Course descriptions

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COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚA/J-S-ZL5-006/25	Anatomy (1)

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 4 / 3 **per level/semester:** 56 / 42
Form of the course: on-site learning

Number of credits: 8

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Course requirements:
100% attendance at practical and dissection sessions, Successful completion of written credit tests – the student must achieve at least 60% success in each written credit test
Scale of assessment (preliminary/final): 100/100

Learning outcomes:
The graduate will acquire detailed knowledge of the systematic anatomy of the musculoskeletal system — including general and special osteology, arthrology, and myology — as well as selected organ systems. This knowledge will serve as a foundation for the study of topographical anatomy and for subsequent studies in physiology, pathological anatomy, and clinical disciplines.

Class syllabus:
Lectures: Locomotor apparatus - general bone structure, bone joints and skeletal muscles; Cardiovascular system; Respiratory syste, Digestive system.
Practicals: Special osteology, arthrology and myology - the bones and joints of the head, neck and trunk. Bones, joints and muscles of the limbs.

Recommended literature:
povinná literatúra:
x Čihák, R. Anatomie 1. Praha: Grada, 2011. 534 s. ISBN 978-80-247-3817-8
x Čihák, R. Anatomie 2. Praha: Avicenum, 2013. 512 s. ISBN 978-80-247-4788-0
x Čihák, R. Anatomie 3. Praha: Grada, 2016. 722s. ISBN 978-80-2475-636-3
x Mráz, P. a kol. Anatómia ľudského tela 1. Bratislava: SAP, 2021. 510 s. ISBN 978-80-896-0789-1
x Mráz, P. et al. Anatómia ľudského tela 2. Bratislava: SAP, 2021. 496 s. ISBN 978-80-896-0792-1
x Paulsen, F. et Waschke, J. Sobotta Atlas of Anatomy (Package). Musculoskeletal system; Internal Organs; Head,Neck and Neuroanatomy; Muscle Tables. Elsevier Science, 2018. 1376 s. ISBN 978-07-020-5268-2
odporúčaná literatúra:

Schuenke, M. et al. Anatomy for Dental Medicine. Thieme medical Publishers, 2020. 608 pages. ISBN 978-16-8420-046-7
Acland's Video Atlas of Human Anatomy. Wolters Kluwer Health, 2023. Available from WWW: https://aclandanatomy.com/
Netter, F.H. Netterov anatomický atlas človeka. Brno: CPress, 2016. 640 s. ISBN 978-80-264-1184-0.

Languages necessary to complete the course:
slovak

Notes:

Past grade distribution
Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Desanka Výbohová, PhD., doc. MUDr. Yvetta Mellová, CSc.

Last change: 21.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚA/J-S-ZL5-010/25	Anatomy (2)

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 4 / 3 **per level/semester:** 56 / 42
Form of the course: on-site learning

Number of credits: 8

Recommended semester: 2.

Educational level: I.II.

Prerequisites: JLF.ÚA/J-S-ZL5-006/25 - Anatomy (1)

Course requirements:
100% attendance in practicals, 100% participation in dissection, at least 60% success rate on written tests
Final Exam:
• the written part: at least 60%
• practical exam
• final oral exam
Scale of assessment (preliminary/final): 20/80

Learning outcomes:
A graduate of anatomy masters the anatomy of the human body to the extent required in undergraduate studies. They understand the principles of the structure of the human body, its parts, and organs in sufficient detail to ensure that the acquired knowledge is lasting, providing a foundation for understanding physiological and pathological processes and changes, and later serving as a basis for the study of clinical disciplines.

Class syllabus:
Lectures: digestive system, urinary system, male and female reproductive systems, nervous system. Practicals: cardiovascular, respiratory, digestive, urogenital systems and nervous system. The contents of dissection is practical study of topographical anatomy - topographic-anatomical dissection of head, neck, trunk and limbs.

Recommended literature:
povinná literatúra:
x Čihák, R. Anatomie 1. Praha: Grada, 2011. 534 s. ISBN 978-80-247-3817-8
x Čihák, R. Anatomie 2. Praha: Avicenum, 2013. 512 s. ISBN 978-80-247-4788-0
x Čihák, R. Anatomie 3. Praha: Grada, 2016. 722s. ISBN 978-80-2475-636-3
x Mráz, P. a kol. Anatómia ľudského tela 1. Bratislava: SAP, 2021. 510 s. ISBN 978-80-896-0789-1
x Mráz, P. et al. Anatómia ľudského tela 2. Bratislava: SAP, 2021. 496 s. ISBN 978-80-896-0792-1

x Paulsen, F. et Waschke, J. Sobotta Atlas of Anatomy (Package). Musculoskeletal system; Internal Organs; Head,Neck and Neuroanatomy; Muscle Tables. Elsevier Science, 2018. 1376 s. ISBN 978-07-020-5268-2
odporúčaná literatúra:
Schuenke, M. et al. Anatomy for Dental Medicine. Thieme medical Publishers, 2020. 608 pages. ISBN 978-16-8420-046-7
Acland's Video Atlas of Human Anatomy. Wolters Kluwer Health, 2023. Available from WWW: https://aclandanatomy.com/
Netter, F.H. Netterov anatomický atlas človeka. Brno: CPress, 2016. 640 s. ISBN 978-80-264-1184-0.

Languages necessary to complete the course:
slovak

Notes:

Past grade distribution
Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Desanka Výbohová, PhD., doc. MUDr. Yvetta Mellová, CSc.

Last change: 21.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.CPMV/J-S-ZL5-007/25	Basics of First Aid

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / ,5 **per level/semester:** 14 / 7
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Course requirements:

Learning outcomes:

Class syllabus:

Recommended literature:

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 1

A	ABS0	B	C	D	E	FX
0,0	100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Jana Plevková, PhD.

Last change: 06.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚA/J-S-ZL5-016/25	Effective Learning Methods

Educational activities:
Type of activities: lecture
Number of hours:
per week: 1 **per level/semester:** 14
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Course requirements:
Participation in lectures. Participation and evaluation of the questionnaires: motivation for learning, learning styles, coping strategies. Time management diary for successful learning.
Scale of assessment (preliminary/final): 100/0 Evaluation:A:95% - 100%, B:88% - 94%, C: 77% - 87%, D: 86% - 76%, E: 60% - 65%

Learning outcomes:
The graduates acquire the information about the effective learning strategies based on the latest evidences from neuropsychology and neuropedagogy, useful information about the memory, forgetting curve, motivation and concentration. Students identify preferred learning styles by using verified questionnaires. The effect of the stress and anxiety on the academic success and learning will be discussed.

