instrument transfer, dry-field maintenance).

Operatory setup & turn-over, instrument/materials flow (decontamination–packaging–sterilisation–storage).

Basic patient education (home-care instruction on models as directed by the dentist).

Teamwork & communication (briefing/debriefing, SBAR).

Ongoing **logbook entries** and final reflection; tutor sign-off.

Recommended literature:

Fejerskov & Kidd: Dental Caries: The Disease and its Clinical Management (latest ed.).

Cochrane reviews on fluorides and OHI (selected).

ICDAS Quick Reference Guide; **WHO Oral Health** prevention resources.

Bird & Robinson: Modern Dental Assisting (selected chapters on prophylaxis & assisting).

The language needed to pass the course: *Slovak or English*

Another course information:

HBV immunisation recommended. Students bring personal protective eyewear/face shield and work shoes. On contracted sites, local SOPs apply.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Staff (course leads and instructors):

Course lead: *Prof. Peter Stanko, MD, PhD.*

Co-lead/Coordinator: *Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA.*

Practicals: According on particular clinical practise.

Last update: 31.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: Summer mandatory dental practice 2 – social aspects of dental care and assistance
Type, scope and method of educational activities: ● Lectures/consultations: 0 h/semester ● Practical classes/seminars (clinical practice): 125 h/semester ● Self-study: 0 h/semester ● Mode of delivery: on-site clinical practice – chairside work (“hands-on” work in the oral cavity) at university dental clinics and contracted dental practices, focused on: ○ people experiencing homelessness, ○ patients from marginalised communities, ○ patients with addictions (alcohol, drugs and other forms of dependency), in cooperation with social services, GPs, addiction services and community organisations (depending on local conditions). Organisation: The compulsory summer placement usually takes place in July – first half of August. The student chooses a clinical placement (preferably with experience in socially vulnerable patients) under the supervision of an experienced tutor; the choice is approved by the Vice-Dean for Dentistry.	
Number of earned credits: 6 ECTS credits	
Recommended semester/trimester of study: 4th semester – typically July – first half of August (end of the 2nd year; follow-up to Summer compulsory dental practice 1 – assistance)	
Study degree: 1 st + 2 nd level	
Prerequisite courses: Summer compulsory dental practice 1 – assistance	
Subjects requirements: Form of assessment: ● ABS – completed / not completed (ABS/NEABS) Requirements: 1. Attendance and scope of practice ○ Completion of 125 hours at an approved clinical site/sites (recorded in the logbook). ○ Attendance must correspond to the agreed timetable; unjustified absence may result in NEABS. 2. Safety and protocols	

- Strict adherence to PPE, infection control and internal SOPs of the clinical site.
- Serious violation of safety or ethical rules (e.g. stigmatising approach to vulnerable patients) is a reason for **NEABS**.

3. Student outputs (compulsory documentation)

- **Logbook** with daily entries – at least **10 short entries**, of which at least **5** should focus on patients from socially vulnerable backgrounds (homelessness, marginalised communities, addictions) + **1 final written reflection** (approx. 1–2 pages).
- **Skills checklist** – signed by the tutor (assisting in treatment of socially vulnerable patients, respectful communication, cooperation with social/community services, basic de-escalation techniques).
- **Certificate of completion** (signed by the tutor and stamped by the clinical site).

4. Assessment:

- Final assessment: **ABS/NEABS**, no written exam.
- The tutor bases the decision on the logbook, skills checklist, attendance and direct observation of the student's performance.

Recommended tutor rubric (rated as achieved/not achieved):

1. Punctuality, reliability and professional conduct.
2. Use of PPE and adherence to infection control and safety rules.
3. Communication with vulnerable patients (homelessness, marginalised communities, addictions) – respectful, non-stigmatising, empathetic.
4. Teamwork with dentist, dental hygienist, dental nurse/assistant, social worker, addiction specialist, community worker.
5. Practical assistance when treating patients with reduced cooperation or psychosocial burden.
6. Quality of logbook entries, including reflection on social aspects of cases and on the student's own limits.

Courses objectives:

On successful completion of the course, the student:

- ***understands how social determinants of health*** (poverty, access to care, education, workload) *affect oral health,*
- *is familiar with the* ***specifics of dental care for people experiencing homelessness,*** *patients from marginalised communities and patients with addictions,*
- *is able to* ***assist in the treatment of these patients*** *in the dental surgery or in specific settings (low-threshold centres, community clinics, social care facilities) under*

supervision,

- *understands the importance of **interprofessional and intersectoral collaboration** (healthcare, social services, NGOs, community programmes) in improving access to dental care,*
- *can **reflect on ethical dilemmas** and personal emotions when working with socially vulnerable patients and seek professional solutions in cooperation with the tutor.*

Knowledge: After completing the course, the student:

After completing the course, the student:

- knows typical **barriers to accessing dental care** in socially disadvantaged populations (financial, geographical, organisational, cultural, psychological),
- understands basic **models of homelessness** (chronic, episodic, hidden) and their relationship to oral health,
- knows the specific oral health problems of patients from **marginalised communities** and people with addictions (increased caries, periodontal disease, trauma, neglected hygiene),
- understands principles of **harm reduction approaches** in dentistry (realistic goals, gradual improvement, respect for the patient's current possibilities),
- is familiar with basic **communication strategies and de-escalation techniques** for patients who are intoxicated, anxious, distrustful or have negative experiences with healthcare,
- has basic knowledge of **local support networks** – GPs, social workers, low-threshold services, shelters, community centres, addiction services – and understands when referral is appropriate.
-

Skills:

After completing the course, the student is able to:

- *assist during treatment of patients in **non-standard social and hygienic conditions** (e.g. homelessness), while ensuring team safety and patient dignity,*
- *adapt **communication** to the patient's needs (low health literacy, language barrier, distrust, shame),*

- cooperate with social workers or community workers when planning a **realistic treatment and prevention plan**,
- under supervision, explain **basic preventive measures** tailored to the patient's resources (affordable aids, simple behavioural steps),
- document clinical course and relevant social aspects **in the logbook** without breaching confidentiality or GDPR,
- recognise situations where **additional help is needed** (safety risk, decompensated condition, intoxication, psychiatric symptoms) and act according to tutor/site protocols.

Syllabus (course structure):

1. Introduction to social aspects of dental care – social determinants of health, inequalities in oral health.
2. Homelessness and oral health – types of homelessness, barriers to care, practical examples.
3. Marginalised communities (e.g. segregated communities, migrants, socially excluded groups) – cultural and communication aspects in dentistry.
4. Patients with addictions – impact of alcohol, tobacco and drugs on oral health; cooperation challenges.
5. Interprofessional collaboration – role of social services, low-threshold centres, NGOs and general practitioners.
6. Practical assistance in treating patients from vulnerable groups – ergonomics, safety and communication.
7. Brief interventions and patient education – setting realistic preventive goals for socially disadvantaged patients.
8. De-escalation techniques and managing difficult situations in the surgery – aggression, frustration, distrust.
9. Documentation and ethics – confidentiality, sensitive recording of social information, non-stigmatising language.
10. Cooperation in long-term management – continuity of care, referrals, navigating the local network of support.
11. Clinical practice at university and contracted dental sites – chairside assistance, patient communication, observation of social aspects of individual cases.
12. Ongoing logbook entries and their discussion with the tutor.
13. Final reflection – what the student has learned from working with socially vulnerable patients; perceived system barriers and possible improvements.

Recommended literature:

WHO – Oral health and social determinants (selected chapters and materials as advised by teachers).

Selected publications on gerodontology and social aspects of oral health (articles and guidelines according to current recommendations).

Bird DL, Robinson DS. Modern Dental Assisting – chapters on assisting and patient communication.

National and local guidelines on care for people experiencing homelessness, marginalised communities and people with addictions (as recommended by course guarantors).

The language needed to pass the course: English

Notes: *Hepatitis B vaccination is recommended; all occupational safety and infection control standards must be followed. Students use their own protective eyewear/face shields and work shoes and follow the internal protocols of the provider. Where possible, placements with a higher proportion of socially vulnerable patients are preferred.*

Grading history:

Number of students:

A	B	C	D	E	FX

Teachers:

Prof. MD Peter Stanko, PhD, Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA., Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA, DMD Martin Strunga, DMD Michaela Lifková, PhD, MD Rastislav Edelstein, PhD, MD Amir Amiry Manesh, DMD Bich Pham Ngoc, DMD Richard Držík, DMD Nikola Držíková Borovanová, Emad Kosarieh

Last update: 1.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: Summer mandatory dental practice 3 - laboratory and pedodontic or orthodontic practice
Type, scope and method of educational activities: • <i>Lectures/consultations: 0 h/semester</i> • <i>Practical classes/seminars (clinical practice): 150 h/semester</i> • <i>Self-study: 0 h/semester</i> Mode of delivery: • <i>on-site clinical practice – chairside work and dental laboratory work at university dental clinics and contracted laboratories/clinics,</i> • <i>rotation typically includes:</i> ○ <i>dental laboratory practice (models, basic prosthodontic and orthodontic laboratory work, digital technologies where available),</i> ○ <i>paediatric dental (pedodontic) practice and/or orthodontic practice (communication and assisting skills in the treatment of children and adolescents).</i> Organisation: <i>The summer mandatory dental practice 3, usually takes place in July – first half of August. The student selects a laboratory and a clinical site (paediatric and/or orthodontic practice) under the supervision of an experienced tutor; the choice is approved by the Vice-Dean for Dentistry.</i>	
Number of earned credits: 5	
Recommended semester of study: <i>6th semester - 3rd year – summer semester - follow-up to Summer compulsory/mandatory dental practice 1 and 2 and preparation for clinical teaching in paediatric dentistry and orthodontics</i>	
Study degree: 1 st + 2 nd level	
Prerequisite courses: <i>Summer compulsory dental practice 2 – social aspects of dental care and assistance</i>	
Subjects requirements: Form of assessment: Attendance and scope of practice - completion of 150 hours at approved sites (laboratory and clinical), - attendance according to the agreed timetable; unjustified absences may lead to NEABS. Safety, ergonomics and protocols	

- a. strict adherence to occupational safety rules, PPE use, infection control and internal SOPs in both the laboratory and the clinic,
- b. serious violation of safety, ethics or workplace rules is a reason for **NEABS**.

