

Course descriptions

TABLE OF CONTENTS

1. L-S-DEN5-014/26 AI-assisted Learning Strategies and Limits of Artificial Intelligence Applications.....	2
2. L-S-DEN5-001/26 Anatomy 1.....	6
3. L-S-DEN5-002/26 Anatomy 2.....	9
4. L-S-DEN5-013/26 Basic Clinical Skills, Ethics and Communication.....	12
5. L-S-DEN5-003/26 Biology, Genetics and Regenerative Medicine 1.....	15
6. L-S-DEN5-004/26 Biology, Genetics and Regenerative Medicine 2.....	18
7. L-S-DEN5-006/26 Chemistry.....	21
8. L-S-DEN5-121/26 Clinical Practice - Assistance and Preventive Dentistry.....	24
9. L-S-DEN5-120/26 Clinical Practice – Interprofessional Collaboration and Dental Hygiene.....	26
10. L-S-DEN5-005/26 Cytology, Histology and Embryology.....	29
11. L-S-DEN5-009/26 Dental Materials, Equipments and Simulations 1.....	32
12. L-S-DEN5-010/26 Dental Materials, Equipments and Simulations 2.....	34
13. L-S-DEN5-015/26 First Aid.....	36
14. L-S-DEN5-202/26 Latin Medical Terminology 1.....	38
15. L-S-DEN5-203/26 Latin Medical Terminology 2.....	40
16. L-S-DEN5-204/26 Physical Training 1.....	42
17. L-S-DEN5-205/26 Physical Training 2.....	44
18. L-S-DEN5-007/26 Physiology and Physics 1.....	46
19. L-S-DEN5-200/26 Professional Communication in Foreign Language 1.....	48
20. L-S-DEN5-201/26 Professional Communication in Foreign Language 2.....	50
21. L-S-DEN5-122/26 Summer Mandatory Dental Practice 1 - Assistance.....	52

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KORFS/L-S-DEN5-014/26	Course title: AI-assisted Learning Strategies and Limits of Artificial Intelligence Applications
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 6s / 6s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Independent study: 38 hours/semester 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 credits: 2	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: ● 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.	
Learning outcomes: 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).

Class syllabus:

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																	
Languages necessary to complete the course: English																	
Notes: 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.																	
Past grade distribution Total number of evaluated students: 0 <table border="1"> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>FX</th></tr> <tr> <td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td></tr> </table>						A	B	C	D	E	FX	0,0	0,0	0,0	0,0	0,0	0,0
A	B	C	D	E	FX												
0,0	0,0	0,0	0,0	0,0	0,0												
Lecturers: doc. MUDr. Andrej Thurzo, PhD., MPH, MHA																	
Last change: 22.06.2026																	
Approved by: prof. MUDr. Peter Stanko, PhD.																	

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.AÚ/L-S-DEN5-001/26	Course title: Anatomy 1
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 48s / 36s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Self-study: 16 hours/semester Form of educational activities: combined	
Number of credits: 4	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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.	
Learning outcomes: 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.	

Class syllabus:**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. 6th ed. Philadelphia: Saunders – Elsevier, 2026. 672p. ISBN: 9780443378553

Languages necessary to complete the course:

English

Notes:**Past grade distribution**

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Anna Holomáňová, CSc., MUDr. Hisham El Falougy, PhD., doc. MUDr. Zora Haviarová, PhD., prof. MUDr. Štefan Polák, CSc., Mgr. Tomáš Havránek, PhD., MUDr. Andrej Mifkovič, PhD., MUDr. Tomáš Barczy, PhD., MPH, RNDr. Petra Lukáčiková, PhD., Stanislav Malakhov, PhD., Mgr. Vladislava Zohdi, PhD.
--

Last change: 11.06.2026

Approved by: prof. MUDr. Peter Stanko, PhD.
--

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.AÚ/L-S-DEN5-002/26	Course title: Anatomy 2
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 48s / 60s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Self-study: 65 hours/semester Form of educational activities: combined	
Number of credits: 7	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-DEN5-001/26 - Anatomy 1	
Course requirements: - 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.	
Learning outcomes: 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.