Class syllabus:
Learning processes, brain compatible learning. Motivation for learning. Concentration. Memory, repetition and Ebbinghaus forgetting curve. Multitasking and the brain. Time management for learning, procrastination. Learning styles. Sleep, memory and learning. Regime and learning. Stress, memory and learning. Exam stress. Coping strategies and autogenic training. Learning with digital technologies. Alternative learning techniques.

Recommended literature:
Boleková, Výbohová, Hešková et al. Ako sa učiť a nezabúdať – Princípy mozgovo-kompatibilného učenia. Univerzita Pavla Jozefa Šafárika v Košiciach, ŠafárikPress, Košice 2020, ISBN 978-80-8152-898-9 https://unibook.upjs.sk/sk/lekarska-fakulta/1390-ako-sa-ucit-a-nezabudat-principy-mozgovo-kompatibilneho-ucenia Hanáček, Mokrý a spol. Trendy v medicínskom vzdelávaní a hodnotenie jeho výsledkov, Osveta, Martin, 2018. Vašasová, Kaliská, Žitniaková Gurgová. Vybrané kapitoly zo psychológie učenia, OZ PF Univerzity myteja Bela, Banská Bystrica, 2017. Tepperwein. Ako sa ľahko učiť, Eko-konzult, Bratislava, 2004.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Desanka Výbohová, PhD., MUDr. Katarína Lešková, PhD., RNDr. Alena Mazuráková, PhD.

Last change: 02.10.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚO/J-S-ZL5-013/25	Ethics in medicine

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 1 / 1 **per level/semester:** 14 / 14
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.II.

Prerequisites:

Course requirements:
Active participation in seminars. Two knowledge tests (continuous and final) written with min. 60% success rate. Overall evaluation of the course based on the results of the first and second test:
A / 1 = 91 - 100%; B / 1.5 = 81 - 90%; C / 2 = 73 - 80%; D / 2.5 = 66 - 72%; E / 3 = 60 - 65%; Fx = less than 60%.
Scale of assessment (preliminary/final): 50/50

Learning outcomes:
By completing the course, the student acquires knowledge of the basic problems of medical ethics and bioethics in the context of dentistry. The student understands the principles of medical ethics and their importance in education, practice, and research in the field of medicine. The student can apply knowledge to case studies, can analyse them, identify problems and dilemmas and propose solutions. The course contributes to the formation of moral attitudes of students to medicine, patients, and other health professions in a team.

Class syllabus:
Introduction to general ethics. Ethics, morality, and moral reasoning. Basic ethical theories in the context of medical ethics. Ethics and law.
Introduction to medical ethics. Basic terminology of medical ethics. Hippocratic tradition and oath. Medical oath of the World Medical Association (Geneva Declaration). Principles of medical ethics and their application. Code of ethics. Specifics of ethics in dentistry.
Dignity. Patients' rights. The doctor-patient relationship. Paternalism and partnership.
Informed consent and the right to refuse treatment. Ethical aspects of providing information.
Ethics at the beginning of human life (contraception, sterilization, assisted reproduction, abortion).
Basics of thanatology. Dying with dignity. The issue of euthanasia and assisted suicide.
Ethical aspects of biomedical research and publishing. Ethics committee.

Recommended literature:
American College of Dentists. Ethics Handbook for Dentists: An Introduction to Ethics, Professionalism, and Ethical Decision Making [online]. Gaithersburg: Maryland,

2012. Dostupné na internete: https://www.dentalethics.org/wp-content/uploads/Ethics_Handbook_for_Dentists_2016.pdf
American Dental Association. Council on Ethics, Bylaws and Judicial Affairs. ADA Principles of Ethics and Code of Professional Conduct. Chicago: ADA, 2020. Dostupné na internete: https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/about/ada_code_of_ethics.pdf?rev=82d95a7422ac47f6bd7cb856be68e359&hash=B429E3FC0E5A2131978DAB037CA73F70
DA.org/ethics
Beauchamp L.T., Childress, F.J. Principles of Biomedical Ethics. 6th. ed. New York, Oxford : Oxford University Press, 2009, 417 p. ISBN 978-0-19-533570-5.
Čáp, J. Lekárska etika pre študijný program Zubné lekárstvo – súbor prezentácii. Multimediálna podpora výučby klinických a zdravotníckych disciplín :: Portál Jesseniovej lekárskej fakulty Univerzity Komenského [online] 14.10.2015, posledná aktualizácia 14.10.2015. Dostupné na internete: http://portal.jfmed.uniba.sk/clanky.php?aid=304
Čáp, J., Palenčár, M., Kurucová, R. Ľudská dôstojnosť v kontexte smrti a umierania. Martin: Vydavateľstvo Osveta, 2016.
Etický kódex zdravotníckeho pracovníka, príloha č. 4. In Zákon č. 578/2004 Z.z. Národnej rady Slovenskej republiky o poskytovateľoch zdravotnej starostlivosti, zdravotníckych pracovníkoch, stavovských organizáciách v zdravotníctve a o zmene a doplnení niektorých zákonov.
Európska charta práv pacienta.
Charta práv pacienta v Slovenskej republike.
Nemčeková, M., Žiaková, K., Mištuna, D. Práva pacientov : Medicínske, ošetrovateľské a filozoficko-etické súvislosti. 1. vyd. Martin : Osveta, 2004. 213 s. ISBN 80-8063-162-X.
Príručka lekárskej etiky. Svetová asociácia lekárov. 2008. ISBN 978-80-8095-036-1
Ptáček, R., Bartůněk et al. Etika a komunikace v medicíně. Praha: Grada, 2011.
Ptáček, R., Bartůněk et al. Etické problémy medicíny na prahu 21. století. Praha: Grada, 2014.
Zákon č. 576/2004 Z. z. Národnej rady Slovenskej republiky o zdravotnej starostlivosti, službách súvisiacich s poskytovaním zdravotnej starostlivosti a o zmene a doplnení niektorých zákonov.

Languages necessary to complete the course:
Slovak language

Notes:
The subject is supported by MS Teams.

Past grade distribution
Total number of evaluated students: 1

A	ABS0	B	C	D	E	FX
0,0	100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. Mgr. Juraj Čáp, PhD.

Last change: 11.07.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚHE/J-S-ZL5-012/25	Histology, cytology and embryology (1)

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 3 / 2 **per level/semester:** 42 / 28
Form of the course: on-site learning

Type, volume, methods and workload of the student - additional information
Form of Study:
Practical exercise / lectures
Number of contact hours:
per week: 3 / 2 per level/semester: 42 / 28

Number of credits: 4

Recommended semester: 2.