3. **Student outputs (compulsory documentation)**

- a. **Logbook** with regular entries – minimum **10 entries** from the laboratory part and **10 entries** from the paediatric/orthodontic part (brief description of activities and reflection),
- b. **Skills checklist** – signed by the tutor (selected laboratory procedures, assistance in paediatric/orthodontic treatment, communication with child and parent),
- c. **Certificate of completion** signed by the tutor and stamped by the clinical site.

4. **Assessment:**

- a. final assessment is **ABS/NEABS**, no written exam,
- b. the tutor bases the decision on attendance, quality of the logbook and observed performance.

Recommended tutor rubric – rated as achieved/not achieved:

1. Punctuality, reliability and professional conduct.
2. Adherence to infection control and safety protocols in both laboratory and clinic.
3. Quality of assistance during paediatric and/or orthodontic procedures (ergonomics, four-handed dentistry, sensitive approach to the child).
4. Basic **laboratory skills** (safe handling of materials, accuracy, following the technological protocol).
5. Communication with the child and his/her parent/guardian; ability to explain basic instructions.
6. Quality of logbook entries and ability to reflect on own progress and limits.

Courses objectives:

On successful completion of the course, the student:

- *acquires an overview of **basic laboratory processes** in dentistry (especially prosthodontics, orthodontics and, where available, digital workflows),*
- *understands the **specifics of treating children and adolescents** in paediatric dentistry and orthodontics,*
- *is able to **assist in paediatric and orthodontic procedures**, including basic behaviour management of the child,*
- *understands the importance of effective communication and cooperation between the **clinical team and the dental laboratory**,*
- *can reflect how the laboratory phase affects the clinical outcome (function, aesthetics, patient comfort),*

- *is able to participate responsibly and independently in the preparation, course and completion of treatment of paediatric and orthodontic patients within the scope of a student role.*

Knowledge

After completing the course, the student:

- *knows basic **laboratory technologies** used in dentistry (models, casts, simple fixed and removable prostheses, simple orthodontic appliances, basic digital workflows – scanning, 3D printing, depending on the site),*
- *understands the **flow of information** between clinic and laboratory (lab prescriptions, model transfer, specification of requirements, quality check of the final work),*
- *knows the specifics of **paediatric dental procedures** (prevention, restorations in children, extractions of primary teeth, fissure sealing, simple emergency care),*
- *is familiar with basic **orthodontic concepts** (indications for interceptive orthodontics, simple appliances, importance of retention),*
- *understands basic principles of **child behaviour in the dental surgery** and non-pharmacological anxiety management (tell-show-do, positive reinforcement, modelling),*
- *understands the importance of **timing of treatment** in childhood (growth, dental development, habits such as pacifier use, thumb sucking, mouth breathing) for orthodontic and paediatric dental planning.*

Skills

After completing the course, the student is able to:

- *perform, under supervision, **basic laboratory procedures** (preparing and pouring models, simple repairs, basic steps in producing simple appliances as instructed by the technician/dentist),*
- *correctly prepare and hand over **laboratory documentation** (lab prescriptions, model labelling, basic technical data),*
- *assist during **treatment of paediatric patients** – from reception of the child, through communication with the parent, to chairside assistance,*
- *adapt communication to the age and comprehension of the child and the parent,*
- *assist in **basic orthodontic procedures** (delivery/removal of appliance, control visits, hygiene and wear instructions),*

- record brief and accurate **logbook entries**, including both laboratory and clinical aspects of the case.

Syllabus (course structure):

1. Introduction to the placement – occupational safety, PPE, internal SOPs in laboratory and clinic.
2. Organisation of work in the dental laboratory – material flow, communication with the clinical team.
3. Models and casts – casting, trimming and labelling models.
4. Basic prosthodontic laboratory procedures (demonstrative and auxiliary tasks suitable for students).
5. Fundamentals of orthodontic laboratory work – simple removable appliances, retention appliances (observation and assistance).
6. Digital technologies (where available) – intraoral/extraoral scanning, 3D printing, basic quality control.
7. Introduction to the paediatric dental clinic – specific environment, communication with child and parent.
8. Assistance in paediatric dental procedures – prevention, restorations, extractions, fissure sealing, simple emergency care.
9. Introduction to the orthodontic clinic – diagnostics, impressions/scans, photographic documentation, simple procedures.
10. Assistance in orthodontic treatment – appliance delivery, recall appointments, hygiene and wear instructions.
11. Coordination between clinic and laboratory – planning, quality control, handling of adjustments and remakes.
12. Ongoing logbook entries and their discussion with the tutor.
13. Final reflection – integrating laboratory and clinical experience; importance of teamwork.

Recommended literature:

Mitchell L., Carter NE. An Introduction to Orthodontics.

Fejerskov O., Kidd E. Dental Caries – The Disease and Its Clinical Management. (selected chapters focused on children)

Bimstein E. et al. Paediatric Dentistry / Pedodontics (or an equivalent textbook available at the faculty library).

Selected guidelines and materials of national professional societies in orthodontics and paediatric dentistry (as recommended by teachers).

The language needed to pass the course: English

Notes: *Hepatitis B vaccination is recommended; students must comply with all relevant occupational safety and infection control standards. Students use their own protective eyewear/face shields and work shoes and follow the internal protocols of the healthcare provider. The proportion of laboratory versus clinical time is decided by the course guarantor according to the capacity of cooperating sites.*

Grading history:

Number of students:

A	B	C	D	E	FX

Teachers:

Prof. MD Peter Stanko, PhD, Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA., Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA, DMD Martin Strunga, DMD Michaela Lifková, PhD, MD Rastislav Edelstein, PhD, MD Amir Amiry Manesh, DMD Bich Pham Ngoc, DMD Richard Držík, DMD Nikola Držíková Borovanová, Emad Kosarieh

Clinical and laboratory teaching:

selected teachers from paediatric dentistry, orthodontics and dental laboratories at the Faculty of Medicine and contracted sites.

Last update: 1.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Subject title: Summer mandatory dental practice 4 - interdisciplinary assistance
Type, scope and method of educational activities: • <i>Lectures/consultations: 0 h/semester</i> • <i>Practical classes/seminars (clinical practice): 150 h/semester</i> • <i>Self-study: 0 h/semester</i> <i>on-site clinical practice – chairside work in the oral cavity and interdisciplinary assistance at:</i> • <i>university dental clinics,</i> • <i>cooperating hospital departments (e.g. oral and maxillofacial surgery, ENT, oncology, geriatrics, internal medicine, anaesthesiology and intensive care),</i> • <i>where applicable, operating theatres and specialised clinics managing head and neck or complex medical cases.</i> Organisation: <i>The summer mandatory practice usually takes place in July – first half of August. The student chooses clinical sites focusing on interdisciplinary collaboration under the supervision of an experienced tutor; the choice is approved by the Vice-Dean for Dentistry.</i>	
Number of earned credits: 5	
Recommended semester of study: <i>8th semester – typically July – first half of August (after completion of the 4th year; follow-up to Summer compulsory dental practice 3 – laboratory and paediatric assistance)</i>	
Study degree: 1 st + 2 nd level	
Prerequisite courses: <i>Summer compulsory dental practice 3 – laboratory and paediatric assistance</i>	
Subjects requirements: Form of assessment: ABS – completed / not completed (ABS/NEABS) Requirements: Attendance and scope of practice ○ completion of 150 hours at approved interdisciplinary sites, ○ attendance according to the agreed timetable with the tutor. Safety and protocols ○ strict adherence to PPE, infection control and safety protocols, including those specific to hospitals and operating theatres,	

- compliance with instructions of ward and theatre staff,
- serious breaches of safety or ethics (e.g. contamination of sterile field, disrespectful behaviour towards patients or team members) may result in **NEABS**.

3. Student outputs (compulsory documentation)

- **Logbook** with daily entries – at least **15 short entries**, of which at least **8** must document **interdisciplinary situations** (e.g. preoperative dental sanitation, oncology patient, complex medical comorbidities, consultations with other specialties).
- **Skills checklist** – signed by the tutor (assistance in interdisciplinary procedures, communication with other specialists, orientation in clinical protocols, basic readiness for work in the operating room).
- **Certificate of completion** – signed by the tutor and stamped by the clinical site.

4. Assessment:

- final assessment: **ABS/NEABS**, no written exam,
- the tutor evaluates the student's performance based on attendance, clinical work, communication and the quality of the logbook.