Class syllabus:

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., Kuehnle, 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

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Anna Holomáňová, CSc., MUDr. Hisham El Falougy, PhD., doc. MUDr. Zora Haviarová, PhD., RNDr. Petra Lukáčiková, PhD., MUDr. Tomáš Barczy, PhD., MPH, Stanislav Malakhov, PhD., MUDr. Andrej Mifkovič, PhD., Mgr. Tomáš Havránek, PhD., Mgr. Vladislava Zohdi, PhD., prof. MUDr. Štefan Polák, CSc.

Last change: 11.06.2026

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚMVS/L-S-DEN5-013/26	Course title: Basic Clinical Skills, Ethics and Communication
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 12s / 30s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information 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: 4	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course 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.

Class syllabus:

Introduction to Clinical Skills in Medical Practice

1. Introduction to Clinical Skills in Medical Education

- o Role of clinical skills in early medical training

2. Patient and Provider Safety

- o Hand hygiene and infection prevention, Personal protective equipment (PPE), Principles of safe practice and error prevention

3. Introduction to Clinical Communication

- o Basic communication skills
- o ISBAR communication tool

4. Structured Clinical Assessment

- o ABCDE approach: overview and rationale
- o Recognizing signs of clinical deterioration

5. Vital Signs and Early Warning Signs

- o Physiology, measurement, and interpretation
- o Integrating vital signs into patient assessment

6. Specimen Collection and Medication Administration Safety

- o Blood, urine, and swab collection
- o Medication Administration Routes

7. Professionalism and Ethics

- o Confidentiality, respect, empathy, informed consent
- o Basics of Medical Ethics

8. Documentation Practice

- o Recording vital signs, procedure notes, observations, imaging

9. Simulation Medicine Basics

Recommended literature:

Bickley, L. S. (2020). Bates' guide to physical examination and history taking (13th ed.). Wolters Kluwer.

Grežd'ová, I., Polhorská, M. 2018. Professional nursing procedures 1. Textbook for general medicine study programme. Slovak Academic Press s.r.o., Bratislava, 2018.

Polhorská, M. Grežd'ová, I., 2018. Professional nursing procedures 2. Textbook for general medicine study programme. Slovak Academic Press s.r.o., Bratislava, 2018.

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: MUDr. Silvia Hnilicová, PhD., PhDr. Eva Dobiášová, PhD., doc. PhDr. Anna Mazalánová, PhD., MPH, PhDr. Iveta Grežd'ová, PhD., doc. RNDr. Pavol Vitovič, PhD., Mariana Bachanová, PhDr. Miriam Polhorská, PhD., PhDr. Ivana Vojteková, PhD., Mgr. Mária Kolesárová, PhD., Mgr. Tomáš Chudý

Last change: 01.07.2026
Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLBG/L-S-DEN5-003/26	Course title: Biology, Genetics and Regenerative Medicine 1
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 24s / 24s Form of the course: on-site learning	
Number of credits: 3	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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.	
Learning outcomes: 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

Class syllabus:

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

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Vanda Repiská, PhD., MPH, prof. RNDr. Ľuboš Danišovič, PhD., doc. Ing. Helena Gbelcová, PhD., RNDr. Petra Priščáková, PhD., RNDr. Marcela Kuniaková, PhD., RNDr. Zuzana Varchulová Nováková, PhD., MUDr. Martina Čulenová, PhD., RNDr. Ľubica

Milošovičová, PhD., RNDr. Andrea Pastoráková, PhD., RNDr. Daniela Klimová, PhD., MUDr. Štefan Harsányi, PhD.
--

Last change: 18.06.2026

Approved by: prof. MUDr. Peter Stanko, PhD.
--

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLBG/L-S-DEN5-004/26	Course title: Biology, Genetics and Regenerative Medicine 2
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 24s / 24s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Individual study: 85 hours/semester Method of education: in-person teaching	
Number of credits: 5	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.ÚLBG/L-S-DEN5-003/26 - Biology, Genetics and Regenerative Medicine 1	
Course requirements: 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)	
Learning outcomes: 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 povodal:

- 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

Class syllabus:

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 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
 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

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

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

Last change: 18.06.2026

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLChB/L-S-DEN5-006/26	Course title: Chemistry
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 24s / 24s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Individual study: 27 hours/semester	
Number of credits: 3	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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.	
Learning outcomes: 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. Knowledge: 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. Skills: 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.