Educational level: I.II.

Prerequisites:

Course requirements:
Obligatory 93%-active participation in practical exercises (one excused absence for serious reasons only).
Other criteria:
1. discussion by microscope – description of the histological structure of individual organs,
2. 4 written tests, each with a minimum of 70 % to successfully pass,
3. practical part (credit exam) – identification and description of 2 human tissue slides
Evaluated A – Fx.
Scale of assessment (preliminary/final): 20/80

Learning outcomes:
The graduate of the coursemasters histological terminology, understands routine work with a light microscope and is able to navigate basic and specific staining methods.
Based on theoretical knowledge, the student can microscopically identify individual cells, determine their function due to their shape and characteristic cytomorphological features, identify all basic human tissues, including their differential diagnosis, and discuss the topic in question (epithelium, connective tissue, cartilage, bone, muscle tissue, nervous tissue, bone marrow, peripheral blood). The student can apply histomorphological and cytomorphological knowledge in terms of the functional histology of organs and systems. Moreover, the graduate of the subject understands the relationship of histology, cytology, and embryology with other medical disciplines, such as biology, physiology, pathological physiology, and pathological anatomy.

Class syllabus:
- Introduction to the study of histology, cytology, and embryology and the role of given fields in medical science. Preparation of permanent slides and staining methods.

- Microscopic anatomy of the human cell at light and electron microscopy level.
- Functional histology and cytology of epithelial tissues, supporting and connective tissues, skeletal tissues, bone marrow and peripheral blood, muscle tissue, nervous tissue with an emphasis on the clinical correlations.
- Microscopic anatomy of the central and peripheral nervous system, cardiovascular and lymphatic system in terms of the functional histology and clinical correlations.
- Differential diagnosis of human organ tissues.

Recommended literature:

Mescher A.L.: Junqueirovy základy histologie. Galén, 2018, 558 s. ISBN 9788074923241
Sadler T. W.: Langmanova lékařská embryologie. Grada, 2010, 414 s. ISBN 9788024726403
Junqueira L. C., Carneiro J., Kelley R. O.: Základy histológie. Praha H&H, 2002, 502 s. ISBN 80-8578-737-7
Kapeller, K., Pospíšilová, V.: Embryológia človeka. Martin: Osveta, 2001, 370 s. ISBN 80-8063-072-0
Kapeller, K., Strakele, H.: Cytomorfológia. Martin: Osveta, 1999, 237 s. ISBN 80-88824-79-6
Adamkov M.: Priečne pruhovaný sval a myofasciálna bolest' hlavy. Druhé doplnené a prepracované vydanie. Vydavateľstvo P+M Turany. 2020, 1ll s. ISBN: 978-80-89694-69-3.
Adamkov M.: Apoptóza a antiapoptotický proteín survivin ako slubný nádorový biomarker. Rank Germany, 2020, 156 s. ISBN 978-3-9812043-9-1
Berkovitz B. K. B., Holland G. R., Moxham B. J: Oral Anatomy, Histology and Embryology, 5th edition. Elsevier, 2018, 462 s. ISBN 978-0-7234-38 1 2-0
Chiego D.: Essentials of Oral Histology and Embryology. A Clinical Approach. 5th Edition. Elsevier-Health Science Division, 2018. 231 s. ISBN 9780323497251

Languages necessary to complete the course:
Slovak language

Notes:

Past grade distribution
Total number of evaluated students: 1

A	ABS0	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: RNDr. Veronika Mešťanová, PhD.

Last change: 01.10.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚLBch/J-S-ZL5-011/25	Medical Biochemistry

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 2 / 3 **per level/semester:** 28 / 42
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 2.

Educational level: I.II.

Prerequisites: JLF.ÚLBch/J-S-ZL5-005/25 - Medical Chemistry

Recommended prerequisites:
JLF.ÚLBch/J-S-ZL-005

Course requirements:
The assessment takes the form of a written exam, the minimum passing score is 60%, and an oral exam.
Scale of assessment (preliminary/final): 40/60

Learning outcomes:
By completing the course, the student acquires basic information about biochemical and molecular biological processes in the human body. The graduate of the course is able to understand the processes necessary for maintaining health and for understanding the causes and rational treatment of many diseases, basic metabolic processes in individual organs with an emphasis on the biochemistry of the oral cavity. He will understand the normally occurring biochemical processes in healthy tissue as well as in tissue changed by a pathological process. The main goal is to understand all chemical processes associated with living cells at the molecular level and to analyze not only their structures, but also metabolic functions. Completing the course also contributes to the understanding of basic diagnostic procedures based on biochemical analysis of body fluids. In seminars in the form of seminar papers, students are able to apply theoretical knowledge to pathological processes and solutions to individual types of diseases at the molecular level.

Class syllabus:
Principles of biological oxidations, formation of macroergic compounds, respiratory chain, formation of ATP, inhibitors of ATP formation and electron transfer. Intermediate metabolism, Citrate cycle, role of acetyl-CoA in nutrient metabolism, Glycolysis, oxidation of pyruvate, aerobic, anaerobic glucose degradation, glycogen metabolism, gluconeogenesis, regulations, metabolism of fructose, galactose, glucuronic acid, pentose cycle, metabolism of glycoproteins and proteoglycans, digestion and absorption of carbohydrates, transport into cells. Digestion and absorption of lipid substances, metabolism of fatty acids, saturated, unsaturated polyene, regulations. Metabolism of triacylglycerols, membrane lipids, phospholipids, glycolipids, cholesterol, regulations. Plasma lipoprotein metabolism - lipoproteinemia, bile acid metabolism, ketone bodies, mutual connection

of carbohydrate and lipid metabolism, hormonal regulation, clinical aspects of individual metabolic disorders of lipids and carbohydrates. Nucleotide metabolism, regulation and metabolic disorders. Protein digestion and absorption, urea and glutamine cycle, involvement of amino acids in intermediary metabolism. Integration of metabolism of essential nutrients carbohydrates, lipids and proteins. Mutual metabolic relationships in obesity, starvation, pregnancy, lactation and old age, stress, physical activity, metabolic risks of vegetarian diets and various forms of weight reduction. Vitamins. Signal transduction and signaling molecules in biological systems. Hormonal regulation, biochemistry of extracellular and intracellular communication. Biochemical functions, metabolism of individual tissues and organs (muscle, skeletal, connective tissue, biochemistry of the liver, kidneys, blood and blood elements, biochemistry of the central and peripheral nervous system). Plasma proteins. Acid-base balance, regulation of homeostasis and exchange of mineral substances. Biochemistry of the oral cavity, saliva, dental plaque, dental caries, periodontal diseases. Biochemistry of pain and inflammation. Influence of selected diseases (osteoporosis, diabetes mellitus) and hypovitaminosis on biochemical processes in the oral cavity.