Recommended tutor rubric (achieved / not achieved):

1. Punctuality, reliability and ability to follow agreed schedules.
2. Use of PPE and adherence to infection control and safety rules, particularly in operating theatres and wards.
3. Communication and cooperation with the interdisciplinary team (physicians of various specialties, nurses, physiotherapists, speech therapists, psychologists, dietitians, social workers).
4. Practical assisting skills in interdisciplinary procedures (e.g. preoperative dental sanitation, assistance in maxillofacial surgery, care for inpatients).
5. Ability to orient in complex clinical situations (medical comorbidities, medications, contraindications to dental procedures).
6. Quality of the logbook and final reflection (understanding the role of dentistry in interdisciplinary patient management).

Courses objectives:

On successful completion of the course, the student:

- *understands the **role of the dentist in interdisciplinary patient care**, particularly in complex medical, surgical, oncological and geriatric cases,*
- *can describe **main models of collaboration** between dentistry and other specialties (preoperative sanitation, consultation, joint treatment planning),*
- *is able to **assist in dental procedures** that are part of a broader interdisciplinary management (e.g. before cardiac surgery, transplantation, oncology treatment),*

- understands basic **risks and limitations of dental interventions** in severely ill and polymorbid patients,
- can reflect on **ethical and communication aspects** of interdisciplinary care (team decision-making, informed consent, communication with the patient and family).

Knowledge

After completing the course, the student:

- knows typical **indications for dental consultation** requested by other specialties (preoperative sanitation, before chemo-/radiotherapy, before prosthesis implantation or major surgery),
- understands fundamentals of **dental care in oncology patients** (before, during and after head and neck cancer treatment; risk of osteonecrosis, xerostomia, nutritional issues),
- has an overview of how **internal diseases** (diabetes, cardiovascular disease, haematologic disorders, immune compromise) influence planning and performance of dental procedures,
- knows basic principles of **cooperation with anaesthesiology and intensive care** (sedation, general anaesthesia, monitoring, risks),
- understands the structure and function of **multidisciplinary teams** (tumour boards, interdisciplinary case conferences, geriatric teams) and what information dentistry should contribute.

Skills

After completing the course, the student is able to:

- assist under supervision in **dental procedures performed as part of interdisciplinary management**, both in outpatient and hospital settings,
- prepare himself/herself and the workplace for presence in an **operating theatre or specialised hospital environment** (dressing, access rules, behaviour in sterile/non-sterile zones),
- obtain and hand over **targeted medical history information** (anticoagulation, immunosuppression, allergies, cardio- and cerebrovascular risk) relevant to dental procedures,
- contribute to **treatment planning** from the dental perspective in patients with serious diseases (what is urgent, what can be postponed, what specific precautions are needed),
- document **interdisciplinary cases** succinctly but clearly (clinical problem, dental contribution, recommendations for further management).

Syllabus (course structure):

1. The role of the dentist in hospital and interdisciplinary care – overview of collaboration models.

2. *Preoperative dental sanitation – indications, scope, cooperation with surgeon and anaesthesiologist.*
3. *Oncologic patients – dental care before, during and after head and neck cancer treatment.*
4. *Internal and cardiovascular diseases – impact on dental treatment planning, consultations with internist/cardiologist.*
5. *Multimorbid geriatric patients – interdisciplinary teams, geriatric syndromes and dentistry.*
6. *Facial and jaw trauma – collaboration with maxillofacial surgery and ENT.*
7. *Cooperation with physiotherapists, speech therapists, dietitians and psychologists in complex cases.*
8. *Principles of presence in the operating room – rules of conduct, communication with the surgical team.*
9. *Documentation of interdisciplinary cases – consultation reports, entries in medical records, recommendations.*
10. *Interdisciplinary case discussions – selected examples (tumour board, transplantation, major surgical procedures).*
11. *Clinical practice at university and contracted sites – assistance focused on interdisciplinary patient care.*
12. *Ongoing logbook consultations with the tutor.*
13. *Final reflection – the role of the future dentist in hospital and interdisciplinary teams.*

Recommended literature:

- Little JW, Falace DA, Miller CS, Rhodus NL. Dental Management of the Medically Compromised Patient.
- Fonseca RJ. Oral and Maxillofacial Surgery (selected chapters as indicated by teachers).
- Current national and international guidelines on dental care in patients with systemic, cardiovascular and oncologic diseases.
- Internal hospital and faculty guidelines on interdisciplinary patient management (tumour boards, consultation processes).

The language needed to pass the course: English

Notes: *Completion of all required BOZP, fire safety and infection control training is expected; additional theatre-specific training may be required. Allocation of students to specific sites depends on the capacity and agreements between the Faculty and partner institutions. The practice is intended for advanced students with basic competence in clinical dentistry.*

Grading history:

Number of students:

A	B	C	D	E	FX

Teachers:

Prof. MD Peter Stanko, PhD, Assoc. Prof. Andrej Thurzo, MD, PhD, MPH, MHA., Assoc. Prof. MD Andrej Thurzo, PhD, MPH, MHA, DMD Martin Strunga, DMD Michaela Lifková, PhD, MD Rastislav Edelstein, PhD, MD Amir Amiry Manesh, DMD Bich Pham Ngoc, DMD Richard Držík, DMD Nikola Držíková Borovanová, Emad Kosarieh

Clinical teaching: *university dental clinics and cooperating hospital departments (oral and maxillofacial surgery, ENT, oncology, geriatrics, internal medicine, anaesthesiology and others) according to the current rota.*

Last update: 1.11.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Compulsory optional subjects

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: AI robotics in Orthodontics
Type, scope and method of educational activities: <i>Lectures/consultations: 0 hours/semester</i> <i>Practical classes/seminars (laboratory/robotics training): 12 hours/semester</i> <i>Independent study: 13 hours/semester</i> <i>Mode of delivery: in-person</i> <i>Form and scope: in-person 12 hours</i>	
Number of earned credits: 1 ECTS	
Recommended semester/trimester of the study: <i>4th year – summer semester (PV)</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: AI-Assisted Learning Strategies and the Limits of AI Applications; Orthodontics 1	
Grading policy: Requirements for course completion: – 100% attendance at practical classes (one replacement session permitted). – One written test (AI + robotics + safety); a minimum of ≥ 81% is required. – Short laboratory micro-project: AI design of a personalised appliance + a safe robotic manufacturing step (wire bending / model for aligner / TAD surgical/drilling template) + brief quality documentation. – Grading scale (with a minimum of 81%): A: 97–100% · B: 93–96% · C: 89–92% · D: 85–88% · E: 81–84% · Fx: ≤ 80%. – Final grade composition: 60% test + 30% micro-project + 10% continuous tasks/OSCE.	
Courses objectives: <i>Students understand the data workflow scan → AI analysis → CAD design → robotic manufacturing → validation, the safe use of a collaborative robot in a laboratory environment, and the basic regulatory/ethical frameworks (EU MDR, AI Act, GDPR). They can design, manufacture, and document a personalised orthodontic appliance using AI and robotics in accordance with the do-no-harm principle and quality requirements.</i> Knowledge: – Roles of AI in orthodontics: segmentation, landmarking, predictive models, and set-up planning. – Biomechanics of appliances (wire, aligner, hybrid) and biological limits. – Fundamentals of collaborative robotics: kinematics, accuracy, calibration, safe zones. – Data formats and interoperability (STL/PLY, DICOM/CBCT, HL7-FHIR). – Basics of quality and safety: ISO 13485, ISO 14971, AI validation/verification, cybersecurity, auditability.	

– Regulatory and ethical essentials: EU MDR, EU AI Act, GDPR (informed consent, bias/robustness).

Skills:

- Prepare data (IOS/CBCT), perform AI analysis, and carry out **CAD** design of an individualised appliance.
- Programme and safely execute the **robotic manufacturing step** (wire bending / aligner model preparation / drilling/bonding template fabrication).
- Perform **QA/QC** (design vs. output comparison, basic metrology) and create concise technical records (**traceability**).
- Collaborate effectively (clinician – technician – IT) and communicate risks and limitations to the patient.

Syllabus (course structure):

- *HSE safety essentials in the robotics lab + ethical and legal frameworks (EU MDR, AI Act, GDPR).*
- *Data workflow: IOS/CBCT → preprocessing → AI (segmentation/landmarking) → set-up.*
- *CAD design of personalised appliances (wire, aligner, TAD templates) – biomechanics fundamentals.*
- *Robotic manufacturing I: **wire bending** – kinematics, fixtures, accuracy testing.*
- *Robotic manufacturing II: **aligner pipeline** – set-up → models → thermoforming → finishing.*
- **QA/QC and documentation:** *verification/validation, traceability, mini-audit of the project.*

Recommended literature:

- Proffit, W. R., et al.: *Contemporary Orthodontics* (latest edition).
- Graber, L. W., et al.: *Orthodontics: Current Principles and Techniques* (latest edition).
- Review papers on digital orthodontics and aligners (AJO-DO, Angle Orthodontist, Journal of Dental Research).
- **EU MDR 2017/745** (custom-made medical devices), **EU AI Act** (high-risk healthcare AI).
- **ISO 13485** (QMS), **ISO 14971** (risk management), **IEC 62304** (software), **ISO/IEC 27001** (ISMS).
- **ISO/TS 15066** (collaborative robotics), **ISO 10218** (industrial robot safety).
- **HL7-FHIR** and **DICOM** specifications for dental imaging.
- *Practical guides to 3D printing in dentistry and manuals for the selected CAD/robot system.*

The language needed to pass the course: *Slovak or English*

Another course information: Limit of **6 students**

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

Teachers:

Assoc. prof. MUDr. Andrej Thurzo, PhD, MPH, MHA; MDDr. Michaela Lifková, PhD; MDDr. Martin Strunga

Practicals: Assoc. prof. MUDr. Andrej Thurzo, PhD, MPH, MHA; MDDr. Michaela Lifková, PhD; MDDr. Martin Strunga
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Last update: 24.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU
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Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Endodontics 1
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 35 hours/semester Individual study: 3 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: 7th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Conservative dentistry 1</i>	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Medical Report preparing	
Courses objectives: <u>Knowledge:</u> Findings on the causes, diagnosis, and therapy of dental pulp diseases. Examination of the patient in endodontics. Therapeutic procedures in endodontics. <u>Skills:</u> Determine the diagnosis and method of therapy for reversible and irreversible diseases of the dental pulp and to carry it out in practice.	
Syllabus (course structure): Etiology, pathology, clinical presentation, and therapy of dental pulp diseases. Pulpitis – dystrophic, degenerative, and regressive changes of the dental pulp. Inflammatory conditions of the pulp – hyperemia, acute and chronic inflammations. Reversible and irreversible pulp conditions. Therapy of pathological conditions of the dental pulp. Vital and devital methods of treating pathologically altered pulp. Pulp amputation. Pulp extirpation. Necrosis and gangrene of the pulp. Complications in the treatment of pathological pulp conditions. Practical management of pulp diseases.	
Recommended literature: Kováč J.: Textbook of endodontology. Vydavateľstvo Univerzity Komenského, Bratislava 2015. Stejskalová J. a kol.: Konzervační zubní lékařství. Grada, Praha 2003. Peřinka L. a kol.: Základy klinické endodoncie. Quintessenz, Praha 2003. Hellwig E. A kol.: Záchovná stomatologie a parodontologie. Grada, Praha 2003.	

The language needed to pass the course: English					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
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Teachers: Lectures: MDDr. Marek Matajs / MUDr. Mgr. Ján Kováč, PhD., MPH Practicals: MUDr. Mgr. Ján Kováč, PhD., MPH, MUDr. Bohuslav Novák, PhD., MUDr. Andrea Nováková, PhD., MDDr. Marek Matajs, MDDr. Richard Držík, MDDr. Michaela Geržová, MDDr. Gabriela Maria Sawicka, MDDr. Alessandro Emanuele Sangalli, MDDr. Petros Koutsoukos, MDDr. Sofia Saridou					
Last update: 27.10.2025					
Approved by: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM, dekan LF UK					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Endodontics 2
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 35 hours/semester Individual study: 3 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: 7th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Conservative dentistry 1</i>	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej Medical Report preparing	
Courses objectives: <u>Knowledge:</u> Findings on the causes, diagnosis, and therapy of dental pulp diseases. Examination of the patient in endodontics. Therapeutic procedures in endodontics. <u>Skills:</u> Determine the diagnosis and method of therapy for reversible and irreversible diseases of the dental pulp and to carry it out in practice.	
Syllabus (course structure): Etiology, pathology, clinical presentation, and therapy of dental pulp diseases. Pulpitis – dystrophic, degenerative, and regressive changes of the dental pulp. Inflammatory conditions of the pulp – hyperemia, acute and chronic inflammations. Reversible and irreversible pulp conditions. Therapy of pathological conditions of the dental pulp. Vital and devital methods of treating pathologically altered pulp. Pulp amputation. Pulp extirpation. Necrosis and gangrene of the pulp. Complications in the treatment of pathological pulp conditions. Practical management of pulp diseases.	
Recommended literature: Kováč J.: Textbook of endodontology. Vydavateľstvo Univerzity Komenského, Bratislava 2015. Stejskalová J. a kol.: Konzervační zubní lékařství. Grada, Praha 2003. Peřinka L. a kol.: Základy klinické endodoncie. Quintessenz, Praha 2003. Hellwig E. A kol.: Záchovná stomatologie a parodontologie. Grada, Praha 2003.	

The language needed to pass the course: English					
Another course information:					
Grading history:					
Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
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Teachers: Lectures: MDDr. Marek Matajs / MUDr. Mgr. Ján Kováč, PhD., MPH Practicals: MUDr. Mgr. Ján Kováč, PhD., MPH, MUDr. Bohuslav Novák, PhD., MUDr. Andrea Nováková, PhD., MDDr. Marek Matajs, MDDr. Richard Držík, MDDr. Michaela Geržová, MDDr. Gabriela Maria Sawicka, MDDr. Alessandro Emanuele Sangalli, MDDr. Petros Koutsoukos, MDDr. Sofia Saridou					
Last update: 27.10.2025					
Approved by: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM, dekan LF UK					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Endodontics 2
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practical: 35 hours/semester Individual study: 3 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: 8th semester	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>Endodontics 1</i>	
Grading policy: 100% attendance at the practicals Completion of the required number of designated practical procedures Examination: Practical part – model preparation of a root canal using a predetermined system of endodontic instruments and its obturation. Theoretical knowledge of the working procedure and root canal anatomy is required. Theoretical part • Written: completion of a test with a minimum score of 60% • Oral: answering two questions (cariology and cavity preparation, diagnosis and therapy in endodontics) Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % a menej The overall evaluation is determined from the average of the obtained grades.	
Courses objectives: Knowledge: Knowledge of the causes, diagnosis, and therapy of periapical periodontium diseases and a comprehensive view of endodontic treatment of teeth. Indications and contraindications for endodontic treatment. Classification of periapical tissue diseases. Systematics of devital tooth treatment. Skills: Determine the diagnosis and method of therapy for diseases of the dental pulp, infected root canals, and apical periodontitis, and to carry it out in practice. Diagnose and therapeutically manage pulp–periodontal lesions.	
Syllabus (course structure):	

Etiology, pathology, clinical presentation, and therapy of periodontal inflammations. Diagnosis and treatment of infected root canals and periodontal complications. Acute and chronic apical periodontitis. Pulpo-periodontal complex – symptomatology, differential diagnosis, and therapy. Surgical procedures complementing conservative treatment. Oral focal infection.

Recommended literature:

Kováč J.: Textbook of endodontology. Vydavateľstvo Univerzity Komenského, Bratislava 2015.

Stejskalová J. a kol.: Konzervační zubní lékařství. Grada, Praha 2003.

Peřinka L. a kol.: Základy klinické endodoncie. Quintessenz, Praha 2003.

Hellwig E. A kol.: Záchovná stomatologie a parodontologie. Grada, Praha 2003.

The language needed to pass the course: English

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: MDDr. Marek Matajs / MUDr. Mgr. Ján Kováč, PhD., MPH

Practicals: MUDr. Mgr. Ján Kováč, PhD., MPH, MUDr. Bohuslav Novák, PhD., MUDr. Andrea Nováková, PhD., MDDr. Marek Matajs, MDDr. Richard Držík, MDDr. Michaela Geržová, MDDr. Gabriela Maria Sawicka, MDDr. Alessandro Emanuele Sangalli, MDDr. Petros Koutsoukos, MDDr. Sofia Saridou

Last update: 27.10.2025

Approved by: prof. MUDr. Juraj Payer, PhD., MPH, FRCP, FEFIM, dekan LF UK

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Forensic Medicine
Type, scope and method of educational activities: Oral lectures: 12 hours/semester Practicals/Interships: 12 hours/semester Individual study: 1 hours/semester Form of education: on-site learning	
Number of earned credits: 1	
Recommended semester/trimester of the study: 8 th	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: pathological anatomy, pathological physiology	
Grading policy: - 100% attendance at the interships <u>Final exam:</u> - theoretical exam: 2 questions <u>Exam evaluation:</u> A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. The overall rating is determined on the basis of the theoretical exam results.	
Courses objectives: <u>Knowledge and skills:</u> To learn the basics of forensic medicine and orientation in criminal matters in medical practice. To learn the basics about external and internal examination of a dead body and about determination of the cause of death. To acquire the knowledge about the compilation of medical certificates and expert's opinions and about the process of their interpretation in front of the court. Examination of a dead body and filling in official documents. Participation in the process of identification of persons with undetected identity. Examination of an alleged assailant (principles, documentation). Examination of a victim (principles, documentation). Compilation of medical certificates	
Syllabus (course structure): Forensic medicine, its importance and role in medicine and society. Principles of criminal proceedings. Merits of selected crimes. Courts and prosecution offices. Doctor as a witness, doctor as an expert. Protective treatment. Bodily injury, severe bodily harm. Medical liability. Death and process of dying. Procedures taken after death. Categories and manners of death. Early and late postmortem changes. Sudden death in children and in adults. Abrasions, contusions. Lacerations, incised, slash, stab and chopping wounds. Firearm injuries – single projectile injuries, shot-gun pellets injuries, explosive injuries. Mechanical asphyxia and its forms - hanging, ligature strangulation, manual strangulation (throttling), smothering, postural asphyxia, and drowning. Fall from height. The effect of changes in atmospheric pressure and of elevated and reduced temperature. The effect of electricity	

and lightning. Forensic procedures to detect poisoning.

Recommended literature:

Simpson's Forensic Medicine 14th ed. Jason Payne – James, Richard Jones, CRC Press Taylor & Francis, London, 2020

The language needed to pass the course: English

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

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Teachers:

Prof. Jozef Šidlo, MD, CSc., MPH, FIALM, Dana Mikulášová, MD, Norbert Moravanský, MD, PhD., Andrea Szórádová, MD, Anežka Zummerová, MD, LLD, PhD., Assoc. Prof. Peter Kováč, MD, LLD, PhD. et PhD.