Class syllabus:

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 (KM) 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

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. RNDr. Jana Muchová, PhD., prof. Ing. Ingrid Žitňanová, PhD., RNDr. Lucia Andrežalová, PhD., RNDr. Zuzana Országhová, PhD., RNDr. Zuzana Paduchová, PhD., Mgr.

Monika Dvořáková, PhD., Mgr. Mária Janubová, PhD., Ing. Miriama Ježovičová, PhD., Ing. Katarína Koňariková, PhD.
Last change: 18.06.2026
Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KSMCh/L-S-DEN5-121/26	Course title: Clinical Practice - Assistance and Preventive Dentistry
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 1s / 70s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Self-study: 10 hours/semester Mode: on-site (chair-side) at university clinics and contracted practices; scope limited to assisting and simulation on models/typodonts; no independent patient treatment.	
Number of credits: 3	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.KSMCh/L-S-DEN5-120/26 - Clinical Practice – Interprofessional Collaboration and Dental Hygiene	
Course requirements: ● Attendance: 100 % (1 excused day, must be made up). ● Written test: 1×; ≥ 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).	
Learning outcomes: 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).																	
Class syllabus: 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).																	
Languages necessary to complete the course: English																	
Notes: HBV immunisation recommended. Students bring personal protective eyewear/face shield and work shoes. On contracted sites, local SOPs apply.																	
Past grade distribution Total number of evaluated students: 0 <table border="1"> <thead> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>FX</th></tr> </thead> <tbody> <tr> <td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td></tr> </tbody> </table>						A	B	C	D	E	FX	0,0	0,0	0,0	0,0	0,0	0,0
A	B	C	D	E	FX												
0,0	0,0	0,0	0,0	0,0	0,0												
Lecturers: prof. MUDr. Peter Stanko, PhD., doc. MUDr. Andrej Thurzo, PhD., MPH, MHA																	
Last change: 23.06.2026																	
Approved by: prof. MUDr. Peter Stanko, PhD.																	

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KSMCh/L-S-DEN5-120/26	Course title: Clinical Practice – Interprofessional Collaboration and Dental Hygiene
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 1s / 112s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Self-study: 5 hours/semester Mode: on-site (chair-side clinical practice – “work in the mouth”) conducted at university clinics and contracted practices under clinical instructors’ supervision.	
Number of credits: 3	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: ● 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).	
Learning outcomes: 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.																	
Class syllabus: 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.																	
Languages necessary to complete the course: English																	
Notes: HBV immunisation recommended. Students bring personal protective eyewear/face shield and work shoes. On contracted sites, local SOPs apply.																	
Past grade distribution Total number of evaluated students: 0 <table border="1"> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>FX</th></tr> <tr> <td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td></tr> </table>						A	B	C	D	E	FX	0,0	0,0	0,0	0,0	0,0	0,0
A	B	C	D	E	FX												
0,0	0,0	0,0	0,0	0,0	0,0												
Lecturers: prof. MUDr. Peter Stanko, PhD., doc. MUDr. Andrej Thurzo, PhD., MPH, MHA																	
Last change: 23.06.2026																	

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚHE/L-S-DEN5-005/26	Course title: Cytology, Histology and Embryology
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 56s / 42s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Individual study: 60 hours /semester 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: 6	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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. Participation in lectures is mandatory, as partial tests also contain information from lectures. The criterion for successful completion of the subject is successful completion of partial tests with 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 (maximum 2 excused absences that need to be substituted). Grade average of partial tests or the semester corrective test: A: 100 - 95 %, B: 94 - 88 %, C: 87 - 80 %, D: 79 - 75 %, E: 74 - 70 %, Fx: 69 % and less. The final exam consists of 3 parts: Test with a passing score of 70% Identification of unlabeled histological preparations (minimum 7 out of 10) Theoretical (oral) part – 3 questions If the student is successful in the first 2 parts of the exam, he/she can continue with the third (oral) part.	
Learning outcomes: Knowledge: 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.