Recommended literature:

D. Dobrota a kol.: Lekárska biochémia. Vysokoškolská učebnica. Osveta Martin, 2016. 799 s. D. Dobrota a kol.: Praktické cvičenia z lekárskej chémie a lekárskej biochémie. UK Bratislava, 2009. 123 s. R. K. Murray a kol.: Harperova ilustrovaná biochemie. Galén Praha, 2012. 730 s. Z. Tatarková: Problémové úlohy k seminárom z lekárskej chémie a biochémie. UK Bratislava, 2013. 89s.

Languages necessary to complete the course:

Slovak language

Notes:

Past grade distribution

Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Dušan Dobrota, CSc., prof. RNDr. Peter Račay, PhD.

Last change: 03.10.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚLBf/J-S-ZL5-002/25	Medical Biophysics

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 4 / 2 **per level/semester:** 56 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Recommended prerequisites:
Basic characteristics of the principles of biophysical process in the organism. Biophysical principles of diagnostics methods and terapeutics methods by ionizing and nonionizing radiation in medicine and basic principles of protection counter ionizing radiation (limits, efective dose and personal dosimetry).

Course requirements:
Students are assessed by means of an oral exam, a credit test, and continuous assessment during exercises and seminars. The assessment of the student's continuous work prior to the oral exam is carried out by adding up the points obtained and classifying them into the following categories:
A maximum of 130 points can be obtained for practical session, i.e. 10 points for each session.
Assessment scale for semester: A ≥ 81, B ≥ 66, C ≥ 51, D ≥ 36, E ≥ 20, Fx < 20.
A maximum of 20 points can be obtained for the credit test, with the following grading scale for the test: A ≥ 18, B ≥ 15, C ≥ 12, D ≥ 9, E ≥ 6, Fx < 6.
The overall assessment of the Medical Biophysics course consists of the semester assessment, the test, and 3 exam questions.
Scale of assessment (preliminary/final): 20/80

Learning outcomes:
After completion of the subject a student masters basic physical and physical-chemical processes in biological systems. He (she) has a basic konwledge in an use of supporting image methods and the methods of physical therapy in stomatology care. He (she) analyses knowledge from medical biophysics which serve as a basic tool for application and use of functional relationships at molecular, cellular and tissue levels. Also, he (she) knows the unwanted effects of environmental factors on a human body and the homeostasis. He (she) masters biophysical principles of medical instrumentation used in diagnostic and some therapeutical methods, mainly in stomatology.

Class syllabus:
-Structure and function of cell membrane. Transport mechanisms. The resting membrane potential.
-The action potential, its origin and propagation. Synapse and synaptic transmission.
-Biophysical principles of muscle contraction. Skeletal, cardiac and smooth muscle.

-Biophysical basics of respiration. External and internal breathing, ventilation, distribution, diffusion and perfusion.
-Biophysics of the circulatory system. Heart as a force pump, structure, function, power output. Laminar and turbulent blood flow - basic laws. Blood pressure. Capillary blood flow, filtration in capillary loop, oedema.
-Biomechanics of bones, the biomaterials and implants.
-Biophysical mechanism of sensory perception. Biophysics of vision. Biophysics of hearing.
-Recording of electrical and nonelectrical biosignals.
-Interaction of mechanical and meteorological factors with living systems.
-Interaction of electrical and magnetic fields and nonionising radiation with living systems.
-Radioactivity and ionising radiation. Detection of ionising radiation. Interaction of ionising radiation with living systems. X-ray imaging techniques in stomatology. Imaging techniques using radionuclides.
-Biophysical principles of some diagnostical and therapeutical methods in medicine.
-Biocybernetics. Simulation and modelling of biological processes. Theory of information. Controlled and regulated biological systems.

Recommended literature:

Povinná: Navrátil, L., Rosina, J. a kol. Medicínska biofyzika. 2. vydanie, Praha: Grada, 2019. 431 s. ISBN 978-80-271-0209-9

Šimera, M., Jakuš, J., Poliaček, I. a kol. Vybrané kapitoly z lekárskej biofyziky s praktickými úlohami. Martin, JLF UK, 2018. 232 s. ISBN 978- 80-8187-056-9

Odporúčaná:

Hrazdira, I. a kol. Biofyzika. Praha: Avicenum, l990. 3l8 s. ISBN 80-201-0046-6

Jakuš, J. Neurónové mechanizmy dýchania a respiračných reflexov. Bratislava: UK, 1999. 66 s. ISBN 80-223-1379-3

Languages necessary to complete the course:

Slovak language

Notes:

Past grade distribution

Total number of evaluated students: 1

A	ABS0	B	C	D	E	FX
0,0	0,0	100,0	0,0	0,0	0,0	0,0

Lecturers: doc. RNDr. Michal Šimera, PhD., doc. Ing. Jakub Míšek, PhD., prof. RNDr. Ivan Poliaček, PhD., Ing. Marcel Veterník, PhD., Mgr. Nadežda Višňovcová, PhD.

Last change: 09.09.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚLBch/J-S-ZL5-005/25	Medical Chemistry

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 3 / 2 **per level/semester:** 42 / 28
Form of the course: on-site learning

Number of credits: 5

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Recommended prerequisites:
Lecture/Practical
Extent (in hours) – per week: 2/3
Method - attendance form
Number of credits: 6 credits

Course requirements:
Evaluation of students is performed as a written exam, minimal level to pass: 60 %. Evaluation: A: 91–100 % B: 81–90 % C: 73–80 % D: 66–72 % E: 60–65 % FX: 59 % and less
Scale of assessment (preliminary/final): 40/60

Learning outcomes:
After completion of the subject student gains essential informations about biologically important compounds and about rules of chemical processes in the living systems. Student understands the principles of bioenergetics and enzyme kinetics and rules for chemical reactions in aqueous solutions. Completion of the subject also contributes to understanding of relationship between structure and function of biologically important compounds. Student is able to apply knowledge gained on the lectures and seminars at learning of biological oxidations, metabolism of compounds and acid-base equilibrium of body fluids. Completion of the course also contributes to the understanding of the relationships between the structure and function of biologically important substances, the basics of the storage and transfer of genetic information, and to familiarity with current applications of recombinant DNA technology in clinical medicine.