Last update: 31.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Gynecology and Obstetrics for Dentistry
Type, scope and method of educational activities: Lectures/consultations: 18 hours/semester Practical classes/seminars: 20 hours/semester Self-study: 12 hours/semester Teaching method: on-site (in-person) ; in exceptional cases blended (in-person + distance) . For any distance delivery in exceptional cases, the format is always synchronous . Delivery: on-site 38 h/semester ; in blended mode, selected seminars/consultations are delivered synchronously online.	
Number of earned credits: 2 ECTS	
Recommended semester/trimester of the study: Year 3 or Year 4 – Winter semester (compulsory-elective; taught simultaneously to both cohorts)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None mandatory. Recommended: Anatomy 1–2, Physiology, Pharmacology for Dentistry, Emergency care in Dentistry.	
Grading policy: 1 written test (MCQ + short clinical vignettes); pass >80 % . Brief OSCE: positioning a pregnant patient, acute scenario decision-making, safe drug selection. Mini-case/portfolio: one care plan for a pregnant or breastfeeding patient. Attendance at practicals: ≥ 80 %. Grading: A 97–100 %, B 93–96 %, C 89–92 %, D 85–88 %, E 81–84 %, Fx ≤80 % . Overall grade: weighted average – test 60 %, OSCE 30 %, mini-case 10 %.	
Courses objectives: Students safely manage dental care for pregnant and breastfeeding patients, schedule procedures by trimester, select safe anaesthetics, analgesics and antibiotics , apply pregnancy radiology rules , perform appropriate positioning (preventing supine hypotensive syndrome), and recognise emergencies requiring referral. Knowledge: - Physiological changes in pregnancy and oral manifestations (pregnancy gingivitis, pyogenic granuloma, erosions with hyperemesis). - Trimester-based planning of dental procedures; indications and deferrals.	

- **Medications in pregnancy and lactation:** analgesics (paracetamol, NSAIDs), antibiotics (penicillins/cephalosporins/clindamycin; tetracyclines contraindicated), local anaesthetics & vasoconstrictors, sedation (limitations).
- **Dental radiology** in pregnancy – safety principles, shielding, ALARA.
- **Acute events** in the dental chair: syncope, eclampsia (recognition, first steps, EMS).
- Hormonal influences (contraception, pregnancy, menopause) on periodontium/mucosa; **antiresorptive therapy** (post-menopausal) and MRONJ risk.

Skills:

- **Positioning of pregnant patients** (left lateral tilt), managing reflux and discomfort.
- **Drug selection and dosing** (including lactation) and adjustment of local anaesthesia.
- **Interprofessional communication** with OB/GYN/anaesthesiology; consent and patient education.
- **Pregnancy/lactation radiology protocol** and informed consent.
- **Chair-side care plans** tailored to trimester and comorbidities.

Syllabus (course structure):

- Pregnancy physiology and oral changes – high-yield for dentists.
- Trimester-based care: what to do when, and why.
- Medications in pregnancy and lactation (analgesia, antibiotics, LA, sedation) – practical tables.
- Radiology in pregnancy – safety, indications, documentation.
- Acute events: syncope, eclampsia – algorithm, positioning, EMS.
- Hyperemesis, dehydration, odontogenic infections in pregnancy – decision-making.
- Hormonal influences: contraception, pregnancy, menopause – periodontium, mucosa, healing.
- Antiresorptive therapy (bisphosphonates/denosumab) – MRONJ risk and dental planning.
- Lactation – drug compatibility, timing of doses, patient counselling.
- Ethics & law: informed consent, sensitive communication, adolescent pregnancy.
- Interdisciplinary collaboration (OB/GYN, primary care, anaesthesiology).
- Mini-OSCE & cases: building a care plan and selecting medications.

Recommended literature:

BNF: pregnancy and lactation sections (safety and interactions).
LactMed / Hale's Medications & Mothers' Milk (drug compatibility in breastfeeding).
ADA and **ACOG** resources on oral health during pregnancy.
FGDP(UK)/NICE guidance on radiology and analgesia.
 Selected reviews on MRONJ and antiresorptive therapy (post-menopausal patients).

The language needed to pass the course: *Slovak or English*

Another course information:

Compulsory-elective course taught **jointly to Years 3 and 4** in the winter semester; designed for immediate chair-side applicability in dental practice.

Grading history:

Number of students: 30

A	B	C	D	E	FX
a	b	c	d	E	f

.

Teachers:Main responsible teacher: doc. MUDr. Alexandra Krištúfková, PhD.Lectures: prof. MUDr. Miroslav Borovský, CSc., prof. MUDr. Jozef Záhumenský, PhD., MPH, prof. MUDr. Kamil Pohlodek, PhD., MPH, doc. MUDr. Alexandra Krištúfková, PhD., doc. MUDr. Rastislav Sysák, PhD., MBA, MUDr. Zuzana Nižňanská, PhD., MUDr. Ladislav Maršík, PhD., MUDr. Petra Pšenková, MUDr. Petra Oťapková,Practicals: MUDr. Zuzana Nižňanská, PhD., MUDr. et PhDr. Mária Vargová, PhD., MUDr. Adam Adamec, PhD., MUDr. Dominika Kotríková, PhD., MUDr. Adriana Goldbergerová, PhD., MUDr. Kajanová, MUDr. Šťastná, MUDr. Petra Oťapková, PhD., MUDr. Peter Papcun, PhD., MUDr. Petra Pšenková, MUDr. Martin Alföldi, PhD., MUDr. Pavel Doležal, PhD., MUDr. Mgr. Rami Saade, PhD., MUDr. Beáta Stopjaková**Last update:** 29.10.2025**Approved by:** prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Introduction to Orthognathic Surgery
Type, scope and method of educational activities: Lectures/ seminars 12 hours/semester Individual study: 38 hours/semester Methods of lectures: prezenčná Education form: presentive form of study	
Number of earned credits: 2	
Recommended semester of the study: 7th semester - winter	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: Special surgery: oral 1.	
Grading policy: 100% attendance at the practicals and seminars Personal discussion	
Courses : <i>introduction to orthognathic surgery</i> Knowledge: malocclusion basic knowledge, different types, characteristic of the face, etiology of malocclusion, cephalometric analysis, treatment plan, surgical options, types of surgical approaches, cleft patients, distraction osteogenesis in orthognathic surgery., cooperation with orthodontists Skills: evaluation of the patient with malocclusion, cephalometric analysis, treatment plan proposals	
Osnova predmetu (syllabus): , <i>Evaluation of the patients, identification of malocclusion, Cephalometric analysis, CT analysis, types of surgical approaches, treatment plan, surgical options</i>	
The language needed to pass the course: English	
Another course information: Study program:Dentistry English, winter semester, minimum 10 students	
Grading history:	

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: prof.MUDr. Dušan Hirjak, PhD

Seminars: MUDr. K Kocsisivá, MDDr. Z Drobná

Last update: 28.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Latin medical terminology 1
Type, scope and method of educational activities: Practical: 24 hours/semester Individual study: 26 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: 1 st , 3 rd , 5 th	
Study degree: 1 st + 2 nd degree	
Prerequisite courses:	
Grading policy: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the overall assessment) and one final test (100 points, makes 85% of the overall assessment). Test assessment: A: 94 – 100 %, B: 87 – 93 %, C: 80 – 86 %, D: 70 – 79 %, E: 60 – 69 %, Fx: 59 % – 0%. The overall grade (minimum of 60%) is determined by the grades obtained in the midterm (15%) and final (85%) test and is their weighted average.	
Courses objectives: Knowledge: Acquisition of fundamental medical terminology with a particular focus on clinical vocabulary. Mastery of essential grammatical structures necessary to understand the composition of specialized anatomical and clinical terms. Familiarity with medical terms of Latin and Greek origin that form the basis of professional medical language. Skills: Development of linguistic competence enabling effective comprehension and use of information from professional medical sources through an engaging and holistic linguistic approach. Ability to analyse and understand the structure of Latin anatomical terms and complex clinical expressions, and to apply them correctly in both spoken and written professional contexts.	
Syllabus (course structure): <i>Introduction to the study of Latin; brief historical overview. Distinction between Latin and Greek and their application in medical terminology. Formation of clinical terms with suffixes -itis, -osis, -oma. Basic grammatical concepts; use of Latin adjectives in anatomy. Clinical word formation: Greek roots, prefixes, and suffixes; Latin prefixes and suffixes. Declension of nouns: overview of the five declensions; genitive singular forms across declensions.</i>	
Recommended literature: Lauková L. et al.: <i>Medical Terminology Unplugged: Latin & Greek Made Easy</i> . In print. Rollerová A., Vasil'ová, L. et al.: <i>Graeco-Latin Terminology of Clinical Dentistry</i> . Bratislava: Univerzita Komenského v Bratislave 2018. 192 p. ISBN 978-80-223-4640-5.	

Kábrt, J., Kábrt J. jr.: Lecixon medicum. Praha: Galén 2015. 917 p. ISBN 978-80-749-2200-8

The language needed to pass the course: *English*

Another course information: Maximum capacity is 12 students.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Practicals: PaedDr. PhDr. Tomáš Hamar, PhD.; Mgr. Lucia Lauková, PhD.; Mgr. Ema Pavláková, PhD.; Mgr. Marek Šibal, PhD.; Mgr. Angela Škovierová, PhD.; Mgr. Ol'ga Vaneková, PhD.; Mgr. Melinda Vasiľová, PhD.