Class syllabus:

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.																	
Languages necessary to complete the course: English																	
Notes:																	
Past grade distribution Total number of evaluated students: 0 <table border="1"> <thead> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>FX</th></tr> </thead> <tbody> <tr> <td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td></tr> </tbody> </table>						A	B	C	D	E	FX	0,0	0,0	0,0	0,0	0,0	0,0
A	B	C	D	E	FX												
0,0	0,0	0,0	0,0	0,0	0,0												
Lecturers: prof. RNDr. Ivan Varga, PhD., doc. RNDr. Marianna Danková, PhD., MUDr. Paulína Gálfiová, PhD., Mgr. Miroslava Juríková, PhD., MUDr. Martin Klein, PhD., RNDr. Mária Kleinová, PhD., MVDr. Ján Líška, CSc., MUDr. Georgína Kolníková, PhD., MPH, MUDr. Mária Lorencová, PhD., MUDr. Renáta Mikušová, PhD., MUDr. Simona Polakovičová, PhD., MUDr. Vanda Rísová, PhD., RNDr. Claudia Feitscher Hudobová																	
Last change: 18.06.2026																	
Approved by: prof. MUDr. Peter Stanko, PhD.																	

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KSMCh/L-S-DEN5-009/26	Course title: Dental Materials, Equipments and Simulations 1
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 14s / 72s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Individual study: 15 hours/semester Form of the course: on-site learning/ distance MS Teams	
Number of credits: 4	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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.	
Learning outcomes: 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.	
Class syllabus: • 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.					
Languages necessary to complete the course: English					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: MUDr. Lea Csicsayová, CSc., MDDr. Michaela Lifková, PhD., MUDr. Darina Gabániová, PhD., MUDr. Zita Kestlerová, PhD., MUDr. Roman Pecháň, MDDr. Alexandros Tzigeris, PhD., MDDr. Martin Strunga, doc. MUDr. Andrej Thurzo, PhD., MPH, MHA					
Last change: 19.06.2026					
Approved by: prof. MUDr. Peter Stanko, PhD.					

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KSMCh/L-S-DEN5-010/26	Course title: Dental Materials, Equipments and Simulations 2
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 17s / 72s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Individual study: 35 hours/semester Form of the course: on-site learning/ distance MS Teams	
Number of credits: 5	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.KSMCh/L-S-DEN5-009/26 - Dental Materials, Equipments and Simulations 1	
Course requirements: 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.	
Learning outcomes: Knowledge: fundamentals of diagnosis and treatment of dental caries, Black’s classification of cavities, cavity preparation, selection of restorative treatment, dental radiography, fundamentals of periodontology Skills: 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.	
Class syllabus: • 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

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: MUDr. Lea Csicsayová, CSc., MDDr. Michaela Lifková, PhD., MUDr. Zita Kestlerová, PhD., MUDr. Darina Gabániová, PhD., MDDr. Alexandros Tzigeris, PhD., MUDr. Roman Pecháň, MDDr. Martin Strunga, doc. MUDr. Andrej Thurzo, PhD., MPH, MHA

Last change: 19.06.2026

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KAIM2/L-S-DEN5-015/26	Course title: First Aid
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 6s / 12s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information 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: 2.	
Educational level: I.II.	
Prerequisites:	
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 liofe support and emergencies) Test evaluation: 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: Basic principles of providing First Aid. Ethical and legal background when providinf first aid. Vital functions, evaluation of clinical state, recognition of the failure of vital functions. Cariac arrest , recognition and basic life support. Defibrillation Understanding the pathophysiology, pharmacology and clinical importance of basic life support (BLS) . Respiratory arrest, Airway managment, Asphyxia, aspiration and its managment, Coma, stabvle postion, Thermic injury, Bleeding and shock, trauma, fractures, acute abdomen, acute coronary syndrome, acute stroke. Activation of emergency system – dispatch. Knowledge: 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/Practicalsa:	

Recognition of cardiac arrest. Evaluation of basic vital functions, Coma, apnoe, 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.					
Class 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, anafylaxis 9. Coma – evaluation, Glasgow come score, management an d stable psotion 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					
Languages necessary to complete the course: English					
Notes:					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. MUDr. Roman Záhorec, CSc., MUDr. Daniel Cintula, MUDr. Tomáš Veselovský					
Last change: 22.06.2026					
Approved by: prof. MUDr. Peter Stanko, PhD.					

