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COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KAIM1/L-S-VLa-004/19	**Course title:** Anaesthesiology and Intensive Medicine 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 15s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites: LF.IK_1/L-S-VLa-035/18 - Internal Propedeutics	
Course requirements: - 100% attendance at the practicals - more than 50% attendance at the lectures - written test (minimum 60% of correct answers) Final exam: - practical exam: patient examination and writing medical report - theoretical exam: 3 question (anaesthesiology, resuscitation and emergencies, intensive medicine) 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 anaesthesiology, intensive medicine and resuscitation . Understanding the pathophysiology, pharmacology and clinical importance of basic clinical discipline AIM. Knowledge: theoretical knowledge - basics in anaesthesiology, resuscitation and intensive medicine according syllabus. Skills: Evaluation of patient for general anesthesia, preoperative evaluation on the basisi of anamnesis , clinical examination, judgment of laboratory and imaging investigation. Airway managment, oxygen therapy, managment of circulatory failure, basic life support training on the manikin in simulation center. General characteristics of critical illness.. Early recognition and managment of critical illness	
Class syllabus: 1. AIM – targets and position in clinical medicine . 2. Preoperative evalôuation and prepairing for anesthesia , premedication. 3. Perioperative care , fluid and oxygen tzherapy, acute postoperative managment . 4. Anesthesia , regional and general, basic principles. 5. AIM for children – introduction and basic principles. 6. Anesthetics and the course of general anesthesia, principles of intravenous, inhalation general anesthesia .	

7. Multidisciplinárna intenzívna medicína v perioperačnej starostlivosti o kriticky chorých.
8. General principles and rationale for care of critical ill patients in intensive medicine. Evaluation of vital function, clinical and lab recognition of critical illness. Scoring.
9. Etiology, pathophysiology , diagnostics, monigtoring and managment of critical states, like shock, acute respiratory failure, ARDS, sepsis, MODS, renal failure.
10. Resuscitation and urgent medicine – pathophysiology and rationale managment.
11. Basic Life support - use of automatic external defibrilation .
12. Advanced Life support – leader in team work. ERC guidelines 2021 . Prevention of the courses of cardiac arrest , outreach approach, MET.

Recommended literature:

LARSEN : Anestézia , 8. Vydanie , Praha Avicenum 2012, resp. LARSEN 9. Vydanie r. 2022,
Textbook english – Morgan & Mikhail : Clinical Anaesthesiology , 5th Edition 2018 , ISBN 978-0-07-181669-4
Barash PG, Cullen B.F, Stoelting R.K a kol. Klinická anestéziológie , Praha Grada 2015. 6.vydáni , ISBN 978-80-247-4053-9
Allman K.G, Wilson I.A: Oxford handbook of ANAESTHESIA , 3rd edition , OXFORD University Press, 2016 ,s. 1203 p. , ISBN 978-0-19-856609-0

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 623

A	B	C	D	E	FX
30,82	31,94	23,27	10,11	3,53	0,32

Lecturers: doc. MUDr. Roman Záhorec, CSc., MUDr. Juraj Koutun, CSc.

Last change: 28.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KAIM1/L-S-VLa-005/19	**Course title:** Anaesthesiology and Intensive Medicine 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 15s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.KAIM1/L-S-VLa-004/19 - Anaesthesiology and Intensive Medicine 1	
Course requirements: - 100% attendance at the practicals - 1 written test (minimum 60% of correct answers) Final exam: - practical exam: patient examination and writing medical report - theoretical exam: oral exam - 2 questions (anaesthesiology, intensive care and resuscitation) and / or professional essay on a topic related to the global objectives of the course (distance learning in LMS Moodle). 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: Upon successful completion of the educational program, the student will gain knowledge and understanding of the knowledge in accordance with the global learning objectives of the course. Knowledge: Anaesthesiology - principles of preoperative evaluation and patient preparation, premedication, anesthesiological procedures, basic and advanced monitoring, postoperative care, including the possibilities of analgesia. Anaesthesiological procedures in selected surgical specialties. Anaphylaxis in the perioperative period. Intensive care - General principles of perioperative care for the critically ill and multidisciplinary intensive care, ICU organization, monitoring and treatment procedures. Etiology, pathophysiology, diagnosis and treatment plans and monitoring in selected critical conditions (shock, circulatory arrest, ALI / ARDS, instrumental lung ventilation, polytrauma, sepsis and MODS). Resuscitation - Basic and advanced life support, resuscitation, algorithms in resuscitation procedures, post-resuscitation care. Prevention of circulatory arrest, basics of teamwork. Skills: Upon successful completion of this course, students will be able to:	

Evaluate the patient in preoperative preparation, assess anamnestic, clinical and laboratory data, know how to predict, describe and design basic procedures for addressing airway disorders, circulatory disorders, severe injury management, practically manage cardiopulmonary resuscitation on the model. General characteristics of a critically ill patient. Applied physiology of vital functions.

Class syllabus:

1. AIM - roles and goals in medical care.
2. Preoperative evaluation and preparation of the patient for surgery.
3. Perioperative care and treatment of acute pain.
4. Anesthetic procedures in selected surgical departments.
5. AIM in pediatrics - basic principles.
6. Basic anesthesiological procedures, drugs in anaesthesiology.
7. Multidisciplinary intensive care medicine in perioperative care of critically ill patients.
8. General principles of medical care in intensive care.
9. Etiology, pathophysiology, diagnostics and treatment plans and monitoring in selected critical conditions
10. Resuscitation - applied physiology in resuscitation procedures.
11. Basic resuscitation and automated external defibrillation.
12. Advanced resuscitation, hospital resuscitation, resuscitation team.
13. Prevention of circulatory arrest.

Recommended literature:

LARSEN : Anestézia , 8. Vydanie , Praha Avicenum 2012, resp. LARSEN 9. Vydanie r. 2022,
Butterworth JF, Mackey D.C, Wasnick J.D. – Morgan & Mikhail s Clinical Anaesthesiology , 5th Edition 2013 , Lange medical book 2013, p. 1366 , ISBN 978_0-07-181669-4
Barash PG, Cullen B.F, Stoelting R.K a kol. Klinická anestéziológie , Praha Grada 2015. 6.vydáni , ISBN 978-80-247-4053-9
Allman K.G, Wilson I.H, Oxford handbook of ANAESTHESIA, thrid 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: 610

A	B	C	D	E	FX
55,74	32,46	9,18	1,64	0,98	0,0

Lecturers: doc. MUDr. Roman Záhorec, CSc., MUDr. Juraj Koutun, CSc.

Last change: 28.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.AÚ/L-S-VLa-001/16	**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	
Number of credits: 8	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% participation on the practical exercises - Passing 1 written test with at least 60% points and 1 practical exam from the structures of the upper and lower limbs. - Written test with a minimum of 60% - Test evaluation: A: 91 - 100 %, B: 81 – 99 %, 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: - Know the architecture and structures of the human body in general. - Know the different parts of the musculoskeletal system. - Have knowledge of the morphological structure of the heart, arteries and veins of the systemic and pulmonary circulation. - Learn and study the structures and organs of the respiratory and lymphatic system. - Have knowledge of the basic concepts and structures of the central and peripheral nervous system. - To acquire and study anatomical structures and topographical regions of the upper and lower limbs. Skills: - Understand and use anatomical terminology. - Analyze the acquired knowledge from a morphological and clinical point of view. - Practical use of theoretical knowledge during dissection and practical exercises. - Recognize and describe radiological images depicting anatomical structures.	
Class syllabus: Lectures: - Introduction to anatomy (planes and directions of the human body, anatomical position, anatomical terminology). - General anatomy of bones and joints.	

- General anatomy of muscles, fascia, fascial compartments, spaces.
- Cardiovascular system – heart, arteries, veins.
- Nervous system – basic concepts.
- Peripheral nervous system – brachial plexus, lumbar plexus, sacral plexus.
- Lymphatic system – general description, lymphatic tissue in organs, thymus, spleen, lymphatic vessels and nodes.
- Topographical regions of the upper and lower limbs.
- Respiratory system – nasal cavity, paranasal sinuses, pharynx, larynx, trachea, bronchi, lungs, pleura.
- Radiological examination methods of the upper and lower limb.

Practical exercises:
- Skeleton of the upper limb.
- Joints of the upper limb.
- Muscles and topographical regions of the upper limb.
- Skeleton of the lower limb.
- Joints of the lower limb.
- Muscles and topographical regions of the lower limb.

Dissection exercises:
Upper limb: Landmarks and regions of the upper limb. Dissection of superficial veins and superficial nerves. Deltopectoral triangle. Dissection oof the structures in the axillary fossa. Dissection of the structures in medial bicipital sulcus. Dissection of the structures in the cubital fossa. Dissection of the structures on the ventral side of the forearm. Dissection of the palm of the hand. Dissection of the structures on the dorsal side of the upper limb.
Lower limb: Landmarks and regions of the lower limb. Dissection of superficial veins and superficial nerves. Dissection of the structures in the femoral triangle and iliopectineal fossa. Dissection of the anterior crural region and the dorsum of the foot. Dissection of the medial retromalleolar region. Dissection of superficial veins and nerves on the dorsal side of the lower limb. Dissection of the structures in the suprapiriform and infrapiriform foramen. Dissection of structures in the popliteal fossa. Planta pedis dissection.

Recommended literature:

- PLATZER, W., SHIOZAWA-BAYER, T. Color Atlas of Human Anatomy. Vol. 1., Locomotor System. 8th ed. Stuttgart: Thieme, 2023. 472 p. ISBN 978-3-13-242443-2.
- FRITSCH, H. and KUEHNEL, W. Color Atlas of Human Anatomy. Vol. 2., Internal Organs. 7th ed. Stuttgart: Thieme, 2023. 467 p. ISBN 978-3-13-242448-7.
- KAHLE, W. and FROTSHCER, M., SCHMITZ, F. Color Atlas of Human Anatomy. Vol. 3., Nervous System and Sensory Organs. 8th ed. Stuttgart: Thieme , 2023. 414 p. ISBN 978-3-13-242451-7. - NETTER, F.H. Netter Atlas of Human Anatomy: Classic Regional Approach. 8th ed. Philadelphia: Elsevier - Health Science, 2022. 712 p. ISBN 978-0-323-68042-4
- LOUKAS, M., BENNINGER, B. and TUBBS, R.S. Gray's Clinical Photographic Dissector of the Human Body. 2nd ed. Philadelphia: Elsevier, 2018. 480 p. ISBN 978-0-323-54417-7.
- DETTON, A.J. Grant's Dissector. 17th ed. Philadelphia: Lippincott Williams and Wilkins, 2024. 367 p. ISBN 978-1-975210-06-9.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1616

A	B	C	D	E	FX
23,45	24,2	27,72	13,74	10,77	0,12

Lecturers: doc. MUDr. Eliška Kubíková, PhD., MPH, doc. MUDr. Anna Holomáňová, CSc., doc. RNDr. Ladislav Guller, CSc., MUDr. Hisham El Falougy, PhD., doc. MUDr. Zora Haviarová, PhD., RNDr. Petra Lukáčiková, PhD., RNDr. Melinda Takácsová, PhD., MUDr. Jana Bevilaqua, MUDr. Abdolreza Majidi, Mgr. Vladislava Zohdi, PhD., MUDr. Andrej Mifkovič, PhD., MUDr. Daniela Dovalová, MUDr. Tomáš Barczi, PhD., Mgr. Tomáš Havránek, PhD., MUDr. Osama Al - Khaldi, Stanislav Malakhov, PhD., prof. MUDr. Štefan Polák, CSc., Mgr. Katarína Bevízová, PhD., MUDr. Olia El Hassoun Sečanská, PhD.