Class syllabus:
-Biologically important elements and their compounds. Weak noncovalent interactions and their importance for biopolymers and biological membranes.
- Termodynamics and living systems. Entropy, Gibbs free energy and coupled reactions in living systems.
- Rate of chemical reactions. Types of reactions and their importance in metabolic pathways. Kinetics of enzyme reactions, enzyme inhibition.

- Properties of aqueous solutions. Chemical reactions in aqueous solutions: acid-base reactions, oxidation-reduction reactions, precipitation reactions, formation of coordination substances. Properties of colloid systems, biopolymers as colloids.
- Chemical properties and biological importance of amino acids, peptides and proteins. Relationship between structure and function of proteins.
- Chemical properties and biological importance of myoglobin and hemoglobin.
- Chemical properties and biological importance of saccharides and their derivatives.
- Chemical properties and biological importance of triacylglycerols, phospholipids, sphingolipids and steroids, nucleotides, coenzymes and vitamins.
- Relationship between structure and function. Chemical properties and biological significance of myoglobin and hemoglobin.
- Structure of biological membranes. Lipid and protein components of membranes, membrane fluidity.
- Membrane transport. Mechanisms of passive and active transport of ions and molecules.
- Structure and properties of DNA, mRNA, tRNA and rRNA. Genetic information and eukaryotic genome.
- Mechanism of DNA replication and repair of damaged DNA.
- RNA synthesis - transcription and post-transcriptional modifications of RNA.
- Characteristics of the genetic code, mutations. Mechanism of synthesis and posttranslational modification.
- Regulation of gene expression in eukaryotes. Clinical examples of gene expression regulation disorders.
- Practical applications of recombinant DNA technology in human genetics, prenatal diagnostics, gene therapy, examples of congenital diseases.

Recommended literature:

D. Dobrota a kol.: Lekárska biochémia. Vysokoškolská učebnica. Osveta Martin, 2016. 799 s.
D. Dobrota a kol.: Praktické cvičenia z lekárskej chémie a lekárskej biochémie. UK Bratislava, 2009. 123 s.
R. K. Murray a kol.: Harperova ilustrovaná biochemie. Galén Praha, 2012. 730 s.
Z. Tatarková: Problémové úlohy k seminárom z lekárskej chémie a biochémie. UK Bratislava, 2013. 89s.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1

A	ABS0	B	C	D	E	FX
0,0	0,0	100,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Dušan Dobrota, CSc.

Last change: 11.07.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚLBl/J-S-ZL5-004/25	Medical biology, genetics and regenerative medicine (1)

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Course requirements:
Successful passing of two credit tests (not less than 60%), 100% attendance at practical classes. Preliminary assessment: Test, stand-alone work, preparation of presentation according to given topic. Final assessment: Mark, according to credit tests results.
Scale of assessment (preliminary/final): 100 / 0

Learning outcomes:
After completing the subject, the student has knowledge in general cytology – structure, function and pathology of the cell.

Class syllabus:
The cell theory. Cell as a basic structural and functional unit. Biopolymers: proteins, nucleic acids, saccharides. Cytoskeleton: structure and function of microfilament, microtubules and intermediate filaments. Organization of the cell memory system, genetic information. Cell genome. Gene expression, regulation of proteosynthesis. Biological membranes – structure and function. Cell surfaces. Membrane transport. Endocytosis, exocytosis. Membrane organelles – nucleus, mitochondria, endoplasmic reticulum, Golgi complex, lysosomes, peroxisomes. Influence of external factors on cell. Cell division – mitosis. Meiosis, gametogenesis.

Recommended literature:
Nečas,O. a kol.: Obecná biologie pro lékařske fakulty, Jinočany, H&H 2000, 554 s. Péč, M. a kol.: Semináre a cvičenia z lekárskej biológie pre zubné lekárstvo, Martin,Beriss, 2013 Péč, M. kol.: Prehľad lekárskej biológie a genetiky pre Zubné lekárstvo, 1. vyd. Bratislava: Univerzita Komenského v Bratislave, 2020. -383 s. [online] Sršeň,Š., Sršňová,K.: Základy klinickej genetiky a jej molekulárna podstata, Martin, Osveta 2000, 410 s. Kapeller,K., Strakele, H.: Cytomorfológia, Osveta, Martin, 1999, 239 s.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 1

A	ABS0	B	C	D	E	FX
0,0	100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Martin Péč, PhD., MPH, Ing. Miroslava Šarlinová, PhD., RNDr. Marek Samec, PhD., RNDr. Mária Franeková, PhD., Mgr. Jana Mazuchová, PhD.

Last change: 27.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚLBl/J-S-ZL5-009/25	Medical biology, genetics and regenerative medicine (2)

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 2 / 2 **per level/semester:** 28 / 28
Form of the course: on-site learning

Number of credits: 4

Recommended semester: 2.

Educational level: I.II.

Prerequisites: JLF.ÚLBl/J-S-ZL5-004/25 - Medical biology, genetics and regenerative medicine (1)

Course requirements:
Successful passing of two credit tests (not less than 60%), 100% attendance at practical classes, successful passing of oral exam. Preliminary assessment: test, stand-alone work, preparation of presentation according to given topic. Final assessment: mark, according to oral exam.
Scale of assessment (preliminary/final): 0 / 100

Learning outcomes:
After completing the subject, the student has knowledge in molecular biology and genetics, in genetics of blood groups, immunogenetics as well as in genetics of cancer cell, viruses and bacteria.

Class syllabus:
Karyotype. DNA replication. General laws of inheritance – Mendel´s laws, gene interactions, gene linkage, sex-linked inheritance. Genetics of blood groups. Mutations – gene, chromosomal, numerical. Population genetics. Pedigree analysis. Genetics of prokaryotes and viruses. Immunogenetics – HLA system. Cancer cell genetics – protooncogenes, oncogenes. Cytogenetic methods, methods of gene engineering.

Recommended literature:
Nečas,O. a kol.: Obecná biologie pro lékařske fakulty, Jinočany, H&H 2000, 554 s. Péč, M. a kol.: Semináre a cvičenia z lekárskej biológie pre zubné lekárstvo, Martin,Beriss, 2013 Péč, M. kol.: Prehľad lekárskej biológie a genetiky pre Zubné lekárstvo, 1. vyd. Bratislava: Univerzita Komenského v Bratislave, 2020. -383 s. [online] Sršeň,Š., Sršňová,K.: Základy klinickej genetiky a jej molekulárna podstata, Martin, Osveta 2000, 410 s. Kapeller,K., Strakele, H.: Cytomorfológia, Osveta, Martin, 1999, 239 s.