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLTCJ/L-S-DEN5-202/26	Course title: Latin Medical Terminology 1
Educational activities: Type of activities: practicals Number of hours: per week: per level/semester: 24s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information CES Individual study: 26 hours/semester Method of education: combined	
Number of credits: 2	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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.	
Learning outcomes: 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.	
Class syllabus: 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.	
Recommended literature: Lauková L. et al.: Medical Terminology Unplugged: Latin & Greek Made Easy. In print.	

Rollerová A., Vasiľová, 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

Languages necessary to complete the course:

English

Notes:

Maximum capacity is 50 students.

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PaedDr. PhDr. Tomáš Hamar, PhD., MBA, Mgr. Lucia Lauková, PhD., Mgr. Ema Pavlíáková, PhD., Mgr. Marek Šibal, PhD., Mgr. Angela Škovierová, PhD., Mgr. Oľga Vaneková, PhD., Mgr. Melinda Vasiľová, PhD.

Last change: 14.07.2026

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLTCJ/L-S-DEN5-203/26	Course title: Latin Medical Terminology 2
Educational activities: Type of activities: practicals Number of hours: per week: per level/semester: 24s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information CES Individual study: 26 hours/semester Method of education: combined	
Number of credits: 2	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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.	
Learning outcomes: 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.	
Class syllabus: 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.					
Recommended literature: Lauková L. et al.: Medical Terminology Unplugged: Latin & Greek Made Easy. In print. Rollerová A., Vasiľová, 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					
Languages necessary to complete the course: English					
Notes: Maximum capacity is 50 students.					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: PaedDr. PhDr. Tomáš Hamar, PhD., MBA, Mgr. Lucia Lauková, PhD., Mgr. Ema Pavlíáková, PhD., Mgr. Marek Šibal, PhD., Mgr. Angela Škovierová, PhD., Mgr. Oľga Vaneková, PhD., Mgr. Melinda Vasiľová, PhD.					
Last change: 14.07.2026					
Approved by: prof. MUDr. Peter Stanko, PhD.					

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-DEN5-204/26	Course title: Physical Training 1
Educational activities: Type of activities: practicals Number of hours: per week: per level/semester: 25s Form of the course: on-site learning	
Number of credits: 1	
Recommended semester: 1.	
Educational level: I.II.	
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.	
Class syllabus: 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.	
Languages 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.

Past grade distribution

Total number of evaluated students: 0

ABS0

0,0

Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD., Mgr. Lenka Svobodová, PhD.

Last change: 25.06.2026

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-DEN5-205/26	Course title: Physical Training 2
Educational activities: Type of activities: practicals Number of hours: per week: per level/semester: 25s Form of the course: on-site learning	
Number of credits: 1	
Recommended semester: 2.	
Educational level: I.II.	
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.	
Class syllabus: 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.	
Languages 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.

Past grade distribution

Total number of evaluated students: 0

ABS0

0,0

Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD., Mgr. Lenka Svobodová, PhD.

Last change: 25.06.2026

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.FyÚ/L-S-DEN5-007/26	Course title: Physiology and Physics 1
Educational activities: Type of activities: lecture / practicals Number of hours: per week: per level/semester: 36s / 36s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Self-study: 28 hours/semester Method of education: combined – on-site learning, on-line learning	
Number of credits: 4	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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.	
Learning outcomes: 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.	
Class syllabus: 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																	
Languages necessary to complete the course: English																	
Notes:																	
Past grade distribution Total number of evaluated students: 0 <table> <tr> <th>A</th><th>B</th><th>C</th><th>D</th><th>E</th><th>FX</th></tr> <tr> <td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td><td>0,0</td></tr> </table>						A	B	C	D	E	FX	0,0	0,0	0,0	0,0	0,0	0,0
A	B	C	D	E	FX												
0,0	0,0	0,0	0,0	0,0	0,0												
Lecturers: prof. MUDr. Katarína Babinská, PhD., prof. MUDr. Daniela Ostatníková, PhD., prof. MUDr. Boris Mravec, DrSc., doc. Dr. Aleksandra Sashova Tomova, PhD., doc. PharmDr. Zdenko Pirník, PhD., prof. MUDr. Jana Radošinská, PhD., doc. RNDr. Jaroslava Babková, PhD., doc. RNDr. Ján Bakoš, PhD., doc. RNDr. Monika Barteková, DrSc., MUDr. Rastislav Važan, PhD.																	
Last change: 18.06.2026																	
Approved by: prof. MUDr. Peter Stanko, PhD.																	