Last change: 22.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.AÚ/L-S-VLa-002/16	**Course title:** Anatomy 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 48s / 54s **Form of the course:** on-site learning	
Number of credits: 10	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-VLa-001/16 - Anatomy 1	
Course requirements: 100% participation on the practical exercises. Passing 1 written test with at least 80% points and 2 practical exams (thorax, abdomen). Test evaluation: A: 200 -192, B: 191 –184, C: 183 –176, D: 175 –168, E: 167 –160, Fx: 159 -0. Practical exam evaluation: A: excellent, B: very good, C: good, D: satisfactory, E: sufficiently, Fx: failed. Practical examination from all structures, organs and spaces of thorax and abdomen. Final mark of the semester is determined from the average of received scores.	
Learning outcomes: Knowledge: - Understanding and knowing the morphological structure of the heart, arteries and veins of the systemic and pulmonary circulations. - Studying the different parts of the lymphatic system and the endocrine glands - Knowing the basic structures of the nervous system (the spinal cord and peripheral nerves). Skills: - To understand and handle the anatomical terminology - Analyzing of the gained knowledge from the morphological and functional point of views. - Practical usage of theoretical information in practical exercises and dissection of the thorax and abdomen. - Recognizing radiological images related to the anatomical structures present in thorax and abdomen.	
Class syllabus: Lectures: - Digestive system - basic concepts, oral cavity, teeth, salivary glands, esophagus, stomach, small intestine, large intestine, liver, bile ducts, pancreas, peritoneum. - Topographical regions – thorax, abdomen. - Urinary system – kidney, ureter, urinary bladder, urethra. - External and internal female genital organs. - External and internal male genital organs.	

- Endocrine glands.
- Radiological examination methods – thorax and abdomen.

Practical exercises:
- Vertebrae, ribs, sternum.
- Joints of the vertebral column and thorax.
- Muscles and topographical regions of the thorax.
- Muscles and topographical regions of the abdomen, rectus sheath.
- Muscles and topographical regions of the back.

Dissection exercises:
- Thorax: Regions of the thorax. Identification points and lines on the thorax. Skeletotopy of lungs, pleura and heart and their surface projection onto the thoracic wall. Dissection of the intercostal space. Dissection of subcutaneous structures. Dissection of the mammary gland. Dissection of pectoral muscles, rami pectorales, nervi pectorales. Opening the thoracic cavity and study of localization of thoracic viscera. Dissection of anterior and superior mediastinum. Opening of the pericardium. Dissection of ascending aorta, arch of aorta, pulmonary trunk and pulmonary veins. Preparation of lung root (radix pulmonis). Study of external features of heart and lungs. Preparation of lung hilum (hilum pulmonis). Dissection of heart vessels. Incision and opening of heart chambers, study of heart interior. Dissection of the posterior mediastinum.

Abdomen: Regions of the abdomen. Identification points and lines on the abdomen. Surface projection of organs onto the abdominal wall. Preparation of the walls and content of the inguinal canal. Dissection of abdominal muscles. Opening of the abdominal cavity and study of abdominal viscera in situ. Peritoneal relations in the supramesocolic and inframesocolic compartment, lesser sac of peritoneum. Peritoneal folds. Dissection of vessels of the abdominal cavity. Study of macroscopic features of organs of the abdominal cavity. Dissection of retroperitoneal space. Topography of the retroperitoneal organs. Dissection of lumbar plexus. Dissection and study of organs in the lesser pelvis.

Recommended literature:

Platzer, W. Color Atlas of Human Anatomy. Vol.1. Locomotor System. 7th rev ed. Stuttgart; New York: Georg Thieme Verlag, 2014. 480p. ISBN13 9783131494818

Fritsch, H., Kuehnel, W. Color Atlas of Human Anatomy. Vol. 2. Internal organs. 6th ed. Stuttgart; New York: Georg Thieme Verlag, 2014. 458p. ISBN13 9781604065633

Kahle, W., Frotscher M. Color Atlas of Human Anatomy. Vol. 3. Nervous System and Sensory Organs. 7th ed. Stuttgart; New York: Georg Thieme Verlag, 2015. 426p. ISBN13 9783131536761

Netter, F. H. Atlas of Human Anatomy. 5th ed. Philadelphia: Saunders - Elsevier, 2010. 624p. ISBN: 978-1-4160-5951-6

Paulsen, F., Waschke, J. Sobotta Atlas of Anatomy. Vol. 1. 16th ed., English/Latin. General Anatomy and Musculoskeletal System. Elsevier, 2018. 462p. ISBN: 9780702052699

Paulsen, F., Waschke, J. Sobotta Atlas of Anatomy. Vol. 2. 16th ed., English/Latin. Internal Organs. Elsevier, 2018. 334 p. ISBN: 9780702052705

Paulsen, F., Waschke, J. Sobotta Atlas of Anatomy. Vol. 3. 16th ed., English/Latin. Head, Neck and Neuroanatomy. Elsevier, 2018. 470 p. ISBN: 9780702052712

Hansen J. T. Netter's Clinical Anatomy. 4th ed. Philadelphia: Saunders – Elsevier, 2019. 588p. ISBN: 978-0-323-53188-7

Languages necessary to complete the course:

English

Notes:

Past grade distribution
Total number of evaluated students: 1571

A	B	C	D	E	FX
24,32	19,16	29,92	18,97	6,75	0,89

Lecturers: MUDr. Hisham El Falougy, PhD., doc. MUDr. Eliška Kubíková, PhD., MPH, doc. MUDr. Anna Holomáňová, CSc., doc. MUDr. Zora Haviarová, PhD., RNDr. Petra Lukáčiková, PhD., MUDr. Marta Masárová, MUDr. Jana Bevilaqua, MUDr. Abdolreza Majidi, Mgr. Vladislava Zohdi, PhD., MUDr. Andrej Mifkovič, PhD., MUDr. Tomáš Barczi, PhD., MUDr. Daniela Dovalová, MUDr. Osama Al - Khaldi, Stanislav Malakhov, PhD., prof. MUDr. Štefan Polák, CSc., Mgr. Katarína Bevízová, PhD., Mgr. Tomáš Havránek, PhD., MUDr. Olia El Hassoun Sečanská, PhD.

Last change: 23.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.AÚ/L-S-VLa-003/17	**Course title:** Anatomy 3
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 48s / 48s **Form of the course:** on-site learning	
Number of credits: 11	
Recommended semester: 3.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-VLa-002/16 - Anatomy 2	
Course requirements: - 100% participation on the practical exercises - Passing 1 written test with at least 60% points and 1 practical exam from the structures of the head and neck, and the central nervous system. - Written test with a minimum of 60% - Test evaluation: A: 91 - 100 %, B: 81 – 99 %, 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 (5 questions), the student has 50 minutes to prepare. - The student must first be successful in the practical part before he can take part in the oral exam. - exam evaluation: A: excellent, B: very good, C: good, D: satisfactory, E: sufficiently, Fx: failed.	
Learning outcomes: Knowledge: - Acquire knowledge about the structures and organs of the central nervous system and the autonomic nervous system. - Acquire knowledge about the regions, organs, nerves and vessels of the head and neck. - Have knowledge about the skeleton and muscles of the head and neck - Gain knowledge about sense organs and skin. Skills: - Understand and use anatomical terminology. - Analyze the acquired knowledge from a morphological and clinical point of view. - Practical use of theoretical knowledge during dissection and practical exercises. - Recognize and describe radiological images depicting anatomical structures.	
Class syllabus: Lectures: - Spinal cord	

- Spinal nerves
- Medulla oblongata, pons.
- Mesencephalon, The fourth ventricle, reticular formation.
- nuclei of the cranial nerves, cranial nerves.
- Cerebellum.
- Telencephalon.
- Limbic lobe and olfactory pathways.
- Basal nuclei.
- Autonomic nervous system
- Sense organs
- Skin.

Practical exercises:
- Skull – viscerocranium.
- Skull – neurocranium.
- Joints of the bones of the skull.
- Muscles of the head and neck.
- Topographical regions of the head and neck.

Dissection exercises:
Head and neck: Surface markings and regions. Dissection of cutaneous nerves and veins. Dissection of the parotid region. Dissection of the oral region, facial vessels. Dissection of the submandibular triangle. Dissection of the carotid triangle. Dissection of the frontal, infraorbital and mental regions. Dissection of the lateral cervical region. Dissection of the occipital and posterior cervical regions. Central nervous system: Surface markings of the spinal medulla. Spinal nerve. Vertebral levels of the spinal cord segments. Removal of the brain from the skull. Cranial nerve projections from openings on the skull. Cranial meninges. Venous sinuses of the dura mater. Subarachnoid cisterns. Blood supply of the brain. Cranial nerve projections from the base of the brain. Surface features of the cerebral haemispheres. Brain stem. Cerebellum. Fourth ventricle. Diencephalon. Third ventricle. Basal nuclei. White matter of the cerebral haemisphere. Lateral ventricles.

Recommended literature:

- PLATZER, W., SHIOZAWA-BAYER, T. Color Atlas of Human Anatomy. Vol. 1., Locomotor System. 8th ed. Stuttgart: Thieme, 2023. 472 p. ISBN 978-3-13-242443-2.
- FRITSCH, H. and KUEHNEL, W. Color Atlas of Human Anatomy. Vol. 2., Internal Organs. 7th ed. Stuttgart: Thieme, 2023. 467 p. ISBN 978-3-13-242448-7.
- KAHLE, W. and FROTSHCER, M., SCHMITZ, F. Color Atlas of Human Anatomy. Vol. 3., Nervous System and Sensory Organs. 8th ed. Stuttgart: Thieme , 2023. 414 p. ISBN 978-3-13-242451-7. - NETTER, F.H. Netter Atlas of Human Anatomy: Classic Regional Approach. 8th ed. Philadelphia: Elsevier - Health Science, 2022. 712 p. ISBN 978-0-323-68042-4
- LOUKAS, M., BENNINGER, B. and TUBBS, R.S. Gray's Clinical Photographic Dissector of the Human Body. 2nd ed. Philadelphia: Elsevier, 2018. 480 p. ISBN 978-0-323-54417-7.
- DETTON, A.J. Grant's Dissector. 17th ed. Philadelphia: Lippincott Williams and Wilkins, 2024. 367 p. ISBN 978-1-975210-06-9.

Languages necessary to complete the course:
English

Notes:

Past grade distribution Total number of evaluated students: 1185					
A	B	C	D	E	FX
14,77	15,61	25,23	20,68	16,46	7,26

Lecturers: doc. MUDr. Eliška Kubíková, PhD., MPH, doc. MUDr. Anna Holomáňová, CSc., MUDr. Hisham El Falougy, PhD., doc. MUDr. Zora Haviarová, PhD., Mgr. Vladislava Zohdi, PhD., RNDr. Petra Lukáčiková, PhD., MUDr. Andrej Mifkovič, PhD., MUDr. Tomáš Barczi, PhD., Mgr. Tomáš Havránek, PhD., prof. MUDr. Štefan Polák, CSc., Mgr. Katarína Bevízová, PhD.

Last change: 24.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK_1/L-S-VLa-116/19	**Course title:** Angiology - Vascular medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 80% attendance at the lectures - working out a seminar work Final exam: - written test (minimum 60% of correct answers) - theoretical exam: 1 question 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: Knowledge: getting knowledge on reasons, clinical pathophysiology, contemporary diagnostic and therapeutic methods about diseases of the arterial, venous and lymphatic system Skills: ankle –brachial index measurement, basic orientation about ultrasound investigation of limb vessels, evaluation of angiographic findings, differential diagnosis of the diseases of vessels	
Class syllabus: Angiology - Vascular medicine – basic terms and definitions, history. Atherosclerosis as a generalized disease. Risk factors for atherosclerosis PAD - Peripheral arterial disease of extremities – diagnostic and conservative therapy. Ankle – brachial index measurement. Primary and secondary vasculitides. Giant cell arteritis. Takayasu arteritis. Winiwarter-Buerger disease. Raynaud´s syndrome and disease. Basic principles of invasive diagnostic and endovascular therapy of arterial diseases. Diseases of the aorta, aneurysms, dissections – etiopathogenesis, diagnostic and treatment. Disease of the carotid, renal and visceral arteries - etiopathogenesis, diagnostic methods and treatment. Deep venous thrombosis - etiopathogenesis, diagnostic methods and conservative therapy. Superficial venous thrombosis - etiopathogenesis, diagnostic methods and conservative treatment. Chronic venous disease and insufficiency. Ulcus cruris – differential diagnosis. Basic principles of endovascular therapy of venous diseases.	

Life threatening conditions in angiology/vascular medicine.
Pain of the limbs – differential diagnosis.
Oedemas of the limbs – differential diagnosis.