Languages necessary to complete the course:
Slovak

Notes:

Past grade distribution
Total number of evaluated students: 1

A	ABS0	B	C	D	E	FX
0,0	0,0	100,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Martin Péč, PhD., MPH, Ing. Miroslava Šarlinová, PhD., RNDr. Marek Samec, PhD., RNDr. Mária Franeková, PhD., Mgr. Jana Mazuchová, PhD.

Last change: 27.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚCJ/J-S-ZL5-003/25	Medical terminology

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Course requirements:
95% participation in seminars, at least 60% success in two written tests per semester.
Evaluation: A: 91-100%, B: 90-81%, C: 80-73%, D: 72-66%, E: 65-60%, FX: less than 60%
Exam: final grade summary result for credit (40%) and exam performance (60%)
Scale of assessment (preliminary/final): 40% for credit tests / 60% for written exam

Learning outcomes:
The student is supposed to be well oriented in Latin medical terminology, since knowledge of certain components of the language structure of Latin as well as Greek is a prerequisite for adequate and economic mastery of almost all medical disciplines. On the basis of this subject the student acquires terminological competence, i. e. the ability to use Latin medical terminology accurately and correctly. After finishing this course, a medical student should meet the following criteria: a) mastering the phonetic and graphic aspects of Latin; b) knowledge of selected aspects of the linguistic morphological system related to selected substantial and verbal forms; c) knowledge of the lexical plan of the language; d) mastering the elementary syntactic structure of medical terms (multi-word terms, close and loose attribute, word order, Latin-form prescriptions); e) control of the word-formation system of one-word terms (affixation, prefix polysemy, polyfunctional suffixes) and relations of word-forming elements (synonyms, antonyms, homonyms).

Class syllabus:
1.Historical and linguistic introduction into medical Latin. 1st Latin and Greek declension.
2. 2nd Latin and Greek declension.
3. 3rd Latin declension.
4. 3rd Latin declension.
5. 4th and 5th Latin declension.
6. Adjectives of the 3rd declension.
7. TEST I.
8. Comparison of adjectives.
9. 3rd Greek declension.
10. Numerals. Latin medical prescription.
11. Prefixes.

12. Suffixes. Adverbs.
13. Compounds.
14. TEST II.

Recommended literature:
Bujalková, M., Šimon, F.: TERMINOLOGIA MEDICA LATINA. Učebnica lekárskej terminológie pre študentov medicíny. Martin: Vydavateľstvo Osveta 2019. 236 s.
3. doplnené a upravené vydanie. ISBN 978-80-8063-480-3

Languages necessary to complete the course:
Slovak and Latin language

Notes:

Past grade distribution
Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: Mgr. Samuel Javornický, PhD.

Last change: 17.09.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚTV/J-S-ZL5-TV1/25	Physical Education (1)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Course requirements:
presence

Learning outcomes:
The graduate of this subject personify his attitude to the necessity of healthy life style. He will understand the health sense of active movement for the human health. He will bring into his attitude and conviction the role of active movement, sport as a effective prevention against civilization illnesses of today as a part of therapy to improve the state of health of the whole population. He will become own surely about the importance of sport and motion activities by harmonic young human character progress.

Class syllabus:
Deepen the base of collective games knowledge (basketball, volleyball, football, floorball, hockeyball). Explain and show the rules on examples. Collective games needs integration of individual ability and skills for its profit to the whole collective. All listed games support the active life style and offer progress of balance between physical and mental work of students at medical faculty.

Recommended literature:
Lubor Tománek , Teória a didaktika basketbalu
Ludmila Zapletalová, Vladimír Přidal, Peter Mačura, 1996 Teória a didaktika volejbalu

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

ABS0	M
0,0	0,0

Lecturers: PaedDr. Jozef Šimeček

Last change: 11.07.2025
Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚTV/J-S-ZL5-TV2/25	Physical Education (2)

Educational activities:
Type of activities: practicals
Number of hours:
per week: 2 **per level/semester:** 28
Form of the course: on-site learning

Number of credits: 1

Recommended semester: 2.

Educational level: I.II.

Prerequisites:

Course requirements:
presence

Learning outcomes:
The graduate of this subject personify his attitude to the necessity of healthy life style. He will understand the health sense of active movement for the human health. He will bring into his attitude and conviction the role of active movement, sport as a effective prevention against civilization illnesses of today as a part of therapy to improve the state of health of the whole population. He will become own surely about the importance of sport and motion activities by harmonic young human character progress.

Class syllabus:
Deepen the base of collective games knowledge (basketball, volleyball, football, floorball, hockeyball). Explain and show the rules on examples. Collective games needs integration of individual ability and skills for its profit to the whole collective. All listed games support the active life style and offer progress of balance between physical and mental work of students at medical faculty.

Recommended literature:
Lubor Tománek , Teória a didaktika basketbalu
Ludmila Zapletalová, Vladimír Přidal, Peter Mačura, 1996 Teória a didaktika volejbalu

Languages necessary to complete the course:

Notes:

Past grade distribution
Total number of evaluated students: 0

ABS0	M
0,0	0,0

Lecturers: PaedDr. Jozef Šimeček

Last change: 11.07.2025
Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.KSMCh/J-S-ZL5-001/25	Pre-clinical dentistry 1 (morphology and tooth anatoym, simulated teaching)

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 4 / 1 **per level/semester:** 56 / 14
Form of the course: on-site learning

Type, volume, methods and workload of the student - additional information
Form of Study: practicals/lecture
Number of contact hours:
per week: 4 / 1 per level/semester: 56 / 14

Number of credits: 4

Recommended semester: 1.

Educational level: I.II.

Prerequisites:

Course requirements:
Attendance 100 %
Continuous assessment test form
Individual work
Interim assessment by test: minimum pass mark 65 %.
A: 93-100%, B: 86-92%, C: 79-85%, D: 72-78%, E: 65-71%, FX: less than 65%
80 % share of the overall continuous assessment
Individual work:
Wax tooth modelling, cavity preparation according to Black, fabrication of restorations on models.
Scale of assessment (test/individual work): 80/20
Scale of assessment (preliminary/final): continuous assessment

Learning outcomes:
The graduate of the subject will understand the terminology in dentistry. By completing the subject, we obtain detailed information about the morphology of permanent and temporary dentition. They will learn about the differences between permanent and deciduous teeth. Completing the subject contributes to the development of manual skills in modeling teeth from various materials - chalk, wax. The graduate of the subject acquires basic theoretical knowledge and practical skills in the basics of cariology. By completing the subject, the student acquires basic skills in working with rotary instruments. They will learn the techniques of preparation of hard dental tissues.