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLTCJ/L-S-DEN5-200/26	Course title: Professional Communication in Foreign Language 1
Educational activities: Type of activities: practicals Number of hours: per week: per level/semester: 36s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information CES Individual study: 1 hour/semester Method of education: combined	
Number of credits: 1	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, 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.	
Learning outcomes: Knowledge: To acquire basic receptive and productive communication skills required for future professional needs of students for purposes of practical communication in spoken and written language in social conversation and in the subject field. Skills: To be able to understand and communicate in the most common professional language, showing knowledge of a range and variety of vocabulary and of appropriate register in simple and routine tasks, to understand basic grammar and terminology and concepts focusing on their communicative importance. Students develop strong communication, teamwork, and problem-solving skills for professional environments.	
Class syllabus: SLOVAK: Basic grammar – gender, verbs, tenses, numerals. Simple phrases and self-introduction. Dentist–patient communication. Human body, head, and face anatomy; senses and functions. Types, naming, and numbering of teeth. Basic anamnestic interview – preventive and acute cases, pain, treatment, medication. Patient instructions and polite communication. Healthy diet, oral hygiene, and prevention – brushing, flossing, gum care. Tooth anatomy and topography. ENGLISH and GERMAN: Introduction to dentistry – key concepts, roles, and work environment. Dentist vs. hygienist – teamwork and differences. Oral cavity anatomy, tooth structure, and functions. Dental health, examinations, and basic instrument terms. Types of fillings and dental	

hygiene importance. First patient contact – greeting, history, symptoms. Teeth in regenerative medicine – stem cells and bioengineering. Essential grammar and modal verbs.					
Recommended literature: Červeňová, P., Hamar, T., Matajs, M.: Učebnica slovenčiny pre študentov zubného lekárstva s audio nahrávkami. Bratislava: Univerzita Komenského v Bratislave 2024. 238 p. ISBN 978-80-7435-935-4 Bábelová, J., Hamar, T.: English in Dentistry. Bratislava: Univerzita Komenského 2024. 180 p. ISBN: 978-80-223-5859-0. Bábelová, J., Rollerová, A.: English for Dentistry Students. Bratislava: Univerzita Komenského 2018. 147 p. ISBN 978-80-223-4443-2. Padrini, G., Hansson, N.: Fachsprache in der Zahnmedizin. Lehmanns Media GmbH, 2024. 137 p. ISBN 978-3-96543-476-9					
Languages necessary to complete the course: Slovak, English, German					
Notes: After completing four semesters of English and Slovak language, and based on fulfilling the requirements, students can apply for a certificate from the Unicert program. Maximum capacity is 12 students.					
Past grade distribution Total number of evaluated students: 0					
A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0
Lecturers: PaedDr. PhDr. Tomáš Hamar, PhD., MBA, Mgr. Radoslav Ďurajka, PhD., Mgr. Petra Červeňová, Ing. Mgr. Erika Jurišová, PhD., Mgr. Zuzana Motešická, PhD., Mgr. Ľubica Olejníková					
Last change: 14.07.2026					
Approved by: prof. MUDr. Peter Stanko, PhD.					