Recommended literature:

1. Kumar P, Clark, M.: Kumar and Clark´s Clinical Medicine. Philadelphia: Saunders Ltd., 2012.1352 s. ISBN-13: 978-0-7020-449-91
2. Goldman, L. et al. Goldman´s Cecil Medicine. Philadelphia: W.B.Saunders, 2012. 2569 s. ISBN 9781437716047
3. Kalodiki E, Štvrtinová V, Allegra, C. et al: Superficial vein thrombosis: a consensus statement. In: International Angiology. - Vol. 31, No. 3 (2012), s. 203-216.
4.Andreozzi, GM, Kalodiki, E, Štvrtinová, V.et al: Consensus Document on IntermittentClaudication from the Central European Vascular Forum(CEVF)-3rd revision). In: International Angiology. - Vol. 33, No. 4 (2014), s. 329-347.
5. Maďarič J, Štvrtinová, V: Vybrané kapitoly z angiológie : Odporúčania a komentáre k diagnostickým a liečebným postupom vybraných vaskulárnych ochorení. - 1. vyd. - Bratislava : Slovak Academic Press, 2014. - 75 s.
6. Michiels, JJ, Moosdorf, W. Štvrtinová, V. et al: Diagnosis and treatment of DVT and prevention of DVT recurrence and the PTS: bridging the gap between DVT and PTS in the primary care setting or outpatient ward. In: Journal of Vascular Diagnostics and Interventions [on.line]. - Vol. 5 (2017), s. 21-34.
7. Kučera M, Čelovská D, Štvrtinová V: Vyšetrovacie metódy vo vaskulárnej medicíne. - 1. vyd. - Bratislava : SAP - Slovak Academic Press, 2020. - 108 s.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 89

A	B	C	D	E	FX
95,51	4,49	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Viera Štvrtinová, PhD., doc. MUDr. Juraj Maďarič, PhD., MPH

Last change: 01.08.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KO/L-S-VLa-165/19	**Course title:** Basic surgical procedures in ophthalmology (orbit, adnexa and eyeglobe)
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals /lectures - 1 written test (minimum 60% of correct answers) + essay Final exam: - theoretical exam: 3 questions 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: Knowledge:Skills :basic knowledge of anatomy, histopathology, general principles in surgery	
Class syllabus: Fundamentals of ophthalmic surgery. Course is a group os separate sections like orbital surgery, eyelid surgery and oculoplastics, cataract surgery, corneal diseases and refractive surgery, eye trauma, glaucoma, pediatric ophthalmology and strabismus, and vitreoretinal diseases surgery. Principles of pre and postop care of patients. Students will be able to participate in simulation of certain operations according to individual schedule.	
Recommended literature: 1. https://www.thieme.com/books-main/ophthalmology/product/1327-ophthalmic-surgical-procedures 2.https://eyetube.net/ 3.https://portal.fmed.uniba.sk/index-en.php?f=search&q=	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 35					
A	B	C	D	E	FX
94,29	0,0	2,86	2,86	0,0	0,0
Lecturers: prof. MUDr. PhDr. Alena Furdová, PhD., MPH, MUDr. Jela Valášková, PhD., MPH					
Last change: 09.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KO/L-S-VLa-171/20	**Course title:** Basic surgical procedures in ophthalmology (orbit, adnexa and eyeglobe)
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals /lectures - 1 written test (minimum 60% of correct answers) + essay Final exam: - theoretical exam: 3 questions 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: Knowledge:Skills :basic knowledge of anatomy, histopathology, general principles in surgery	
Class syllabus: Fundamentals of ophthalmic surgery. Course is a group os separate sections like orbital surgery, eyelid surgery and oculoplastics, cataract surgery, corneal diseases and refractive surgery, eye trauma, glaucoma, pediatric ophthalmology and strabismus, and vitreoretinal diseases surgery. Principles of pre and postop care of patients. Students will be able to participate in simulation of certain operations according to individual schedule	
Recommended literature: 1. https://www.thieme.com/books-main/ophthalmology/product/1327-ophthalmic-surgical-procedures 2.https://eyetube.net/ 3.https://portal.fmed.uniba.sk/index-en.php?f=search&q=	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 29					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: prof. MUDr. PhDr. Alena Furdová, PhD., MPH, MUDr. Jela Valášková, PhD., MPH					
Last change: 30.11.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024

University: Comenius University Bratislava

Faculty: Faculty of Medicine

Course ID:	**Course title:**
LF.KK/L-S-VLa-175/22	Basics of clinical cardiology

Educational activities:
Type of activities: lecture
Number of hours:
per week: **per level/semester:** 24s
Form of the course: on-site learning

Number of credits: 2

Recommended semester: 10.

Educational level: I.II.

Prerequisites:

Course requirements:
- 100% participation at the practical exercises
- to pass 1 written exam (at least 60 % required - evaluation of the exam: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less
- practical exam (patient examination)

The overall evaluation is determined from the avarage of obtained evaluations

Learning outcomes:
Knowledge: Diagnostics and differential diagnostics of common cardiological syndromes
Skills: ECG assessment, ability to indicate non-invasive and invasive examinations relevant to the working diagnosis, basics of interpretation of findings.

Class syllabus:
Course “Basics of clinical cardiology” combines theoretical teaching with clinical patient examination, ECG , X-ray description and analysis of the available imaging studies. Student learns to build up a working diagnosis , design a plan of additional examinations and patient management. Main topics are: Syncope; Acute short of breath; Acute coronary syndromes; Arterial hypertension; Atrial fibrillation; Chronic SZ; Interventional cardiology; Pulmonary hypertension; Cardiomyopathy; Chronic coronary heart disease; Sudden cardiac death

Recommended literature:
Chizner MA. Clinical Cardiology made ridiculously simple, MedMaster Inc, Miami, 2016

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 10

A	B	C	D	E	FX
30,0	50,0	20,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Eva Goncalvesová, CSc.
Last change: 30.11.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLBG/L-S-VLa-006/16	**Course title:** Biology and Human Genetics 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: 4	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the practicals 2 seminar work 2 written test (minimum 60% of correct answers) 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: Learning outcomes: To gain basic information about cell morphology and physiology and about molecular biology and genetics. Knowledge: - Morphology, physiology and genome of prokaryotic and eukaryotic cells - Morphology, function and biogenesis of cell organelles - Cell transport, intercellular spaces and intercellular communication, cell receptors - Reproduction and cell cycle of eukaryotic cells - Cell and tissue cultures - Infectious diseases caused by prokaryotic and single-cellular organisms, their life cycle - Types of microscopes, their design and usage possibilities - Basics of relation between micro- and macroorganisms - Viral genome characteristics and reproduction - Molecular biology: structure and function of DNA and RNA, DNA replication, transcription, translation and their regulation, the genetic code, the genes of prokaryotic and eukaryotic cells, gene expression, form of existence and entry of foreign DNA in a cell - Insertion sequences and transposons, antibiotic resistance (R plasmids, DNA recombination, recombinant techniques, vectors), gene therapy - Obtaining and material processing for DNA analysis, isolation of nucleic acids - An overview of the basic methods used in molecular genetics and the possibilities of their usage	

Skills:
- Enhancing the skills of the microscopic techniques (light microscopy)
- Preparation of native and simple fixed microscopic specimens
- Cultivation of eukaryotic cells and tissues in vitro
- Morphological diagnosis of bacterial and some parasitic protozoa
- Utilization of selected methods of molecular genetics - the obtaining, incubation and storage of biological material, isolation of DNA from tissue, gel separation of DNA fragments, DNA quantitation, restriction, blotting, DNA denaturation and renaturation

Class syllabus:
Cell as the basic structural and functional unit: morphology, cell surfaces, nucleus, nucleolus, mitochondria, endoplasmic reticulum, ribosomes, Golgi apparatus, lysosomes, cytoskeleton. Intercellular spaces and intercellular communication. Transport of substances - glycocalix, membrane receptors. Cell cycle: amitosis, mitosis (mitotic apparatus, endomitosis). Cell and tissue cultures. In vitro cell culture conditions, culture process, regenerative medicine. Viruses: genome, reproduction, mutations and recombinations, oncogenic viruses and acute transforming viruses. Prokaryotic cells - morphology, structure, genome. Parasexual process in bacteria and CRISPR/Cas system. Differences between prokaryotes and eukaryotes. Protista. Molecular biology: structure of DNA and RNA, denaturation and renaturation of DNA, replication of DNA, transcription, translation, regulation of proteosynthesis and post-translational modifications, genetic code. Genes of prokaryotic and eukaryotic cells, insertion sequences and transposons, resistance to antibiotics (plasmids, recombinant DNA technology, vectors). DNA analysis and application of molecular biology in medical practice.

Recommended literature:
Repiská Vanda, Böhmer Daniel, Danišovič Ľuboš, Klimová Daniela: Medical biology and molecular genetics. Bratislava: Comenius University Bratislava, 2020. - 306 p. ISBN 978-80-223-4984-0
Nussbaum, R.L., McInnes, R.R., Willard, H.F.: Thompson & Thompson Genetics in medicine. 8th edition. Elsevier, Philadelphia. 2016; 546 p.
Alberts, B., et al. Molecular biology of cell. 6th edition. Garland Science, New York. 2015; 1464 p.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 1634

A	B	C	D	E	FX
6,24	18,97	30,48	27,48	15,06	1,77

Lecturers: doc. MUDr. Daniel Böhmer, PhD., prof. RNDr. Vanda Repiská, PhD., MPH, MUDr. Tatiana Braxatorisová, CSc., doc. RNDr. Ľuboš Danišovič, PhD., doc. Ing. Helena Gbelcová, PhD., RNDr. Ľubica Milošovičová, PhD., RNDr. Marcela Kuniaková, PhD., RNDr. Jana Malová, PhD., RNDr. Robert Petrovič, PhD., RNDr. Anna Totková, PhD., RNDr. Zuzana Varchulová Nováková, PhD., MUDr. Patrik Víťazka, PhD., RNDr. Andrea Pastoráková, PhD., RNDr. Petra Priščáková, PhD.

Last change: 28.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLBG/L-S-VLa-007/16	**Course title:** Biology and Human Genetics 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	
Number of credits: 7	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.ÚLBG/L-S-VLa-006/16 - Biology and Human Genetics 1	
Course requirements: 100% attendance at the practicals 1 seminar work 2 written test (minimum 60% of correct answers) Test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. Final exam: a) test (minimum 60% of correct answers) b) theoretical exam: 3 questions (cytology,molecular genetics, human genetics)	
Learning outcomes: To gain knowledge about normal and pathological genetic traits in man, their etiology and diagnostics. Knowledge: - Organization of the human genome: types of DNA, gene structure, homeoboxes and homeodomain DNA - histone complex, the human genome project - Chromosomal inheritance, the structure of chromosomes, nomenclature, identification techniques - Meiosis, differences between spermiogenesis and oogenesis, disorders and their consequences - Cell cycle regulation - Molecular mechanisms of cell cycle deregulation - Molecular basis of carcinogenesis - oncogenes, their function in the body - Oncogenes mutations and their relation to malignancy - Biology of the most common forms of cancer: breast, prostate and ovary, gestational trophoblastic disease, familial cancer - Tumor suppressor genes - their function and type of mutations - Cell death and apoptosis - Mutagenesis, distribution and mutagens basic characteristics, reparation mechanisms - Syndrome of increased spontaneous chromosomal instability	

- Malignant diseases associated with typical rearrangement of chromosomes
- Basic methods of human genetics (twin studies, genealogical method, population genetics)
- Monogenic disease (autosomal dominant and recessive inheritance, X-linked dominant and recessive inheritance)
- Multifactorial inheritance of quantitative and qualitative traits - normal variability
- Congenital defects with multifactorial inheritance
- Pathologies based on multifactorial type of inheritance, congenital developmental defects, civilization diseases, threshold effect theory, predisposition to civilization diseases, possibilities of prenatal diagnosis
- Classical cytogenetics (interphase and mitosis)
- Chromosomal aberrations in humans (numeric, structural), the mechanism of their formation, frequency and the type of the most common chromosomal aberrations, the risk of recurrence, aberrations of sex chromosomes X and Y, effect of gene dosage, mosaicism
- The frequency of birth defects in the miscarriages population in newborns, prenatal genetic diagnosis and prognosis
- Molecular basics of embryogenesis, the role of apoptosis
- Teratogenesis - basic characteristics, mechanism of action, possibilities of differential diagnosis