Class syllabus:
Terminology in dentistry.
Anatomy and morphology of the dentition and teeth.

Morphology of permanent and deciduous dentition.
Differences between deciduous and permanent dentition.
Morphology of individual teeth.
Basic equipment of a dental clinic.
Basic equipment of dental technology.
Dental caries - predilection sites of occurrence.
Classification of carious cavities.
Principles of cavity preparation (gaining access and opening the cavity, cavity contour and preventive extension, anchoring the filling, ensuring the resistance of the tooth and filling).
Preparation of Class I cavities according to Black, preparation of Class II cavities according to Black,
preparation of Class III cavities according to Black, preparation of Class IV cavities according to Black, preparation of Class V cavities according to Black.
Permanent and temporary filling materials.
Simulation training on dental simulators and virtual reality simulators.

Recommended literature:

972057-9-9
Hecová, H., Monhartová, K.: Morfologie zubu a kreslení a modelování zubu, Karolinum, 2008, ISBN
978-80-246-1586-8
Klepáček,I.,Mazánek,J.: Klinická anatomie pro stomatology, Grada, Avicenum, 2001, ISBN 80-7169-
770-2
Duránik, V., Holomáňová, A., Gabániová, D.: Detailná anatómia zubov. Návod na modelovanie zubov. Bratislava: Univerzita Komenského, 2002. 64 s. Skriptá. ISBN 80-223-1622-9.
Hubálková, H., Krňoulová, J.: Materiály a technologie v protetickém zubním lékařství. Praha: Galén, 2009. 301 s. ISBN 978-80-7262-581-9.

Languages necessary to complete the course:
slovak

Notes:

Past grade distribution
Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Jarmila Procházková, CSc., MDDr. Michaela Smatanová, PhD., PhDr. Libuša Kovalská, MDDr. Michal Augustín

Last change: 06.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.KSMCh/J-S-ZL5-008/25	Pre-clinical dentistry 2 (morphology and tooth anatoym, simulated teaching)

Educational activities:
Type of activities: practicals / lecture
Number of hours:
per week: 4 / 1 **per level/semester:** 56 / 14
Form of the course: on-site learning

Type, volume, methods and workload of the student - additional information
Form of Study: practicals/lecture
Number of contact hours:
per week: 4 / 1 per level/semester: 56 / 14

Number of credits: 4

Recommended semester: 2.

Educational level: I.II.

Prerequisites: JLF.KSMCh/J-S-ZL5-001/25 - Pre-clinical dentistry 1 (morphology and tooth anatoym, simulated teaching)

Course requirements:
Attendance 100 %
Continuous assessment test form
Individual work
Interim assessment by test: minimum pass mark 65 %.
A: 93-100%, B: 86-92%, C: 79-85%, D: 72-78%, E: 65-71%, FX: less than 65%
80 % share of the overall continuous assessment
Individual work:
Mechanical-chemical preparation of root canals, tooth preparation in fixed prosthetics.
Scale of assessment (test/individual work): 80/20
Scale of assessment (preliminary/final): continuous assessment

Learning outcomes:
The graduate of the subject acquires basic theoretical knowledge and practical skills related to the basics of endodontics and fixed prosthetics. By completing the subject, the student acquires basic skills in working with rotary instruments. They will learn the techniques of preparing hard dental tissues. By completing this subject, they will acquire knowledge of the anatomy of the tooth root system. They will acquire practical skills for performing endodontic treatment of teeth, i.e. mechanical-chemical preparation of root canals. They will understand the working procedures for making fixed prosthetic restorations. The graduate of the subject will master the impression technique in fixed prosthetics.
They can use the acquired theoretical knowledge when working on models and simulators.

Class syllabus:

Basics of the anatomy of the root system of teeth.
Mechanical-chemical preparation of root canals.
Working procedures before and after endodontic treatment of teeth.
Classification of dental defects.
Biodynamics of restorations.
Working procedures in dental technology when making crown restorations.
Fixed crown restorations - classification, manufacturing workflow
Fixed bridges - manufacturing workflow, types of pontic elements.
Impression materials - classification, properties and use.
Development of skills in impression technique, making models, reconstruction of intermaxillary relationships, the importance of individual procedures and causes of possible errors.
Tools, materials and working procedures when making a resin crown, all-cast, veneer and ceramic crown, fixed bridge.
Simulation teaching on dental simulators and simulators with virtual reality.

Recommended literature:

Šestáková, M. a kol., Protetické zubné lekárstvo a čeľustná ortopédia, 2016, ISBN 978-80-972254-9-0
Minčík, J. a kol.: Propedeutika - terapeutické zubné lekárstvo. Košice: UPJŠ, 2019, ISBN-13: 978-80-972057-9-9
Hubálková, H., Krňoulová, J.: Materiály a technologie v protetickém zubním lékařství. Praha: Galén, 2009. 301 s. ISBN 978-80-7262-581-9.

Languages necessary to complete the course:
slovak language

Notes:

Past grade distribution
Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Jarmila Procházková, CSc., MDDr. Michaela Smatanová, PhD., MDDr. Kristína Pitáková, MDDr. Michal Augustín

Last change: 06.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.ÚVZ/J-S-ZL5-014/25	Public health, hygiene, epidemiology and social medicine

Educational activities:
Type of activities: lecture
Number of hours:
per week: 3 **per level/semester:** 42
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 2.

Educational level: I.II.

Prerequisites:

Course requirements:
ASSESSMENT:
a/ 100% attendance – at lectures (14 x 2 points) max. 28 points
b/ theses from supervised self-study and participation in discussions max. 12 points
b/ oral exam (2 questions) max. 60 points
Overall evaluation (max. 100 points):
Evaluation: A: 91–100%, B: 81–90%, C: 73–80%, D: 66–72%, E: 60–65%, Fx: 59% and below.
One excused absence (in accordance with the Study Regulations of the Faculty of Medicine, Comenius University), points are not counted, only in case of replacement (the form is determined by the teacher). The condition for successful completion of the course is to achieve a minimum of 60 points in the overall assessment.
Translated with DeepL.com (free version)
Scale of assessment (preliminary/final): 40/60

Learning outcomes:
Graduates of this course will understand the role of epidemiology, hygiene, and social medicine (preventive medicine disciplines) in public health and in the implementation of regional and national health policy. They will gain knowledge about the identification, monitoring, and control of physical, chemical, biological, and psychosocial factors affecting environmental health and occupational health. They will become familiar with epidemiological methods of work, the laws of the epidemic process, non-infectious diseases, preventive programs, and preventive and repressive measures affecting the incidence of these diseases. They will understand the organization of healthcare, population health care, health education, basic medical and legal standards, and healthcare laws. In dental practice, they will be able to apply knowledge about monitoring the health status of the population, health indicators, morbidity, mortality, social determinants of health, and health statistics.
Translated with DeepL.com (free version)

Class syllabus:
National Health Promotion Program. Preventive programs and examinations. Public health – history, objectives. Public health in the Slovak Republic – focus, objectives, tasks, cooperation.