Last update: 26 October 2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, Dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Latin medical terminology 2
Type, scope and method of educational activities: Practical: 24 hours/semester Individual study: 26 hours/semester Method of education: combined	
Number of earned credits: 2	
Recommended semester/trimester of the study: 2 nd , 4 th , 6 th	
Study degree: 1 st + 2 nd degree	
Prerequisite courses:	
Grading policy: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the overall assessment) and one final test (100 points, makes 85% of the overall assessment). Test assessment: A: 94 – 100 %, B: 87 – 93 %, C: 80 – 86 %, D: 70 – 79 %, E: 60 – 69 %, Fx: 59 % – 0%. The overall grade (minimum of 60%) is determined by the grades obtained in the midterm (15%) and final (85%) test and is their weighted average.	
Courses objectives: Knowledge: Acquisition of fundamental medical terminology with a particular focus on clinical vocabulary. Mastery of essential grammatical structures necessary to understand the composition of specialized anatomical and clinical terms. Familiarity with medical terms of Latin and Greek origin that form the basis of professional medical language. Skills: Development of linguistic competence enabling effective comprehension and use of information from professional medical sources through an engaging and holistic linguistic approach. Ability to analyse and understand the structure of Latin anatomical terms and complex clinical expressions, and to apply them correctly in both spoken and written professional contexts.	
Syllabus (course structure): <i>Revision and consolidation of declensions, with focus on the genitive case. Review of compound clinical terms. Formation of plural nouns and adjectives (masculine and feminine). Neuter nouns across the 2nd, 3rd, and 4th declensions. Structure of complex anatomical terms. Detailed use of adjectives in Latin. Accusative case – prepositional phrases used in diagnoses. Ablative case – prepositional phrases used in diagnoses. Latin numerals and their medical applications. Structure and composition of medical prescriptions (recipe construction). Practice in writing prescriptions. Pathological diagnoses – examples and analysis. Reading and interpretation of professional medical texts.</i>	
Recommended literature:	

Lauková L. et al.: *Medical Terminology Unplugged: Latin & Greek Made Easy*. In print.
Rollerová A., Vasil'ová, L. et al.: *Graeco-Latin Terminology of Clinical Dentistry*. Bratislava:
Univerzita Komenského v Bratislave 2018. 192 p. ISBN 978-80-223-4640-5.
Kábrt, J., Kábrt J. jr.: *Lecixon medicum*. Praha: Galén 2015. 917 p. ISBN 978-80-749-2200-8

The language needed to pass the course: *English*

Another course information: Maximum capacity is 12 students.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Practicals: PaedDr. PhDr. Tomáš Hamar, PhD.; Mgr. Lucia Lauková, PhD.; Mgr. Ema Pavláková, PhD.; Mgr. Marek Šibal, PhD.; Mgr. Angela Škovierová, PhD.; Mgr. Oľga Vaneková, PhD.; Mgr. Melinda Vasil'ová, PhD.

Last update: 26 October 2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, Dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course code: <i>doplní študijné oddelenie</i>	Course title: Microscopical structure and development of the orofacial region
Type, extent and teaching methods: Oral lectures: <i>14 hours /semester</i> Practicals: <i>14 hours/semester</i> Individual study: <i>47 hours /semester</i> Teaching methods: taught in person. In case of an emergency (e.g. pandemic situation), communication via MS TEAMS and MOODLE (distance method), or a combination of these methods.	
Number of credits: 3	
Recommended semester of study: 3rd semester of study (summer)	
Level of study: 1st + 2nd degree	
Prerequisites: Cytology, histology and embryology. Anatomy 1-2 (head and neck)	
Assessment methods: The student is evaluated based on the study results during the semester (control questions, written partial test, preparation of pictures/figures of observed histological preparations) and participation in mandatory forms of teaching. Participation in lectures is recommended, as the partial test also contains information from the lectures. The student is obliged to complete a lesson on work safety in the practical room. The criterion for successful completion of the subject is successful completion of the partial test with at least 70% correct answers and 90% participation in practical teaching. The final exam consists of 2 parts: • Test (30 points) • Oral / morphological part (30 points) Grading: A: 96 - 100%, B: 90 - 95%, C: 85 - 89%, D: 82 - 84%, E: 80 - 81%, Fx: 79% and less	
Learning outcomes: <u>Knowledge:</u> After completing the course, the student is able to distinguish and identify the microscopic structure of orofacial tissues and organs and can connect the acquired knowledge with clinical situations in dentistry in terms of diagnosis, prevention and their therapy. At the same time, the student is able to theoretically describe the development of orofacial tissues and their possible anomalies and use this knowledge for their diagnosis and therapy. <u>Skills:</u>	

After completing the course, the student is able to use a light microscope to identify and describe the structure of individual cell types and tissues of the orofacial region in humans. The acquired skills will help the student connect the microscopic structure of the tissues of the orofacial region with their function.

The acquired knowledge of the development of orofacial tissues and their developmental anomalies is the basis for interpreting their clinical consequences (e.g., clefts, eruption disorders, etc.). The student will also gain experience in safe work with tissue preparations and learn the basics of digital microscopy.

Syllabus:

Topics of lectures and exercises:

1. Introduction to the technique of tissue preparation and processing and preparation for observation of dental tissue and tissues of the orofacial region and its histological examination
2. Oral mucosa - microscopic structure of epithelium and connective tissue. Odontogenesis and its developmental stages
3. Tooth tissues 1: Enamel and dentin – development, ultrastructure, enamel-dentin junction
4. Tooth tissues 2: Cementum and pulp – development, ultrastructure, cementum-dentin junction, topography
5. Dentogingival junction, periodontium – development, ultrastructure, functions
6. Alveolar bone and gingiva – development, structure and functions
7. Salivary glands – development, structure, saliva production, its composition and functions
8. Development of the remaining structures and organs of the orofacial region and their anomalies (development of the face, oral and nasal cavities, palate, development of the skull, derivatives of the pharyngeal arches)

Recommended literature:

Mescher, A.L. Junqueira's Basic Histology. Text and Atlas, 17th Ed, McGraw-Hill Medical Books, 2023, ISBN: 1264930399, 704 p.

Balko, J., Tonar, Z., Varga, I. and Hudák, R., 1st ed. Memorix Histology. Triton, 2018, ISBN: 9788075535771, 584 p.

Mikušová, Polák. Introduction to Histology and Embryology 1 for students of Dentistry and General Medicine. CU Bratislava 2017, 140 p. ISBN 978-80-223-4348-0.

Sadler, T. W. Langman's Medical Embryology, 15th Ed, Lippincott Raven, 2023, ISBN: 9781975180010, 472 p.

Moore, K.L., Persaud, T.V.N., Torchia, M.G. Before We Are Born, 10th Ed, Saunders, 2019, ISBN: 9780323608497, 350 p.

Nanci, A.: Ten Cate's Oral Histology: Development, Structure and Function, 2008

Language required for the course: english					
Comments: The course outline and scope are set to provide a general grounding in morphological fundamentals prior to clinical modules, with an emphasis on practical tissue identification and brief clinical correlation.					
Course evaluation: <i>doplň študijné oddelenie</i>					
Total number of evaluated students:					
A	B	C	D	E	FX
a	b	c	d	e	f
Teachers: Guaranteed by: prof. RNDr. Ivan Varga, PhD. et PhD. Lectures: prof. RNDr. Ivan Varga, PhD. et PhD., doc. RNDr. Marianna Danková, PhD. and model lectures given by Assistant Professors as part of a comprehensive teaching activity prior to the start of their habilitation procedure Practicals: prof. RNDr. Ivan Varga, PhD. et PhD., doc. RNDr. Marianna Danková, PhD., RNDr. Mária Kleinová, PhD., Mgr. Miroslava Juríková, PhD., MUDr. Paulína Gálfiová, PhD., MUDr. Martin Klein, PhD., MUDr. Ján Líška, CSc., MUDr. Mária Lorencová, PhD., MUDr. Renáta Mikušová, PhD., MUDr. Simona Polakovičová, PhD., MUDr. Vanda Rísová, PhD., MUDr. Mgr. Rami Saade, PhD., MUDr. Georgína Kolníková, PhD., RNDr. Claudia Feitscherová and internal PhD. students of the Institute					
Last update:					
Approved by: <i>prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU</i>					

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code: Vyplní studied odd.	Course Title: Microvascular Propaedeutics
Type, scope and method of educational activities: Practical's: 12 hours/semester Individual study: 38 hours/semester Method of educational activities: Teaching only in the form of in-person classes	
Number of earned credits: 2	
Recommended semester/trimester of the study: 3rd year, summer semester (6) or 4th year, summer semester (8)	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: General Surgery 1 and 2. Kódy doplní študijné odd.	
Grading policy: 100% attendance at practical's 1 written test – at least above 60% Test grading: · A: 91 – 100% · B: 81 – 90% · C: 73 – 80% · D: 66 – 72% · E: 60 – 65% · Fx: 59% and below Independent performance of microvascular anastomosis on cadavers The final grade is determined from the average of the obtained evaluations.	
Courses objectives: Knowledge: The student will acquire theoretical knowledge about the principles of microvascular surgery, basic instruments, materials, and techniques used in vascular and nerve anastomoses. They will understand the biological and technical factors influencing the success of microvascular reconstructions. Skills: The student will gain practical skills in preparing the surgical field, handling microinstruments and suturing material when using surgical loupes and the microscope. They will be able to independently perform simple vascular and nerve anastomoses and practice hand–eye coordination under magnification.	