Skills:
- The ability to establish the proportion of hereditary and non-hereditary factors in the trait development
- Design the standard family tree
- Application of Hardy-Weinberg law
- Cytogenetic analysis in interphase (X and Y chromatin)
- Cytogenetic analysis in metaphase
- Determination of the risk of the most common chromosomal aberrations according to their type, parents age, or by meiosis process
- Determination of the risk of transmission of structural chromosomal aberrations
- Mutagens testing evaluation (gene mutations, chromosomal aberrations, reparation tests) comparison of positive or negative control and mutagens

Class syllabus:

Syllabus:

Chromosomal base of inheritance: structure of chromosomes, nomenclature, methods of identification. Meiosis. Differences between spermatogenesis and oogenesis. Classification of inherited diseases: single gene (autosomal dominant, codominant and recessive, X-linked), interaction of genes. Chromosomal aberrations, mechanisms of origin, frequences. Aberrations of chromosomes X and Y and gene dosage effect. Mosaicism. Organization of human genome: Human Genome Project (HGP) - goals, results and ethical issues associated with the project, types of DNA, structure of gene, homeoboxes and homeodomains. DNA-histones complex. Cell cycle regulation. Oncogenesis - molecular base of cancerogenesis, oncogenes, their function in organism, c-onc, v-onc. Mutations of oncogenes, relation to malignancy. Tumor suppressor genes (TSG) - function, character of TSG mutations. Multistep theory, gene dosage effect. DNA repair mechanisms. Syndromes of increased spontaneous fragility of chromosomes. Neoplasmas associated with typical rearrangement of chromosomes. Molecular mechanisms of cell cycle deregulation. Gene therapy. Epigenetics. Apoptosis. Multifactorial and polygenic inheritance. Normal variability. Qualitative and quantitative traits, methods of genetical analysis. Pathological traits with multifactorial inheritance, malformations, civilisation diseases. Threshold effect. Predisposition to “civilisation“diseases. Mutagenesis, types and basic characteristics of mutagens. Mutation frequency. Molecular basis of embryogenesis, role of apoptosis in embryogenesis.

Teratogenesis - basic characteristics, mechanisms of origin, possibilities of differential diagnosis. Occurence of congenital defects in populations of spontaneous abortions and newborns. Prenatal genetic diagnosis and prognosis.

Recommended literature:

Repiská Vanda, Böhmer Daniel, Danišovič Ľuboš, Klimová Daniela: Medical biology and molecular genetics. Bratislava: Comenius University Bratislava, 2020. - 306 p. ISBN 978-80-223-4984-0

Nussbaum, R.L., McInnes, R.R., Willard, H.F.: Thompson&Thompson Genetics in medicine. 8th edition. Elsevier, Philadelphia. 2016; 546 p.

Alberts, B., et al. Molecular biology of cell. 6th edition. Garland Science, New York. 2015; 1464 p

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 1590

A	B	C	D	E	FX
31,32	13,46	19,62	11,38	15,28	8,93

Lecturers: doc. MUDr. Daniel Böhmer, PhD., prof. RNDr. Vanda Repiská, PhD., MPH, doc. RNDr. Ľuboš Danišovič, PhD., doc. Ing. Helena Gbelcová, PhD., RNDr. Ľubica Milošovičová, PhD., RNDr. Marcela Kuniaková, PhD., RNDr. Andrea Pastoráková, PhD., RNDr. Robert Petrovič, PhD., RNDr. Petra Priščáková, PhD.

Last change: 28.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.FyÚ/L-S-VLa-143/19	**Course title:** Brain - the base for human perception and cognition
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100 % presence in lectures and seminars Submitting of the written assignments and presentations Examination: final written assignment and presentation Evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % or less The overall rating is determined as the average of the marks for assignments.	
Learning outcomes: Knowledge: By attending the course the student will understand clinical aplications of theoretical knowledge on brain and its functions in prevention of brain disorders and management of brain diseases. They will receive the advanced knoiwledge on pathomechanisms in development of basic central nervous disorders with consequences on behavioural and cognitive functioning Skills: Students will improve their work with scientific literature and interpretation of obtained evidence based information in communication with patients using team based learning.	
Class syllabus: Complex functions of the brain. Functional organization of neural circuits. Neuronal signaling and neuronal plasticity.General principles of cognitive and behavioral neuroscience..Cognitive and behavioral disorders.. Perception, attention and awareness and its disorders. Neurobehavioral and neurodevelopmental disorders in children focused on autism. Physiology and pathophysiology of emotions, behaviour and motivation. Higher brain functions including learning, memory and speech/language focused on dementia. Functional specialization of brain hemispheres and sexual dimorphism as the base for personalized medicine.	
Recommended literature: Cognitive Neuroscience, 5th edition, Banich, M.T. anf Compton, R.J., Cambridge University Press. 2023	

Cognitive Neuroscience: A very short Introduction Passingham R., Oxford University Press, 2016
Recent literature resources reccommended by the teacher

Languages necessary to complete the course:
English

Notes:
The subject has limited capacity and can accept 20 students. In case of a higher interest, the first 20 students of the list will be accepted.

Past grade distribution
Total number of evaluated students: 106

A	B	C	D	E	FX
97,17	2,83	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Daniela Ostatníková, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KDP/L-S-VLa-118/19	**Course title:** Child and Adolescent Psychiatry
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.PK/L-S-VLa-063/19 - Psychiatry 2	
Course requirements: - 80% attendance at the lectures/practicals Final exam: - requisition: passing the exam in the subject Psychiatry 2 - theoretical exam: 1 question (content of the subject child and adolescent psychiatry)	
Learning outcomes: Knowledge: general knowledge in the field of child psychiatry, psychopathology, syndromology, nosological units, treatment and prevention. Skills: ability to realise pedopsychiatric assessment, to suggest basic examination procedures and comprehensive management in differential diagnostics	
Class syllabus: - Assessment in Pedopsychiatry (taking a history, differences between the Assessment of a child and an adult psychiatric patient) - Normal Child development and its abnormalities (attachment, specific development disorders of speech and language, specific disorders of school abilities) - Disorders of child-specific social relationships (Elective Mutism, Reactive Attachment Disorder, Disinhibited Social Engagement Disorder) - Child Abuse and Neglect Syndrome, Social Issues in Pedopsychiatry - Autism Spectrum Disorder - Mental retardation - Attention Deficit Hyperactivity Disorder - Conduct Disorder - Tics disorder, Sleep disorders - Disorders of elimination (enuresis, encopresis) - Anxiety disorders (including with onset in childhood) - Post-traumatic stress disorder, Acute Stress Disorder , Adjustment Disorders, - Obsessive Compulsive Disorder (specific in childhood) - Affective disorders: unipolar depressive disorder (specific in childhood) - Affective disorders: manic episode, bipolar disorder (specific in childhood)	

- Psychotic disorders: acute transient psychotic disorder, schizophrenia, schizoaffective (specific in childhood)
- Eating disorders (mental anorexia, mental bulimia)
- Substance Use disorders (specific in childhood)
- Internet Gaming Disorder (specifics in childhood)
- Principles of pharmacotherapy, psychotherapy (specifics in childhood)

Recommended literature:

- Coghill et al: Child and Adolescent Psychiatry, Oxford University Press, 2009
- Findling: Clinical Manual of Child and Adolescent Psychopharmacology, American psychiatric Publishing, 2008
- http://iacapap.org/iacapap-textbook-of-child-and-adolescent-mental-health
- - Kiragasur RM, Kommu JV, CN Kumar, Shetty VB, Parthasarathy R, Math SB. Child and Adolescent Mental Health: A Manual for Medical officers. National Institute of Mental Health and Neuro Sciences. Bengaluru: NIMHANS Publication no. 176; 2020 (ISBN: 978-81-945815-8-1).
- Dean Elbe, Tyler R. Black, Ian R. McGrane, Ric M.Procyshyn: Clinical Handbook of Psychotropic Drugs for Children and Adolescents, 4th edition (ISBN 9781616765507) c 2019 Hogrefe Publishing.
- D. Skuse, H. Bruce, L. Dowdney & D. Mrazek (Eds.): Child Psychology and Psychiatry: Frameworks for Practice, Chichester: Wiley-Blackwell, 2011. pp. 318, ISBN: 978-0-470-97382-0.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 78

A	B	C	D	E	FX
73,08	11,54	7,69	2,56	3,85	1,28

Lecturers: doc. MUDr. Jana Trebatická, PhD., PhDr. Zuzana Hradečná, MUDr. Zuzana Matzová, PhD.

Last change: 24.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.AÚ/L-S-VLa-127/19	**Course title:** Clinical Anatomy 1
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: -100% participation in practical exercises - pass 1 written test (at least 60%) - oral examination Test evaluation: A: 200 - 192, B: 191 – 184, C: 183 – 176, D: 175 – 168, E: 167 – 160, Fx: 159 – 0. Oral 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: - Knowledge synthesis of systematic and topographical anatomy and their clinical application. Skills: - Analysis of the achieved knowledge from the morphological and clinical point of view. - Clinical application of the gained theoretical information. - Handling morphological basis of diagnostic and therapeutic procedures. - Application of diagnostic and therapeutic procedures on flexible cadavers. - To be familiar with the radio-diagnostic correlation. - Handling interdisciplinary procedures within overlapping morphological and clinical knowledge.	
Class syllabus: Lectures/seminars: - Clinical anatomy of the musculoskeletal system (bones, joints, muscles). - Clinical anatomy of the digestive system. - Clinical anatomy of the respiratory system. - Clinical anatomy of the urinary system. - Clinical anatomy of the female and male reproductive system. - Application of diagnostic and therapeutic procedures to flexible cadavers. - Mastering radio diagnostic correlation.	

- Mastering interdisciplinary procedures within the framework of the interweaving of morphological and clinical knowledge.

Recommended literature:

- DALLEY, A. F., AGUR, A. M. R. Moore´s Clinically Oriented Anatomy. 9th edition. Philadelphia: Wolters Kluwer, 2023, 1160p. ISBN 9781975209544
- HANSEN, J.T. Netter's Clinical Anatomy. 4th ed. Philadelphia: Elsevier/Saunders, 2019. 608 s. ISBN 978-0-323-53188-7
- LOUKAS, M., BENNINGER, B. and TUBBS, R.S. Gray's Clinical Photographic Dissector of the Human Body. 2nd ed. Philadelphia: Elsevier, 2018. 480 p. ISBN 978-0-323-54417-7.

Languages necessary to complete the course:
English

Notes:
The capacity of the subject is limited to 30 students, in the case of higher interest, the first enrolled students will be selected in order.

Past grade distribution
Total number of evaluated students: 99

A	B	C	D	E	FX
43,43	41,41	12,12	1,01	2,02	0,0

Lecturers: MUDr. Andrej Mifkovič, PhD., doc. MUDr. Zora Haviarová, PhD.

Last change: 29.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.AÚ/L-S-VLa-128/19	**Course title:** Clinical Anatomy 2
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-VLa-127/19 - Clinical Anatomy 1	
Course requirements: -100% participation in practical exercises - pass 1 written test (at least 60%) - oral examination Test evaluation: A: 200 - 192, B: 191 – 184, C: 183 – 176, D: 175 – 168, E: 167 – 160, Fx: 159 – 0. Oral 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: - Knowledge synthesis of systematic and topographical anatomy and their clinical application. Skills: - Analysis of the achieved knowledge from the morphological and clinical point of view. - Clinical application of the gained theoretical information. - Handling morphological basis of diagnostic and therapeutic procedures. - Application of diagnostic and therapeutic procedures on flexible cadavers. - To be familiar with the radio-diagnostic correlation. - Handling interdisciplinary procedures within overlapping morphological and clinical knowledge.	
Class syllabus: Lectures/seminars: - Clinical anatomy of the cardiovascular system. - Clinical anatomy of the lymphatic system. - Clinical anatomy of endocrine glands. - Clinical anatomy of the nervous system. - Clinical anatomy of sense organs. - Clinical anatomy of the skin. - Application of diagnostic and therapeutic procedures to flexible cadavers. - Mastering radio-diagnostic correlation.	