International public health. State health policy – objectives and programs in Slovakia. The role of hygiene, epidemiology, and social medicine in public health. Social determinants of health. Population health and demography. Organization, management, and financing of healthcare and public health in Slovakia. Education of healthcare professionals. Work environment – risk factors and their impact on population health. Food hygiene: impact on health and HACCP. Hygiene of children and youth, educational process. Environment – risk factors and their impact on population health. Epidemiology of non-infectious diseases. Epidemiology of infectious diseases. Hospital hygiene and occupational risks in dentistry. Hygiene and epidemiological regime in dental workplaces. Emergency situations in epidemiology and hygiene. Methodology in public health.
Translated with DeepL.com (free version)

Recommended literature:

Required:

Jurkovičová J. et al.: Hygiene. Bratislava: UK Publishing House, 2020. 482 p. ISBN 978-80-223-4905-5
Ozorovský V. et al.: Social Medicine. SAP Press 2019, 226 p., ISBN 9788089607686
Šulcová, M., Čižmár, I., Fabiánová E.: Public Health. Bratislava: Veda, 2013, 651 p., ISBN 978-80-224-1283-4
Rovný, I. et al.: Selected Chapters of Public Health II. Turany, P+M, 2013, 896 pp., ISBN 978-80-89057-44-3
Hudečková, H., Švihrová, V.: Vaccination. Martin, Osveta, 2013, 221 pp. ISBN 978-80-80633-96-7

Recommended:

HUDEČKOVÁ, H., ŠVIHROVÁ, V., NOVÁKOVÁ, E., SZILÁGYIOVÁ, M.: Public health aspects of measles. Bratislava: A-medi management, 2018, 84 p., ISBN 978-80-89797-29-5
BAKOSS, P. et al. Epidemiology. 4th edition. Bratislava: UK, 2013, 517 p. ISBN 978-80-223-3499 0
BAZOVSKÁ S., et al.: Epidemiology for dental students. UK Bratislava, 2010. Printed by Polygrafické stredisko Uk in Bratislava, 136 p., ISBN 978-80-223-2716-9
ŠTEFKOVIČOVÁ M.: Hygienic Compendium for Dentists, Skalica, Didaktik 2005, 74 pp., ISBN 80-969379-4-4
Laws: 576/2004; 577/2004; 578/2004; 579/2004; 580/2004; 581/2004 and their amendments
OZOROVSKÝ V. et al.: Social Medicine. Bratislava: Asklepios, 2011. 166 p. ISBN 978-88-7167-158-9
Legáth, Ľ., Buchancová, J. et al. Occupational Medicine. Selected Chapters I. Martin: Osveta, 2020, 295 p. ISBN 978-80-8063-493-3

Languages necessary to complete the course:

Slovak, Czech languages

Notes:

Past grade distribution

Total number of evaluated students: 0

A	ABS0	B	C	D	E	FX
0,0	0,0	0,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Henrieta Hudečková, PhD., MPH, prof. MUDr. Tibor Baška, PhD., doc. PhDr. Simona Kelčíková, PhD., PhDr. Mgr. Martin Novák, PhD., Mgr. Jana Zibolenová, PhD., prof. MUDr. Viera Švihrová, CSc., Mgr. Róbert Čecho, PhD., Mgr. Eva Malobická, PhD., Mgr. Eliška Štefanová, PhD., Mgr. Mária Tatarková, PhD.

Last change: 22.08.2025
Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.

COURSE DESCRIPTION

Academic year: 2025/2026

University: Comenius University Bratislava

Faculty: Jessenius Faculty of Medicine in Martin

Course ID:	**Course title:**
JLF.KSMCh/J-S-ZL5-015/25	Summer practice in Dental Laboratory and in Dental surgery (1)

Educational activities:
Type of activities: practice
Number of hours:
per week: **per level/semester:** 80s
Form of the course: on-site learning

Type, volume, methods and workload of the student - additional information
Completing the internship without grades (assessment – ABSo)

Number of credits: 3

Recommended semester: 2.

Educational level: I.II.

Prerequisites: JLF.KSMCh/J-S-ZL5-001/25 - Pre-clinical dentistry 1 (morphology and tooth anatoym, simulated teaching)

Course requirements:
Practice in the Dental Laboratory and Dental Outpatient
Scale of assessment (preliminary/final): Written Evaluation by the Head of the Dpt. where the practicals took place.Evaluation of the working diary by the guarant of the subjectIndividual work: performance of all the prescribed practical tasks

Learning outcomes:
Students gain the complex overview of work in the dental practice from the point of view of the assisting nurse. They make themselves familiar with the fundamentals of the hygienic regime of the dental practice, take part in disinfection and sterilisation of the instrumentation equipment. Students practically learn all the tasks performed by the nurse including file keeping, documenting the patients. The are expected to master all procedures related to processing various dental materials. On completing the subject, students acquire a complex picture of the sequence of procedures in the dental practice and dental technics.

Class syllabus:
Work in dental practice: preparation of the practice for the daily program. Preparation of instrumentation and materials. Hygienic and desinfective regime in the practice. Desinfection and sterilisation of instrumentation. Protective means. Preparation and storage of the filing and other dental materials. Stomatological instrumentation. Preparation and manipulation with the imprint materials.
Practical performance of all nurse tasks in the dental practice.
Basics of the health documentation file keeping.
Work in laboratory: work in dental technique lab, equipment , protective means.
Imprints making, casting, fabrication of all types of models. Maintenance of damaged prosthetic replacements.

Familiarisation with the laboratory technological methods with emphasis on their linkup between dental practice and dental technic.

Recommended literature:

Languages necessary to complete the course:
slovak

Notes:

Past grade distribution
Total number of evaluated students: 0

ABS0	M
0,0	0,0

Lecturers: doc. MUDr. Dagmar Statelová, CSc., doc. MUDr. Mária Janíčková, PhD., MPH

Last change: 06.08.2025

Approved by: doc. MUDr. Mária Janíčková, PhD., MPH, prof. MUDr. Jarmila Procházková, CSc., doc. MUDr. Tomáš Siebert, PhD.