By completing the course, the student will acquire basic experience with microvascular techniques, including performing vascular and nerve anastomoses on an experimental model.

Syllabus (course structure):

1. Introduction to microvascular surgery – history, significance, and indications
2. Microsurgical instruments, materials, and surgical equipment
3. Principles of working with surgical loupes and the microscope – ergonomic setup, hand–eye coordination
4. Microsurgical suturing – basic types of stitches, handling delicate tissue
5. Vascular anastomoses – end-to-end technique on an experimental model
6. Vascular anastomoses – end-to-side technique and its specifics
7. Nerve suturing – principles and practical training on cadavers
8. Prevention and management of complications in microvascular surgery
9. Simulation of complex microvascular reconstruction (combination of vascular and nerve sutures)
10. Final practical training and assessment of basic skills

Recommended literature:

The language needed to pass the course: English

Another course information:

Study program: Dentistry

The course is offered only in the winter semester.

Minimum number of students: 6, maximum capacity: 12 students (in case of higher interest, students will be selected based on a written test).

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Practical teaching:

- Assoc. Prof. Ladislav Czako, MD, PhD, MPH
- Branislav Gális, MDDr., PhD
- Kristián Šimko, MD, PhD
- Ivana Vidová, MD
- Marek Soviš, MDDr.

Last update: 25.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Neurology for Dentistry
Type, scope and method of educational activities: <i>Lectures/consultations: 17 hours/semester</i> <i>Practical classes/seminars: 25 hours/semester</i> <i>Self-study: 33 hours/semester</i> <i>Teaching method: on-site (in-person); in exceptional cases blended (in-person + distance).</i> <i>For any distance delivery in exceptional cases the format is always synchronous.</i> <i>Delivery: on-site 42 h/semester; in blended mode, selected seminars/consultations are delivered synchronously online.</i>	
Number of earned credits: 3 ECTS	
Recommended semester/trimester of the study: <i>Year 3 or Year 4 – Winter semester (compulsory-elective, taught simultaneously to both cohorts)</i>	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: <i>None mandatory.</i> <i>Recommended: Anatomy 1–2, Physiology, General Pathology & Pathophysiology.</i>	
Grading policy: <i>100% attendance at clerkships (or internships/placements) Patient examination and patient case write-up (or compiling a medical record) Written test - minimum 70% correct answers Test grading: A: 95 - 100%, B: 89 - 94%, C: 83 - 88%, D: 77 - 82%, E: 70 - 76%, Fx: 0 - 69%</i> <i>Oral exam</i>	
Courses objectives: <i>Students perform a focused cranial nerve exam, differentiate common causes of orofacial pain, recognise emergencies requiring referral, and adapt dental procedures, anaesthesia and sedation to neurological conditions and medication regimens.</i>	
Knowledge: • Neuroanatomy/neurophysiology of cranial nerves relevant to dentistry. • Differential diagnosis of orofacial pain (neuropathic, musculoskeletal, vascular, odontogenic). • Trigeminal neuralgia/neuropathy, post-procedure neuropathies; Bell's palsy; headache spectrum vs. TMD. • Epilepsy in dental practice (triggers, acute management, drug interactions). • Parkinson's disease, MS, stroke/TIA – oral implications, swallowing, positioning, interactions. • Principles of neuropathic pain pharmacotherapy and interactions with local anaesthesia/sedation.	

Skills:

- Focused examination of cranial nerves (V, VII, IX, X, XII).
- Red-flag screening and appropriate referral.
- Chair-side diagnostic algorithm for orofacial pain.
- Treatment planning adjusted to neurological comorbidities/medication.
- Clear interprofessional communication and documentation.

Syllabus (course structure):

1. Cranial nerve essentials for dentists (high-yield).
2. Orofacial pain framework (IASP) and diagnostic flow.
3. Trigeminal neuralgia/neuropathy and post-dental nerve injury.
4. TMD vs. headache: overlaps and distinctions.
5. Bell's palsy and other peripheral pareses – differential and management.
6. Migraine, tension-type and cluster headache in dental settings.
7. Epilepsy: prevention, in-office management, interactions.
8. Parkinson's disease, MS and neurodegeneration – oral care implications.
9. Stroke/TIA – recognition and first response in the dental office.
10. Neuropathic pain: pharmacology, topical options, co-management.
11. Local anaesthesia and sedation in neurological patients – safety principles.
12. Mini-OSCE: cranial nerve exam, case discussions, decision-making.

Recommended literature:

Sharav & Benoliel: Orofacial Pain and Headache.

Okeson: Management of Temporomandibular Disorders and Occlusion.

IASP resources on orofacial/neuropathic pain.

ICHD-3: International Classification of Headache Disorders.

EAN/AAN guidance on trigeminal neuralgia and Bell's palsy.

BNF / standard drug-interaction references (analgesics, anxiolytics, antiepileptics).

The language needed to pass the course: English**Another course information:**

Compulsory-elective course delivered **jointly to Years 3 and 4** (winter). Aligned with Directive 2005/36/EC (consolidated) regarding practical competencies within university-based training.

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Instructor (head): Prof. MD Peter Turčáni, PhD.

Lectures: Prof. MD P. Turčáni, PhD., Prof. MD B. Kollár, PhD., Assoc. Prof. MD J. Pancák, PhD., Univ. Prof. M. Sykora, PhD., Assoc. Prof. MD S. Šutovský, PhD., Assoc. Prof. MD P. Šiarnik, PhD.

Practicals/Seminars: Prof. MD B. Kollár, PhD., Assoc. Prof. MD J. Pancák, PhD., MD M. Kondáš, PhD., MD K. Klobučníková, PhD., MD P. Karapin, MD Z. Goldenberg, PhD., MD J. Szabo, PhD., Assoc. Prof. MD S. Šutovský, PhD., Assoc. Prof. MD P. Šiarnik, PhD.

Last update: 24.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava	
Faculty: Faculty of Medicine in Bratislava	
Course Code:	Course Title: Ophthalmology
Type, scope and method of educational activities: Oral lectures: 2 hours/semester Practical: 12 hours/semester Controlled study: 36 hours/semester Method of education: full-time	
Number of earned credits: 2	
Recommended semester/trimester of the study: 6. and 8. semester, 3. and 4. year	
Study degree: 1 st + 2 nd degree	
Prerequisite courses: None.	
Grading policy: 100% attendance at the practicals 1 written test – minimal 60% of correct answers Final exam: - theoretical part - 3 questions (general ophthalmology - from the areas: optics, examination methods in ophthalmology, general ophthalmology, special ophthalmology, pedo-ophthalmology, emergencies and first aid in ophthalmology) Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less	
Courses objectives: <i>Acquisition of basic, theoretical and practical knowledge and skills in the field of pediatric and adult ophthalmology.</i> Knowledge: Basic problems of clinical morphology and physiology of visual functions. Diagnostic procedures in ophthalmology, treatment procedures. Differential diagnosis of diseases of the orbit and paranasal sinuses. Skills: <i>Examination in daylight and side light. Biomicroscopy of the eye. Direct and indirect ophthalmoscopy. Examination of visual acuity, visual field and chromocyt. Additional examinations in ophthalmology: ultrasound diagnostics, fluorescein angiography of retinal vessels, optical coherence tomography, basics of radiodiagnostics in ophthalmology. Problems of pedo-ophthalmology, ophthalmogenetics, ophthalmology-oncology, ophthalmology-gerontology, ophthalmology-geriatrics. Relationship of ophthalmology and other medical disciplines. General diseases and their manifestations in the eye. Screening in ophthalmology.</i>	

Diseases of the accessory organs of the eye. Diseases of the anterior segment of the eye. Cataract and modern cataract surgery. Diseases of the refractive system of the eye. Basics of refractive surgery. Vascular and degenerative diseases of the retina and vitreous. Basics of vitreo-retinal surgery. Glaucoma diseases. Eye traumatology. Basics of neuro-ophthalmology. Treatment of patients with eye and orbit diseases. Problems of inclusion of patients with visual impairment in the environment - assessment activities. First aid and emergencies in ophthalmology.

Syllabus (course structure):

Diagnostic and therapeutic procedures in the field of ophthalmology

Recommended literature:

Richard A. Harper: Basic Ophthalmology: Essentials for Medical Students, , AAO, Tenth Edition, 2016

The language needed to pass the course: *English*

Another course information:

Grading history:

Number of students:

A	B	C	D	E	FX
a	b	c	d	e	f

.

Teachers:

Lectures: **Associate Professor M.D.** Vladimír Krásnik, PhD., **Professor M.D. PhDr.** Alena Furdová, PhD., MPH, **Associate Professor M.D.** Jana Štefaničková, PhD., **Associate Professor M.D.** Ivajlo Popov, PhD., MPH Practicals: **M.D.** Jela Valášková, PhD., MPH, **M.D.** Pavol Veselý, PhD., **M.D.** Paulína Plesníková

Last update: 28.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 1</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1 st + 2 nd level	
Prerequisites:	
Course requirements: 100% participation in seminars Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada López D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i>, 15, (1):9-18. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i>. Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first semester through a short screening process. In case of a timetable conflict, an individual study plan is permitted.	