- Mastering interdisciplinary procedures within the framework of the interweaving of morphological and clinical knowledge.

Recommended literature:

- DALLEY, A. F., AGUR, A. M. R. Moore´s Clinically Oriented Anatomy. 9th edition. Philadelphia: Wolters Kluwer, 2023, 1160p. ISBN 9781975209544
- HANSEN, J.T. Netter's Clinical Anatomy. 4th ed. Philadelphia: Elsevier/Saunders, 2019. 608 s. ISBN 978-0-323-53188-7
- LOUKAS, M., BENNINGER, B. and TUBBS, R.S. Gray's Clinical Photographic Dissector of the Human Body. 2nd ed. Philadelphia: Elsevier, 2018. 480 p. ISBN 978-0-323-54417-7.

Languages necessary to complete the course:
English

Notes:
The capacity of the subject is limited to 30 students, in the case of higher interest, the first enrolled students will be selected in order.

Past grade distribution
Total number of evaluated students: 65

A	B	C	D	E	FX
29,23	32,31	16,92	10,77	10,77	0,0

Lecturers: MUDr. Andrej Mifkovič, PhD., doc. MUDr. Zora Haviarová, PhD.

Last change: 29.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLChB/L-S-VLa-036/19	**Course title:** Clinical Biochemistry
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 25s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites: LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2 and LF.IK5/L-S-VLa-029/18 - Internal Medicine 1	
Course requirements: Final exam: The test consists of 40 questions.The minimum number of points for passing the test is more than 80%. Test evaluation: A: 97 - 100 %, B: 93 – 96 %, C: 89 – 92 %, D: 85 – 88 %, E: 81 – 84 %, Fx: 80 % - 0%.	
Learning outcomes: Knowledge: - Basics of pathobiochemistry and clinical biochemistry of analytes in blood and urine - Knowledge of the possibility of using the results of laboratory tests in the diagnosis of diseases of individual organ systems Skills: - Understanding the principles of clinical-biochemical diagnostics - Basics of indication and interpretation of laboratory test results - Utilization of laboratory parameters in differential diagnosis of diseases	
Class syllabus: General clinical biochemistry, phases of laboratory examination, evaluation of results, reference values. Laboratory tests of plasma proteins, hyper- and hypoproteinemia. Clinical enzymology. Clinically important enzymes. Clinical biochemistry of lipid metabolism and hyperlipoproteinemias. The importance of laboratory tests in the diagnosis and monitoring of patients with diabetes mellitus. Importance of laboratory tests in gastroenterology. The importance of laboratory tests in diseases of the hepatobiliary system. Laboratory examinations in nephrology. Urine tests and kidney function tests. Oncomarkers and diagnostics and monitoring of patients with oncological diseases.Laboratory tests in cardiology, cardiomarkers, diagnosis of acute myocardial infarction. Disorders of acid-base balance and their diagnosis. Laboratory tests for diseases of the thyroid gland and adrenal cortex.	
Recommended literature:	

W.J.Marshall, M.Lapsley, A.P.Day, R.M.Ayling: Clinical Biochemistry, Churchill Livingstone-Elsevier 2014, 932 s.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 621

A	B	C	D	E	FX
9,02	18,36	27,21	21,26	17,87	6,28

Lecturers: prof. MUDr. Ladislav Turecký, CSc., doc. RNDr. Eva Uhlíková, CSc., RNDr. Milada Laššánová, CSc.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLBG/L-S-VLa-132-4/19	**Course title:** Clinical Genetics and Molecular Biology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the lectures Final exam: test (minimum 60% of correct answers) Test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%.	
Learning outcomes: Knowledge: - Introduction and tools of human molecular genetics- Organization of the human genome, Methods of nucleic acid analysis, The polymerase chain reaction (PCR), Advanced techniques in molecular genetics, Real-time PCR, DNA sequence analysis - Basics of clinical genetics - Introduction to clinical genetics, Classification of genetic diseases, Chromosomal syndromes – cytogenetic and molecular diagnosis - Human reproductive genetics - Sterility and infertility, Prenatal genetic diagnosis, Molecular methods of invasive and non-invasie prenatal diagnosis, Molecular techniques used for detection of aneuploidies, Analysis of cell free foetal DNA - Biochemical genetics: inborn errors of metabolism - Diagnostic of inborn errors of metabolism, Mitochondrial diseases, Lysosomal storage disorders, Peroxisomal disorders, Disorders of amino acid, Organic acidurias, Disorders of carbohydrate metabolism, Disorders of metaloproteins, Disorders of bilirubine metabolism, Disorders of cholesterol metabolism - Rare genetic disorders - Endocrinological genetic disorders, Genetic disorders with neurological manifestation, muscular dystrophies, Cystic fibrosis, - Genetic disorders and predispositions - Familiar hypercholesterolemia, Diabetes mellitus, Haemophilias - Epigenetics - Novel therapies for rare disorders - Gene therapy - Pharmacogenetics and personalized medicine	
Class syllabus: Definition of the subject clinical genetics and its role in clinical practice. Tasks of clinical genetics departments and their position in the field of the medicine. The use of DNA analysis methods in	

the diagnostics of hereditary conditions and diseases. The use of cytogenetic diagnostic methods in general genetic practice and in reproductive failures. Most common chromosomal aberrations. General information of the most frequent single gene diseases. Diagnostics of the inborn errors of metabolism. Disorders with multifactorial type of inheritance. Congenital malformations. Prenatal genetic diagnostics - algorithms, methods, prognostic use. Introduction to the oncogenetics.

Recommended literature:

Repiská Vanda, Böhmer Daniel, Danišovič Ľuboš, Klimová Daniela: Medical biology and molecular genetics. Bratislava: Comenius University Bratislava, 2020. - 306 p. ISBN 978-80-223-4984-0

Nussbaum, R.L., McInnes, R.R., Willard, H.F.: Thompson & Thompson Genetics in medicine. 8th edition. Elsevier, Philadelphia. 2016; 546 p.

Alberts, B., et al. Molecular biology of cell. 6th edition. Garland Science, New York. 2015; 1464 p.

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 48

A	B	C	D	E	FX
97,92	2,08	0,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Daniel Böhmer, PhD., prof. RNDr. Vanda Repiská, PhD., MPH

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLBG/L-S-VLa-132-5/19	**Course title:** Clinical Genetics and Molecular Biology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the lectures Final exam: test (minimum 60% of correct answers) Test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%.	
Learning outcomes: Knowledge: - Introduction and tools of human molecular genetics- Organization of the human genome, Methods of nucleic acid analysis, The polymerase chain reaction (PCR), Advanced techniques in molecular genetics, Real-time PCR, DNA sequence analysis - Basics of clinical genetics - Introduction to clinical genetics, Classification of genetic diseases, Chromosomal syndromes – cytogenetic and molecular diagnosis - Human reproductive genetics - Sterility and infertility, Prenatal genetic diagnosis, Molecular methods of invasive and non-invasie prenatal diagnosis, Molecular techniques used for detection of aneuploidies, Analysis of cell free foetal DNA - Biochemical genetics: inborn errors of metabolism - Diagnostic of inborn errors of metabolism, Mitochondrial diseases, Lysosomal storage disorders, Peroxisomal disorders, Disorders of amino acid, Organic acidurias, Disorders of carbohydrate metabolism, Disorders of metaloproteins, Disorders of bilirubine metabolism, Disorders of cholesterol metabolism - Rare genetic disorders - Endocrinological genetic disorders, Genetic disorders with neurological manifestation, muscular dystrophies, Cystic fibrosis, - Genetic disorders and predispositions - Familiar hypercholesterolemia, Diabetes mellitus, Haemophilias - Epigenetics - Novel therapies for rare disorders - Gene therapy - Pharmacogenetics and personalized medicine	
Class syllabus: Definition of the subject clinical genetics and its role in clinical practice. Tasks of clinical genetics departments and their position in the field of the medicine. The use of DNA analysis methods in	

the diagnostics of hereditary conditions and diseases. The use of cytogenetic diagnostic methods in general genetic practice and in reproductive failures. Most common chromosomal aberrations. General information of the most frequent single gene diseases. Diagnostics of the inborn errors of metabolism. Disorders with multifactorial type of inheritance. Congenital malformations. Prenatal genetic diagnostics - algorithms, methods, prognostic use. Introduction to the oncogenetics.

Recommended literature:

Repiská Vanda, Böhmer Daniel, Danišovič Ľuboš, Klimová Daniela: Medical biology and molecular genetics. Bratislava: Comenius University Bratislava, 2020. - 306 p. ISBN 978-80-223-4984-0

Nussbaum, R.L., McInnes, R.R., Willard, H.F.: Thompson & Thompson Genetics in medicine. 8th edition. Elsevier, Philadelphia. 2016; 546 p.

Alberts, B., et al. Molecular biology of cell. 6th edition. Garland Science, New York. 2015; 1464 p.

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 34

A	B	C	D	E	FX
97,06	2,94	0,0	0,0	0,0	0,0

Lecturers: doc. MUDr. Daniel Böhmer, PhD., prof. RNDr. Vanda Repiská, PhD., MPH

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IÚ/L-S-VLa-133-4/22	**Course title:** Clinical Immunology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.IÚ/L-S-VLa-092/22 - Immunology	
Course requirements: Final exam: Written test: Evaluation of the test: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less Oral exam: Answer to 3 questions.	
Learning outcomes: Knowledge: 1. Students will master the role of psycho-neuro-endocrine-immune cooperation in the pathogenesis of diseases. 2. The have knowledge about the dual role of inflammation its importance in immunity and defence mechanisms, but also as a key mechanism that play a great role in the development of diseases, especially in the development of oncological, cardiovascular, infectious, neurodegenerative, and other diseases. 3. They expand their knowledge on clinical immunology in the areas of allergies, autoimmunity, tissue and tissue and organ transplants, anti-tumor immunity, and immunodeficiencies, infectious and non-infectious inflammation (SIRS, sepsis, MODS, septic shock), immunoprevention and immunotherapy. 4. They gain knowledge about SARS-COV-2 infection, its origin, clinical manifestations, diagnostics, Covid 19 therapy and long-lasting post-covid syndrome. Skills: 1. Students recognize the clinical signs of atopy and anaphylaxis. They recognize clinical manifestations of atopy, anaphylactic, anaphylactoid shock and serum sickness, and their therapy. They can use EpiPen. 2. They can diagnose acute and chronic allergies. 3. They recognize clinical symptoms of congenital and acquired immunodeficient conditions including HIV. They know the diagnosis, and treatment of these diseases.	
Class syllabus: Classification of immunopathological reactions, their mechanisms, clinical manifestations, and therapy. Type I hypersensitivity reaction. Atopy and anaphylaxis. Anaphylactic shock,	

manifestations, diagnosis, therapy. Differential diagnosis from anaphylactoid shock (pseudo-allergies). Hypersensitivity reactions type II. ˜ drug reactions, post-transfusion reactions, neonatal hemolytic disease. Hypersensitivity reactions type III. ˜ Arthus reaction, serum disease (manifestations, diagnosis, treatment), systemic immune complex diseases. Hypersensitivity reactions type IV. ˜ tuberculin reaction, granulomas, allergies. Type V hypersensitivity reactions - the role of autoantibodies (M. Basedow-Graves, Hashimoto's disease, myasthenia gravis), their mechanisms, clinical manifestations, and diagnostics. Physiological and pathological autoimmunity. Immune tolerance and its failure, APS I ˜ IV. Pathogenetic mechanisms of autoimmune processes and their genetic and hormonal predisposition. Immunopathogenesis and immunotherapy of selected autoimmune diseases (type 1 diabetes mellitus, Crohn's disease, colitis ulcerosa, multiple sclerosis, neuromyelitis optica). Immunopathogenesis of some selected autoimmune diseases (myasthenia gravis, psoriasis vulgaris, rheumatoid arthritis, systemic lupus erythematosus). Systemic inflammation, sepsis, MODS, and septic shock. The role of Th1, Th2 immunity, and pro-and anti-inflammatory cytokines and counter-regulatory mechanisms. SIRS, CARS, MARS. New sepsis definition „Sepsis 3“. Diagnosis and differential diagnosis of infectious and non-infectious systemic inflammation - CRP, SAA, procalcitonin, neopterin, TREM-1, HMGB1, and Neu / Ly ratio. Systemic inflammatory index. Transplantation, nomenclature, transplant reactions of HvG and GvH. Exceptions to rejections. Bone marrow, kidney and other organ transplantations. Immunoprevention, immune-prophylaxis. Immuno-stimulation and immunosuppression. Types of vaccines and vaccination calendar in Slovakia. Intravenous immunoglobulins. Monoclonal antibodies and cytokines in therapy. Biological treatment, gene therapy, and peptide therapy. Fusion proteins and small molecules. Congenital disorders of innate immunity. Disorders of adaptive antibody immunity, cellular immunity, and combined immunodeficiencies. General manifestations, occurrence, division. AIDS. Structure of HIV, types of HIV. Interactions of HIV with immune system cells. Clinical stages of AIDS. AIDS prevention and immunological diagnosis. The current approach to therapy. SARS COV-2 infection, the role of the immunity and inflammation in clinical manifestation of disease. The role of vasculitis and thrombosis. Long-term post-covid syndrome, vaccination, its side effects, and therapy. Tumors, inflammation, immunity, and HLA-G as an immune checkpoint molecule. Etiology of tumor process; translocations in the malignant process. Immunoediting. The cause of malignant cell leakage from effector functions of the immune system. The role of inflammation in carcinogenesis. Metastatic process. Immunodiagnostics and immunotherapy of tumor disease. Immunity during pregnancy. Immunological paradox and foetal tolerance. Psycho-neuroendocrine-immune system ˜ a holistic view on the functioning of immunity. The role of inflammation in the development of neurodegenerative diseases. Alzheimer disease. The role of the mother's immune system in foetal tolerance. The role of HLA-G. Development of foetal and new-born immunity.