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLTCJ/L-S-DEN5-201/26	Course title: Professional Communication in Foreign Language 2
Educational activities: Type of activities: practicals Number of hours: per week: per level/semester: 36s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information CES Individual study: 14 hours/semester Method of education: combined	
Number of credits: 2	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 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: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, 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.	
Learning outcomes: Knowledge: To acquire basic receptive and productive communication skills required for future professional needs of students for purposes of practical communication in spoken and written language in social conversation and in the subject field. Skills: To be able to understand and communicate in the most common professional language, showing knowledge of a range and variety of vocabulary and of appropriate register in simple and routine tasks, to understand basic grammar and terminology and concepts focusing on their communicative importance. Students develop strong communication, teamwork, and problem-solving skills for professional environments.	
Class syllabus: SLOVAK: Dental clinic – daily routine, surgery, and equipment. Instruments and specialities. Communication with the dental nurse. Preventive check-up – patient questionnaire, consent, and instructions. Medical history and symptom reporting. Diagnosis and treatment – X-ray, fillings, tooth decay, and follow-up care. Periodontology – common gum diseases and patient dialogue. Broken tooth or filling – causes and treatment. Prosthodontics – dentures. Orthodontics – dental anomalies. Tooth extraction – anaesthesia, procedure, pain relief, and implant options. ENGLISH and GERMAN: Assessment of dental health. Dental and gum diseases – symptoms, prevention, treatment. Dental hygiene. Gum disease – deep dental hygiene and smoothing of the	

tooth root surface. Dental fillings – materials and techniques – amalgam, composite, ceramics. Jaw surgery – types of procedures, wound healing, communication with the patient. Orthodontics – orthodontic appliances. Relevant grammatical phenomena. Prosthetics and tooth replacements – crowns, bridges, implants. Endodontics – procedure, instruments, sterilization. Pedodontics – care for children. Dealing with complications and emergencies – pain, allergic reactions, bleeding. Relevant grammatical phenomena.

Recommended literature:

Červeňová, P., Hamar, T., Matajs, M.: Učebnica slovenčiny pre študentov zubného lekárstva s audio nahrávkami. Bratislava: Univerzita Komenského v Bratislave 2024. 238 p. ISBN 978-80-7435-935-4

Bábelová, J., Hamar, T.: English in Dentistry. Bratislava: Univerzita Komenského 2024. 180 p. ISBN: 978-80-223-5859-0.

Bábelová, J., Rollerová, A.: English for Dentistry Students. Bratislava: Univerzita Komenského 2018. 147 p. ISBN 978-80-223-4443-2.

Padrini, G., Hansson, N.: Fachsprache in der Zahnmedizin. Lehmanns Media GmbH, 2024. 137 p. ISBN 978-3-96543-476-9

Languages necessary to complete the course:

Slovak, English, German

Notes:

After completing four semesters of English and Slovak language, and based on fulfilling the requirements, students can apply for a certificate from the Unicert program. Maximum capacity is 50 students.

Past grade distribution

Total number of evaluated students: 0

A	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: PaedDr. PhD. Tomáš Hamar, PhD., MBA, Mgr. Radoslav Ďurajka, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Zuzana Motešická, PhD., Mgr. Petra Červeňová, Mgr. Ľubica Olejníková

Last change: 14.07.2026

Approved by: prof. MUDr. Peter Stanko, PhD.

COURSE DESCRIPTION

Academic year: 2026/2027	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KSMCh/L-S-DEN5-122/26	Course title: Summer Mandatory Dental Practice 1 - Assistance
Educational activities: Type of activities: practice Number of hours: per week: per level/semester: 125s Form of the course: on-site learning	
Type, volume, methods and workload of the student - additional information Mode: on-site clinical placement (“work in the mouth”) at university and contracted clinics. 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.	
Number of credits: 6	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.KSMCh/L-S-DEN5-120/26 - Clinical Practice – Interprofessional Collaboration and Dental Hygiene	
Course requirements: ● 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).	
Learning outcomes: 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).
Class syllabus: 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).
Languages necessary to complete the course: English
Notes: HBV immunisation recommended. Students bring personal protective eyewear/face shield and work shoes. On contracted sites, local SOPs apply.
Past grade distribution Total number of evaluated students: 0
ABS0
0,0
Lecturers: prof. MUDr. Peter Stanko, PhD., doc. MUDr. Andrej Thurzo, PhD., MPH, MHA
Last change: 23.06.2026
Approved by: prof. MUDr. Peter Stanko, PhD.