Evaluation of course:

PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.

Lecturers: *of English language*

PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD.,
Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.

Last change: 30.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 2</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1 st + 2 nd level	
Prerequisites:	
Course requirements: 100% participation in seminars Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada Lòpez D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i>, 15, (1):9-18. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i>. Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first semester through a short screening process. In case of a timetable conflict, an individual	

study plan is permitted.
Evaluation of course: PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.
Lecturers: <i>of English language</i> PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.
Last change: 30.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 3</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1 st + 2 nd level	
Prerequisites:	
Course requirements: 100% participation in seminars Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada Lòpez D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i> , 15, (1):9-18. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i> . Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first semester through a short screening process. In case of a timetable conflict, an individual	

study plan is permitted.
Evaluation of course: PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.
Lecturers: <i>of English language</i> PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.
Last change: 30.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 4</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1 st + 2 nd level	
Prerequisites:	
Course requirements: <i>100% participation in seminars</i> Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada Lòpez D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i> , 15, (1):9-18. 1. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i> . Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first	

semester through a short screening process. In case of a timetable conflict, an individual study plan is permitted.

Evaluation of course:

PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.

Lecturers: *of English language*

PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.

Last change: 30.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 5</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1st + 2nd level	
Prerequisites:	
Course requirements: <i>100% participation in seminars</i> Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada Lòpez D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i> , 15, (1):9-18. 1. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i> . Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first	

semester through a short screening process. In case of a timetable conflict, an individual study plan is permitted.

Evaluation of course:

PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.

Lecturers: *of English language*

PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.

Last change: 30.10.2025

Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 6</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1 st + 2 nd level	
Prerequisites:	
Course requirements: <i>100% participation in seminars</i> Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada Lòpez D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i> , 15, (1):9-18. 1. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i> . Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first	

semester through a short screening process. In case of a timetable conflict, an individual study plan is permitted.
Evaluation of course: PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.
Lecturers: <i>of English language</i> PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.
Last change: 30.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 7</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1 st + 2 nd level	
Prerequisites:	
Course requirements: <i>100% participation in seminars</i> Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada Lòpez D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i> , 15, (1):9-18. 1. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i> . Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first	

semester through a short screening process. In case of a timetable conflict, an individual study plan is permitted.
Evaluation of course: PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.
Lecturers: <i>of English language</i> PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.
Last change: 30.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: <i>Physical Education 8</i>
Type, range and form of educational activities: Trainings: 25 lessons/semester Form of educational activities: on-site	
Number of credits: 1	
Recommended semester/trimester of study:	
Educational level: 1st + 2nd level	
Prerequisites:	
Course requirements: <i>100% participation in seminars</i> Learning outcomes: This subject contributes to the all-round development of the future doctor's personality and supports the principle of kalokagatia. It strengthens resilience to stress, prevents overload, and improves the student's overall physical and mental condition. Emphasis is placed on a healthy lifestyle, the prevention of lifestyle diseases, building teamwork, and developing the principles of fair play. Course syllabus summary: Students choose one of the two main educational paths: Representative (Repre) Track – for students involved in the faculty's sport representation (volleyball, football/futsal, floorball, basketball, swimming). Training sessions take place during physical education classes, and students represent the faculty in University League competitions. Well-being Track – for students focused on a healthy lifestyle and regeneration. It includes conditioning and compensatory exercises, gym (weight training), yoga, aerobics, Zumba, tourism (hiking, cycling, water sports, conditioning walks), and seasonal winter sports (skiing, snowboarding, ski mountaineering/ski-touring).	
Recommended literature: 1. Bronikowski M., González-Gross M., Kleiner K., Knisel K., Martinková I., Stache A., Kantanista A., Cañada Lòpez D., Konlechner A. (2008). Physical activity, obesity and health programs in selected European countries. <i>Studies in Physical Culture and Tourism</i> , 15, (1):9-18. 1. 2. Chandler T., Cronin M., Vamplew W. (2007). <i>Sport and Physical Education. The key concepts</i> . Routledge. London.	
Language necessary to complete the course: English	
Notes: The instruction is carried out in-person with the option of a block or weekend format (e.g., hiking trips, outdoor activities). In higher years, the schedule is variable according to the chosen sport and clinical duties. The exercises are also adapted for students with health restrictions (gymnasium, pool, weight room/gym). The identification of faculty athletes and representatives takes place as early as the first	

semester through a short screening process. In case of a timetable conflict, an individual study plan is permitted.
Evaluation of course: PASS (Passed) attendance, active participation, training log, possibility of recognizing performance from representation.
Lecturers: <i>of English language</i> PaedDr. Róbert Važan, PhD., Mgr. Lenka Svobodová, Mgr. Veronika Lovásová, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč.
Last change: 30.10.2025
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU

Course Information Sheet

University: Comenius University Bratislava					
Faculty: Faculty of Medicine in Bratislava					
Course Code:			Course Title: Temporomandibular joint disorders		
Type, scope and method of educational activities: Education form: presentive form of study lectures/ seminars 12 hours/semester Individual study: 38 hours/semester Education form: presentive form of study					
Number of earned credits: 2					
Recommended semester/trimester of the study: 8th semester - summer, 4 year					
Study degree: 1 st + 2 nd degree					
Prerequisite courses: Special surgery: oral 1.					
Grading policy: 100% attendance at the practicals and seminars Personal discussion					
Courses : <i>temporomandibular joint disorders and dysfunction</i> Knowledge: basic anatomy and function of the TMJ, evaluation of the patient, etiology of dysfunction including posttraumatic changes, evaluation of the x-rays (OPG, CT, MRI), therapeutic options, miniinvasive options, total joint replacement. Skills: evaluation of the patient with TMJ dysfunction, diagnostic conclusion, treatment proposals,					
Syllabus (course structure): <i>Evaluation of the patient with TMJ dysfunction, OPG, CT, MRI evaluation, diagnostic conclusion, treatment options, conservative, miniinvasive, total joint replacement</i>					
The language needed to pass the course: English					
Another course information: Study program: Dentistry English, winter semester, minimum 10 students					
Grading history: Number of students:					
A	B	C	D	E	FX
a	b	c	d	e	f
.					
Teachers: Lectures: prof. MUDr. Dušan Hirjak, PhD Seminars: MUDr. K Kocsisivá, MDDr. Z Drobná					
Last update: 28.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					

Course Information Sheet

University: Comenius University in Bratislava	
Faculty: Faculty of Medicine	
Course ID:	Course title: Topographical anatomy of the head and neck
Type, range and form of educational activities: Lectures: 14 hours/semester Practicals/internships: 14 hours/semester Self-study: 47 hours/semester Form of educational activities: combined	
Number of earned credits: 3	
Recommended semester/trimester of study: 5 th semester	
Study degree: 1 st + 2 nd level	
Prerequisite courses: Anatomy 2	
Grading policy: - 100% participation in the practical exercises. Exam: - Oral exam (2 questions) Exam evaluation: A: excellent, B: very good, C: good, D: satisfactory, E: sufficiently, Fx: failed.	
Courses objectives: Knowledge: - Synthesis of knowledge of the systematic and topographical anatomy of the head and neck. Skills: - Analyzing the acquired knowledge from morphological and clinical perspectives. - Clinical application of the acquired theoretical knowledge (anatomical aspects of coniotomy and tracheotomy, regional spread of odontogenic infections). - To master radiodiagnostic correlation.	
Syllabus (course structure): Lectures: Topographical regions of the head. Topographical regions of the neck. Topographical-anatomical aspects. Coniotomy and tracheotomy. Salivary glands. Temporomandibular joint. Mimic (facial expression) muscles. Sensory and motor innervation of the head and neck. Radiological anatomy. Masticatory muscles and their influence on the displacement of fragments in jaw fractures. Topography of the lymphatic system. Topographical anatomy of the floor of the mouth and the act of swallowing. Practicals: Dissection of the topographical regions of the head. Dissection of the topographical regions of the neck. Oral cavity: vestibulum, tongue, soft palate,	

hard palate, floor of the oral cavity. Physiology and topographical anatomy of swallowing. Topographical anatomy of the teeth. Dental caries, gangrene, pulpitis, and periodontitis. Local spread of odontogenic infections. Regional and distant spread of odontogenic infections. Radiodiagnostic correlations.					
Recommended literature: Norton, N.S. Willett, G. M. Netter's Head and Neck Anatomy for Dentistry. 4 th ed. Elsevier, 2024. 768p. ISBN 9780323791441 Liebgott, B. The Anatomical Basis of Dentistry. 5 th ed. Elsevier, 2023. 496p. ISBN 9780323824057. Netter, F. H. Netter Atlas of Human Anatomy: Classic Regional Approach. 8th ed. Philadelphia: Saunders - Elsevier, 2022. 712 p. ISBN: 0323760236 Paulsen, F., Waschke, J. Sobotta Atlas of Anatomy. 17th ed., English/Latin. Elsevier, 2023. 1588p. ISBN: 9780702067648					
The language needed to pass the course: English					
Another course information:					
Grading history: Number of students:					
A	B	C	D	E	FX
Teachers: prof. MUDr. P. Stanko, PhD., MUDr. H. El Falougy, PhD., MUDr. T. Barczy, PhD., MPH., MUDr. S. Malakhov, PhD.					
Last change: 27.10.2025					
Approved by: prof. Juraj Payer, MD, PhD., MPH, FRCP, FEFIM, dean of the FM CU					