Recommended literature:

Obligatory textbooks:

1. Buc M. Basic and Clinical Immunology. 5th ed. Bratislava: Comenius University 2020, 554 pp.
2. Video-presentations of lecturers.

Recommended textbooks

1. Abbas AK, Lichtman, AH, Pillai S: Cellular and Molecular Immunology. 9th ed. New York: Elsevier 2022, 565 pp. (internet edition available too)
2. Chapel H, Haeney M, Misbah S, Snowden N.: Essentials of Clinical Immunology. Willey Oxford: Blackwell 2014, 365 pp.

Languages necessary to complete the course:

english

Notes:					
Past grade distribution Total number of evaluated students: 8					
A	B	C	D	E	FX
0,0	0,0	25,0	37,5	37,5	0,0
Lecturers: prof. MUDr. Milan Buc, DrSc., doc. MUDr. Mária Bucová, CSc., doc. RNDr. Vladimíra Ďurmanová, PhD., doc. Mgr. Ivana Shawkatová, PhD., MUDr. Monika Homolová, PhD., MUDr. Juraj Javor, PhD., MUDr. Zuzana Párnická, PhD., MUDr. Magda Suchánková, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IÚ/L-S-VLa-133-5/22	**Course title:** Clinical Immunology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Final exam: Written test: Evaluation of the test: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less Oral exam: Answer to 3 questions.	
Learning outcomes: Knowledge: 1. Students will master the role of psycho-neuro-endocrine-immune cooperation in the pathogenesis of diseases. 2. The have knowledge about the dual role of inflammation its importance in immunity and defence mechanisms, but also as a key mechanism that play a great role in the development of diseases, especially in the development of oncological, cardiovascular, infectious, neurodegenerative, and other diseases. 3. They expand their knowledge on clinical immunology in the areas of allergies, autoimmunity, tissue and tissue and organ transplants, anti-tumor immunity, and immunodeficiencies, infectious and non-infectious inflammation (SIRS, sepsis, MODS, septic shock), immunoprevention and immunotherapy. 4. They gain knowledge about SARS-COV-2 infection, its origin, clinical manifestations, diagnostics, Covid 19 therapy and long-lasting post-covid syndrome. Skills: 1. Students recognize the clinical signs of atopy and anaphylaxis. They recognize clinical manifestations of atopy, anaphylactic, anaphylactoid shock and serum sickness, and their therapy. They can use EpiPen. 2. They can diagnose acute and chronic allergies. 3. They recognize clinical symptoms of congenital and acquired immunodeficient conditions including HIV. They know the diagnosis, and treatment of these diseases.	
Class syllabus: Classification of immunopathological reactions, their mechanisms, clinical manifestations, and therapy. Type I hypersensitivity reaction. Atopy and anaphylaxis. Anaphylactic shock,	

manifestations, diagnosis, therapy. Differential diagnosis from anaphylactoid shock (pseudo-allergies). Hypersensitivity reactions type II. ˜ drug reactions, post-transfusion reactions, neonatal hemolytic disease. Hypersensitivity reactions type III. ˜ Arthus reaction, serum disease (manifestations, diagnosis, treatment), systemic immune complex diseases. Hypersensitivity reactions type IV. ˜ tuberculin reaction, granulomas, allergies. Type V hypersensitivity reactions - the role of autoantibodies (M. Basedow-Graves, Hashimoto's disease, myasthenia gravis), their mechanisms, clinical manifestations, and diagnostics. Physiological and pathological autoimmunity. Immune tolerance and its failure, APS I ˜ IV. Pathogenetic mechanisms of autoimmune processes and their genetic and hormonal predisposition. Immunopathogenesis and immunotherapy of selected autoimmune diseases (type 1 diabetes mellitus, Crohn's disease, colitis ulcerosa, multiple sclerosis, neuromyelitis optica). Immunopathogenesis of some selected autoimmune diseases (myasthenia gravis, psoriasis vulgaris, rheumatoid arthritis, systemic lupus erythematosus). Systemic inflammation, sepsis, MODS, and septic shock. The role of Th1, Th2 immunity, and pro-and anti-inflammatory cytokines and counter-regulatory mechanisms. SIRS, CARS, MARS. New sepsis definition „Sepsis 3“. Diagnosis and differential diagnosis of infectious and non-infectious systemic inflammation - CRP, SAA, procalcitonin, neopterin, TREM-1, HMGB1, and Neu / Ly ratio. Systemic inflammatory index. Transplantation, nomenclature, transplant reactions of HvG and GvH. Exceptions to rejections. Bone marrow, kidney and other organ transplantations. Immunoprevention, immune-prophylaxis. Immuno-stimulation and immunosuppression. Types of vaccines and vaccination calendar in Slovakia. Intravenous immunoglobulins. Monoclonal antibodies and cytokines in therapy. Biological treatment, gene therapy, and peptide therapy. Fusion proteins and small molecules. Congenital disorders of innate immunity. Disorders of adaptive antibody immunity, cellular immunity, and combined immunodeficiencies. General manifestations, occurrence, division. AIDS. Structure of HIV, types of HIV. Interactions of HIV with immune system cells. Clinical stages of AIDS. AIDS prevention and immunological diagnosis. The current approach to therapy. SARS COV-2 infection, the role of the immunity and inflammation in clinical manifestation of disease. The role of vasculitis and thrombosis. Long-term post-covid syndrome, vaccination, its side effects, and therapy. Tumors, inflammation, immunity, and HLA-G as an immune checkpoint molecule. Etiology of tumor process; translocations in the malignant process. Immunoediting. The cause of malignant cell leakage from effector functions of the immune system. The role of inflammation in carcinogenesis. Metastatic process. Immunodiagnostics and immunotherapy of tumor disease. Immunity during pregnancy. Immunological paradox and foetal tolerance. Psycho-neuroendocrine-immune system ˜ a holistic view on the functioning of immunity. The role of inflammation in the development of neurodegenerative diseases. Alzheimer disease. The role of the mother's immune system in foetal tolerance. The role of HLA-G. Development of foetal and new-born immunity.

Recommended literature:

Obligatory textbooks:

1. Buc M. Basic and Clinical Immunology. 5th ed. Bratislava: Comenius University 2020, 554 pp.
2. Video-presentations of lecturers.

Recommended textbooks

1. Abbas AK, Lichtman, AH, Pillai S: Cellular and Molecular Immunology. 9th ed. New York: Elsevier 2022, 565 pp. (internet edition available too)
2. Chapel H, Haeney M, Misbah S, Snowden N.: Essentials of Clinical Immunology. Willey Oxford: Blackwell 2014, 365 pp.

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. MUDr. Milan Buc, DrSc., doc. MUDr. Mária Bucová, CSc., doc. RNDr. Vladimíra Ďurmanová, PhD., doc. Mgr. Ivana Shawkatová, PhD., MUDr. Monika Homolová, PhD., MUDr. Juraj Javor, PhD., MUDr. Zuzana Párnická, PhD., MUDr. Magda Suchánková, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.MÚ/L-S-VLa-134-4/19	**Course title:** Clinical Microbiology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Final exam: - defending the seminar work (in minimal extent of 5 pages) - written test (minimum 60% of correct answers) - theoretical exam: 2 questions 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: Knowledge: Explanation of pathogenesis of microbial diseases according to the affected organs and organ systems Skills: Interpretation of microbiologic diagnostics results and their implementation in the therapy	
Class syllabus: Principles of rational antimicrobial therapy in outpatients and in hospitalised patients. Multiresistance of bacteria, risks and possible solutions. Diagnostics and therapy of life-threatening infections such as pneumonia,sepsis, endocarditis, meningitis, urogenital infections. Infectious complications in immunocompromised patient. Current therapy options of mycoses. Principles of microbiological diagnostic results interpretation.	
Recommended literature: Struthers, J.K.: Clinical Microbiology. Taylor & Francis, 2017, 264 pp.	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 16					
A	B	C	D	E	FX
62,5	31,25	6,25	0,0	0,0	0,0
Lecturers: doc. MUDr. Adriana Liptáková, PhD., MPH, doc. RNDr. Lívia Slobodníková, CSc., MUDr. Ján Koreň, PhD., Mgr. Marek Straka, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.MÚ/L-S-VLa-134-5/19	**Course title:** Clinical Microbiology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Final exam: - defending the seminar work (in minimal extent of 5 pages) - written test (minimum 60% of correct answers) - theoretical exam: 2 questions 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: Knowledge: Explanation of pathogenesis of microbial diseases according to the affected organs and organ systems Skills: Interpretation of microbiologic diagnostics results and their implementation in the therapy	
Class syllabus: Principles of rational antimicrobial therapy in outpatients and in hospitalised patients. Multiresistance of bacteria, risks and possible solutions. Diagnostics and therapy of life-threatening infections such as pneumonia,sepsis, endocarditis, meningitis, urogenital infections. Infectious complications in immunocompromised patient. Current therapy options of mycoses. Principles of microbiological diagnostic results interpretation.	
Recommended literature: Struthers, J.K.: Clinical Microbiology. Taylor & Francis, 2017, 264 pp.	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 6					
A	B	C	D	E	FX
33,33	33,33	16,67	0,0	16,67	0,0
Lecturers: doc. MUDr. Adriana Liptáková, PhD., MPH, doc. RNDr. Lívia Slobodníková, CSc., MUDr. Ján Koreň, PhD., Mgr. Marek Straka, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.NKIM/L-S-VLa-178/23	**Course title:** Clinical Neonatology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-031/19 - Internal Medicine 3	
Course requirements: -100% attendance at the practicals -1 written test – minimal 60% of correct answers Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: less then 60 %	
Learning outcomes: Knowledge: to obtain current theoretical knowledge in neonatal care Skills: to obtain communication and practical skills in neonatal care (securing of airways, resuscitation, i. v. access, monitoring of vital signs)	
Class syllabus: 1. Classification of newborns, physiological postnatal adaptation 2. Resuscitation of a newborn 3. Examination of a newborn 4. Neonatal screening 5. Non-invasive and invasive monitoring of a newborn: pulse oximetry, NIRS, aEEG, blood pressure 6. Principles of non-invasive and invasive respiratory support of the newborn 7. Postpartum adaptation disorders: early asphyxia syndrome, syndrome of persistent pulmonary hypertension, transient tachypnea of the newborn, SIDS 8. Care and complications of a premature newborn – respiratory system 9. Care and complications of a premature newborn – central nervous system, alimentary system, infections, others 10. Acute conditions in neonatology 11. Communication and practical skills training 12. Application of theoretical knowledge in practice – analysis of various case reports	
Recommended literature: Brucknerová, Ingrid: Neonatology: simple & easy. – Part 1. – 2nd ed. - Bratislava: Univerzita Komenského, 2019. – 158 s. ISBN 978-80-223-4760-0	

Brucknerová, Ingrid: Neonatology: simple & easy. – Part 2. – 2nd ed. - Bratislava: Univerzita Komenského, 2021. – 116 s. ISBN 978-80-223-5047-1
Brucknerová, Ingrid: Neonatology: simple & easy. – Part 3. – 2nd ed. - Bratislava: Univerzita Komenského, 2019. – 110 s. ISBN 978-80-223-4761-7
Brucknerová, Ingrid: Neonatology: simple & easy. – Part 4. – 1st ed. - Bratislava: Univerzita Komenského, 2018. – 190 s. ISBN 978-80-223-4429-6

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 15

A	B	C	D	E	FX
86,67	6,67	6,67	0,0	0,0	0,0

Lecturers: prof. MUDr. Ingrid Brucknerová, PhD., MUDr. Dušan Doboš

Last change: 17.07.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚPA/L-S-VLa-135-4/19	**Course title:** Clinical Pathology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.ÚPA/L-S-VLa-055/18 - Pathological Anatomy 2	
Course requirements: - 100% attendance at the lectures - oral examination – 1 question	
Learning outcomes: Knowledge and skills: Correlation of morphological changes with clinical findings in diseases of the hemopoetic system, female genital system and neuromuscular diseases. Targeted diagnostics of hemopoietic and testicular tumors, colorectal carcinoma, with the aim of personalized therapeutic outcomes. Therapeutic possibilities of hyperbaric environment. Pathology of gestational trophoblastic disease, diabetes mellitus, COVID-19 and their clinical correlation. Application of frozen section histology.	
Class syllabus: Introduction to clinical pathology. Application of immunohistochemistry in tumor diagnostics. Pathology and clinical manifestation of COVID-19. Gestational trophoblastic disease – multidisciplinary cooperation in the diagnostics. Hyperbaric medicine. Translational research – its significance in search for new therapeutic targets. Classification and significance of complex diagnostics of lymphoproliferative diseases. Gynecologic cytology and its significance in prevention of uterine cervix carcinoma. Pathology of diabetes mellitus. Genetics of colorectal carcinoma. Practical use of frozen section histology in clinical praxis.	
Recommended literature: Recommended literature: the lectures	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 77					
A	B	C	D	E	FX
77,92	7,79	10,39	3,9	0,0	0,0

Lecturers: prof. MUDr. Ľudovít Danihel, CSc., prof. MUDr. Pavel Babál, CSc., doc. MUDr. Zuzana Čierna, PhD., doc. MUDr. Pavol Janega, PhD., MUDr. Andrea Janegová, PhD., MUDr. Katarína Letkovská, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚPA/L-S-VLa-135-5/19	**Course title:** Clinical Pathology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the lectures - oral examination – 1 question	
Learning outcomes: Knowledge and skills: Correlation of morphological changes with clinical findings in diseases of the hemopoetic system, female genital system and neuromuscular diseases. Targeted diagnostics of hemopoietic and testicular tumors, colorectal carcinoma, with the aim of personalized therapeutic outcomes. Therapeutic possibilities of hyperbaric environment. Pathology of gestational trophoblastic disease, diabetes mellitus, COVID-19 and their clinical correlation. Application of frozen section histology.	
Class syllabus: Introduction to clinical pathology. Application of immunohistochemistry in tumor diagnostics. Pathology and clinical manifestation of COVID-19. Gestational trophoblastic disease – multidisciplinary cooperation in the diagnostics. Hyperbaric medicine. Translational research – its significance in search for new therapeutic targets. Classification and significance of complex diagnostics of lymphoproliferative diseases. Gynecologic cytology and its significance in prevention of uterine cervix carcinoma. Pathology of diabetes mellitus. Genetics of colorectal carcinoma. Practical use of frozen section histology in clinical praxis.	
Recommended literature: Recommended literature: the lectures	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 14					
A	B	C	D	E	FX
64,29	21,43	7,14	7,14	0,0	0,0
Lecturers: prof. MUDr. Ľudovít Danihel, CSc., prof. MUDr. Pavel Babál, CSc., doc. MUDr. Zuzana Čierna, PhD., doc. MUDr. Pavol Janega, PhD., MUDr. Andrea Janegová, PhD., MUDr. Katarína Letkovská, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚFKF/L-S-VLa-131-4/20	**Course title:** Clinical Pharmacology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.ÚFKF/L-S-VLa-012/19 - Pharmacology 2	
Course requirements: - 100% attendance on the lectures Final exam: - written part – work up of pharmacotherapeutic plan - theoretical part – 2 questions: 1st question from general clinical pharmacology; 2nd question – discussion and justification of the proposed pharmacotherapeutic plan The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - acquisition of knowledge from medical pharmacology and therapeutics - acquisition of knowledge necessary for pharmacological decision-making in selected diseases Skills: - application of knowledge in an appropriate drug selection - assessment of the risk-benefit ratio of drugs in specific situations of selected diseases in an individual patient	
Class syllabus: Strategy and methods in pharmacotherapy. Drug evaluation. GLP, GCP. Medication adherence. Drug risk and its prevention. Pharmacovigilance and monitoring of adverse drug reactions. Therapeutic drug monitoring. Characteristics of pharmacotherapy during pregnancy and lactation. Characteristics of pharmacotherapy in children. Characteristics of pharmacotherapy in elderly. Clinical analysis of pharmacotherapy in selected frequently occuring diseases. Creating different pharmacotherapeutic plans and drug selection.	
Recommended literature: Brown, M., Sharma, P., Mir, F., Bennett, P.N. Clinical Pharmacology 12th ed. Edinburgh: Elsevier Ltd., 2019. 720 p. Waller, D.G., Sampson, A.P., Hitchings, A.W. Medical Pharmacology and Therapeutics. 6th ed. Elsevier Ltd., 2021. 752 p.	
Languages necessary to complete the course:	

English

Notes:
The course is in summer term and has a limited capacity of 20 students total number (together 4th and 5th year students). In case of higher interest, the first 20 enrolled students will be selected.

Past grade distribution
Total number of evaluated students: 57

A	B	C	D	E	FX
87,72	12,28	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Martin Wawruch, PhD., MUDr. Jana Tisoňová, PhD.

Last change: 03.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚFKF/L-S-VLa-131-5/20	**Course title:** Clinical Pharmacology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.ÚFKF/L-S-VLa-012/19 - Pharmacology 2	
Course requirements: - 100% attendance on the lectures Final exam: - written part – work up of pharmacotherapeutic plan - theoretical part – 2 questions: 1st question from general clinical pharmacology; 2nd question – discussion and justification of the proposed pharmacotherapeutic plan The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - acquisition of knowledge from medical pharmacology and therapeutics - acquisition of knowledge necessary for pharmacological decision-making in selected diseases Skills: - application of knowledge in an appropriate drug selection - assessment of the risk-benefit ratio of drugs in specific situations of selected diseases in an individual patient	
Class syllabus: Strategy and methods in pharmacotherapy. Drug evaluation. GLP, GCP. Medication adherence. Drug risk and its prevention. Pharmacovigilance and monitoring of adverse drug reactions. Therapeutic drug monitoring. Characteristics of pharmacotherapy during pregnancy and lactation. Characteristics of pharmacotherapy in children. Characteristics of pharmacotherapy in elderly. Clinical analysis of pharmacotherapy in selected frequently occuring diseases. Creating different pharmacotherapeutic plans and drug selection.	
Recommended literature: Brown, M., Sharma, P., Mir, F., Bennett, P.N. Clinical Pharmacology 12th ed. Edinburgh: Elsevier Ltd., 2019. 720 p. Waller, D.G., Sampson, A.P., Hitchings, A.W. Medical Pharmacology and Therapeutics. 6th ed. Elsevier Ltd., 2021. 752 p.	
Languages necessary to complete the course:	

English

Notes:
The course is only in summer term and has a limited capacity of 20 students total number (together 4th and 5th year students). In case of higher interest, the first 20 enrolled students will be selected.

Past grade distribution
Total number of evaluated students: 67

A	B	C	D	E	FX
89,55	8,96	1,49	0,0	0,0	0,0

Lecturers: prof. MUDr. Martin Wawruch, PhD., MUDr. Jana Tisoňová, PhD.

Last change: 03.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KNM/L-S-VLa-136-4/19	**Course title:** Clinical applications of diagnostic and therapeutic methods of nuclear medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.ÚPA/L-S-VLa-055/18 - Pathological Anatomy 2 and LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2	
Course requirements: - 100% attendance at the practicals - written test (minimum 60% of correct answers) Final exam: - theoretical exam: 3 questions 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: Knowledge: - Deepening of knowledge about clinical applications of diagnostic and therapeutic methods of nuclear medicine, about their position in diagnostic work-up and therapeutic management of selected oncological and neo-oncological diseases - Clinical applications of direct link between diagnostic examinations of nuclear medicine and subsequent treatment, i.e. of the teragnostic principles of nuclear medicine - Acquirement of the theoretical bases of scientific work in the domain of nuclear medicine and understanding the principles of their practical applications Skills: - Capacity of basic image processing and interpretation of findings of diagnostic methods of nuclear medicine - Basics of radionuclide treatment	
Class syllabus: - Clinical applications of diagnostic and therapeutic methods in selected oncological (breast cancer, prostate cancer, colorectal cancer, neuroendocrine neoplasms and multiple endocrine neoplasia syndromes, multiple myeloma and malignant lymphoma, metastatic malignancy of unknown origin, characterization of nodular foci in the liver)	

and non-oncological (thyroid and parathyroid diseases, localization of infectious and inflammatory lesions in fever / inflammatory syndrome of unknown origin) diseases
- Fundamentals of scientific work in nuclear medicine, types of clinical studies in nuclear medicine and principles of clinical studies with a diagnostic agent

Recommended literature:
Biersack HJ et al., Clinical Nuclear Medicine, 2007, ISBN 978-3-540-28025-5
Current guidelines of European Association of Nuclear Medicine (https://www.eanm.org/publications/guidelines/)
Current guidelines of European Medicines Agency on clinical trials in evaluation of diagnostic agents (Doc. Ref. CPMP/EWP/1119/98/Rev 1)
European Nuclear Medicine Guide, The 2020 Edition, https://www.eanm.org/publicpress/european-nuclear-medicine-guide/
Špánik S. et al. Introduction to Clinical Oncology, Chapter: Balogova S. Nuclear Medicine in Oncology p.82-112, 2021, ISBN 978-80-2234988-B

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 13

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

Lecturers: prof. MUDr. Soňa Balogová, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KNM/L-S-VLa-136-5/19	**Course title:** Clinical applications of diagnostic and therapeutic methods of nuclear medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.RK/L-S-VLa-095/22 - Radiology and Nuclear Medicine	
Course requirements: - 100% attendance at the practicals - written test (minimum 60% of correct answers) Final exam: - theoretical exam: 3 questions 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: Knowledge: - Deepening of knowledge about clinical applications of diagnostic and therapeutic methods of nuclear medicine, about their position in diagnostic work-up and therapeutic management of selected oncological and neo-oncological diseases - Clinical applications of direct link between diagnostic examinations of nuclear medicine and subsequent treatment, i.e. of the teragnostic principles of nuclear medicine - Acquirement of the theoretical bases of scientific work in the domain of nuclear medicine and understanding the principles of their practical applications Skills: - Capacity of basic image processing and interpretation of findings of diagnostic methods of nuclear medicine - Basics of radionuclide treatment	
Class syllabus: - Clinical applications of diagnostic and therapeutic methods in selected oncological (breast cancer, prostate cancer, colorectal cancer, neuroendocrine neoplasms and multiple endocrine neoplasia syndromes, multiple myeloma and malignant lymphoma, metastatic malignancy of unknown origin, characterization of nodular foci in the liver) and non-oncological (thyroid and parathyroid diseases, localization of infectious and inflammatory lesions in fever / inflammatory syndrome of unknown origin) diseases	

- Fundamentals of scientific work in nuclear medicine, types of clinical studies in nuclear medicine and principles of clinical studies with a diagnostic agent

Recommended literature:

Biersack HJ et al., Clinical Nuclear Medicine, 2007, ISBN 978-3-540-28025-5
Current guidelines of European Association of Nuclear Medicine (https://www.eanm.org/publications/guidelines/)
Current guidelines of European Medicines Agency on clinical trials in evaluation of diagnostic agents (Doc. Ref. CPMP/EWP/1119/98/Rev 1)
European Nuclear Medicine Guide, The 2020 Edition, https://www.eanm.org/publicpress/european-nuclear-medicine-guide/
Špánik S. et al. Introduction to Clinical Oncology, Chapter: Balogova S. Nuclear Medicine in Oncology p.82-112, 2021, ISBN 978-80-2234988-B

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 4

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

Lecturers: prof. MUDr. Soňa Balogová, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚHE/L-S-VLa-130/22	**Course title:** Clinical embryology and reproductive medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Obligatory attendance at the lectures and a final multiple choice test (minimum 60% of correct answers) 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: Gaining the recent knowledge about new trends in clinical embryology and reproductive medicine. The graduate of the course masters the anatomy and physiology of human reproduction, the causes and possibilities of diagnosis of the most common congenital malformations, masters at the theoretical level the causes and possibilities of diagnosis and treatment of infertility and selected laboratory methods of assisted reproduction. The aim of the course is also to gain a comprehensive view of the issue of human reproduction, and to point out the intersection between theoretical knowledge of embryology and experimental biology and clinical research in gynecology, obstetrics, urology and neonatology. The given subject would in a logical sequence connect knowledge from clinical embryology and assisted reproduction, from the field of female and male infertility, mechanisms of birth defects, their prenatal diagnosis and subsequent specialized neonatological care of the newborn.	
Class syllabus: The contents of the lectures can be divided into several areas: 1) Clinical embryology and laboratory part of assisted reproduction (assisted reproduction methods: spermiology and ejaculate analysis, micromanipulation methods and intracytoplasmic sperm injection into the oocyte, in vitro cultivation of the early embryo and evaluation of its development, cryopreservation in reproductive medicine, preimplantation genetics), 2) Causes and treatment of female and male infertility, 3) A comprehensive view of the issue of congenital malformations (prenatal screening and diagnosis of congenital malformations, current possibilities of fetal surgery, teratology, causes of congenital malformations and prevention options), 4) Problems of preconception and prenatal preparation and childbirth, family planning, 5) Reproductive immunology and endocrinology.	

Recommended literature:

1. Coward K, Wells D. (Eds). Textbook of Clinical Embryology. Cambridge University Press. 2013. 392 pp. ISBN 978-0-521-16640-9.
2. Torchia MG, Persaud TVN. Concise Clinical Embryology. An Integrated, Case-Based Approach. Philadelphia: Elsevier, 2021. 118 pp. ISBN 978-0-323-69615-9.
3. Sadler TW. Langman's Medical Embryology. Fourteenth Edition. Philadelphia: Wolters Kluwer, 2019. 432 pp. ISBN 978-1-975114-84-8.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 22

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

Lecturers: prof. RNDr. Ivan Varga, PhD., prof. MUDr. Jozef Záhumenský, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚPF/L-S-VLa-138/19	**Course title:** Critical Appraisal and Academic Writing Skills
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the seminars (on-site) and lectures (online), - positive evaluation of an online oral presentation on the topic of a diploma thesis (only Introduction, Hypothesis/Aims, Methodology) - 1 written test (minimum 60% of correct answers). 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: Knowledge: Upon successful completion of the compulsory optional course, the student: - is able to distinguish the type of scientific articles and scientific journals, with a focus on the evaluating indicators for the journal quality, - is familiar with bibliometric and citation databases, - learns the basics of critical academic thinking and professional communication, including communication with the diploma thesis supervisor, - learns the principles of presentation (oral/poster), professional speaking and discussion at scientific events/thesis defence, - learns the possibilities and style of active participation in scientific conferences, congresses, -can identify major problem areas: vocabulary, structure, logical factors-content in papers/ thesis. Skills: - The student can better assess the quality of scientific papers/ diploma theses, - can assess main formal mistakes in oral academic communication and the most common errors in academic writing (papers/ thesis), - can better assess weakness in arguments concerning scientific data, - is able to logically formulate a hypothesis/aims in a thesis/article in which they are an author, understands how to clearly present results, how to write a discussion in comparison with the results of other authors, how to formulate a well-balanced conclusion, the student is familiar with the principles of proper citation of relevant literature, - can prepare a high-quality oral presentation regarding own scientific results/diploma thesis.	

Class syllabus:
Lectures:
Core academic skills of medical students. Academic communication with researchers' supervisors. Academic English, analysis of selected mistakes across papers and diploma thesis. Oral and poster presentation. How to prepare an Abstract (paper/conference). Medical databases. References.
Seminars:
Scientific publication: Introduction; Scientific publication: Material (Patients) and Methods, Scientific publication: Results; Scientific publication: Discussion; Scientific publication: Conclusions; How to write a review article/systematic review.

Recommended literature:
- Materials from lectures and seminars,
- at least 5 selected scientific articles with an impact factor on the diploma thesis topic.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 58

A	B	C	D	E	FX
75,86	18,97	5,17	0,0	0,0	0,0

Lecturers: prof. MUDr. Beáta Mladosievičová, CSc., prof. MUDr. Marián Bernadič, CSc., prof. MUDr. Daniela Ostatníková, PhD., MUDr. Ljuba Bachárová, DrSc.

Last change: 30.11.2022

Approved by:

STATE EXAM DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF/L-VLa-O-5/15	**Course title:** Defense of the Diploma Thesis
Number of credits: 2	
Recommended semester: 11., 12..	
Educational level: I.II.	
State exam syllabus:	
Last change:	
Approved by:	

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KSMCh/L-S-VLa-070/18	**Course title:** Dental Medicine
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 14s / 3s **Form of the course:** on-site learning	
Number of credits: 1	
Recommended semester: 6.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - attendance at the lectures - 100% attendance at the seminar - 1 written test (minimum 60% of correct answers) 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: Normal orofacial region and by pathological conditions. Aetiology, prevention, diagnostics and therapy of the dentition and oral soft tissues. Emphasis layed upon causing factors, early diagnostics, risk of complications a relations to the general health. Knowledge: basics of conservative dentistry, periodontology and oral pathology, dental prosthetics, orthodontics, dentoalveolar and maxillofacial surgery. Skills: not required	
Class syllabus: Disorders of hard dental tissues, dental pulp, apical periodontium, oral focal infection. Manifestation of general disorders in oral cavity. Orthodontic anomalies, orofacial clefts. Prosthetic replacement of missing teeth. Infections around the jaws, fractures of the facial skeleton, oncology of head and neck. Treatment of handicaped patients. Long term follow-up.	
Recommended literature: -LEWIS, M.A.O, LAMEY, J.P.: Oral medicine in primary dental care. 4th ed., Springer Verlag 2019. -MITCHELL, L., MITCHELL, D.A., McCAUL, L.: Oxford handbook of clinical dentistry. 5th ed., Oxford University Press 2009, 761 pp. ISBN 978-0-19-955330-3	
Languages necessary to complete the course: english	

Notes:

Past grade distribution
Total number of evaluated students: 819

A	B	C	D	E	FX
65,93	24,05	6,59	2,08	1,34	0,0

Lecturers: prof. MUDr. Peter Stanko, PhD., MUDr. Dušan Hollý, PhD., MPH, MDDr. Nikola Držíková Borovanová, MUDr. Rastislav Edelstein, PhD., MDDr. Kristína Hrdličková, MDDr. Michail Vasileios Kapetanakis, MDDr. Nora Kelecsényiová, MDDr. Anna Korpášová, MUDr. Mgr. Ján Kováč, PhD., MPH, MDDr. Nikos Leptos, MUDr. Juraj Lysý, PhD., MPH, MDDr. Ľubomír Malíček, PhD., MDDr. Marek Matajs, PhD., MDDr. Šamseh Merdaa, MUDr. Bohuslav Novák, PhD., MUDr. Andrea Nováková, PhD., MUDr. Daniela Novotňáková, PhD., MPH, MDDr. Bich Pham Ngoc, MDDr. Soňa Pintešová, PhD., MDDr. Vladimír Prachár, doktor medicíny Halyna Pruts, MDDr. Alessandro Emanuele Sangalli, MDDr. Martina Sirotková, MUDr. Rastislav Slávik, MDDr. Adam Stebel, PhD., MDDr. Martin Strunga, doc. MUDr. Andrej Thurzo, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.DK/L-S-VLa-008/19	**Course title:** Dermatovenerology 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 15s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.ÚFKF/L-S-VLa-012/19 - Pharmacology 2	
Course requirements: 100% participation in practicals Exam: test – minimum of 60% success rate Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less Writing of the medical record of the patient The final evaluation is calculated as the median of all received results.	
Learning outcomes: Theoretical knowledge: Nomenclature in dermatovenerology. Information about bacterial, viral and sexually transmitted diseases, skin disorders Practical skills: examination methods in dermatovenerology: alergological and mycological examination, Wood lamp, collecting of the tissue for histological examination, microscopic examination of pathological materials, dark field microscopy	
Class syllabus: Anatomy, physiology, histopathology of the skin. Skin lesions. Dermatosis from external physical and chemical causes. Erythematosquamous dermatosis - pityriasis rosea, psoriasis, parapsoriasis erytroderma. Viral infections. Acne vulgaris, rosacea, dermatitis rosaceiformis. Hidradenitis suppurativa. Bacterial infections of skin and mucous membranes. Tuberculosis – skin forms. Pyoderma of the hair follicle and sweat glands, erythrasma. Epizoonosis. Benign tumors of the skin and mucous membranes. Precancerous lesions and malignancies of the skin and mucous membranes.	
Recommended literature: Buchvald, J.: Praktikum z dermatovenerológie pre stážujúcich. Bratislava,UK,1996.72 s. Skriptá. Buchvald, J., Buchvald, D.: Dermatovenerológia. Bratislava,SAP 2002, 520 s. Šimaljaková, M., Buchvald, D.: Dermatovenerológia, UK Bratislava 2019, Švecová,D., Danilla.T.: Textbook of Dermatology. UK Bratislava, 2017, 384 s. Švecová, D.: Handbook of Dermatovenerology for Practical Lessons , UK Bratislava 2018, 274s	
Languages necessary to complete the course:	

English

Notes:

Past grade distribution
Total number of evaluated students: 614

A	B	C	D	E	FX
99,19	0,0	0,33	0,16	0,33	0,0

Lecturers: prof. MUDr. Mária Šimaljaková, PhD., prof. MUDr. Danka Švecová, PhD., doc. MUDr. Dušan Buchvald, CSc., doc. MUDr. Tibor Danilla, PhD.

Last change: 04.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.DK/L-S-VLa-009/19	**Course title:** Dermatovenerology 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 20s / 20s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.DK/L-S-VLa-008/19 - Dermatovenerology 1	
Course requirements: 100% participation in practicals Test - minimum of 60% success rate Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less Exam: practical part – writing the medical record of one patient, including differential diagnosis, 1 question from practicals - Theoretical part - 3 questions from dermatovenerology	
Learning outcomes: Theoretical knowledge: Etiopathogenesis, clinical picture, diagnostics, differential diagnosis and therapy of mucocutaneous diseases. Principles of topical therapy in dermatology, preventive measures. Practical skills: differential diagnostic procedures. Proposals for examination and therapy of cutaneous diseases, principles of topical therapy in dermatology. Trichogram, dermoscopy, cryotherapy, lasers, phototherapy, PDT, compressive therapy	
Class syllabus: Medicamentous exanthema. Urticaria, angioedema. Eczema contactum allergicum. Toxic dermatitis. Dermatitis seborrhoica. Dermatitis atopica. Eczema microbiale. Erythematosquamous dermatosis. Papular dermatosis - lichen ruber, prurigo. Bullous dermatosis - pemphigus, pemphigoid, dermatitis herpetiformis. Disorders of blood and lymphatic vessels. Sexually transmitted infections. Mycotic infections of the skin and mucous membranes. Neutrophils and eosinophils dermatosis. Disorders of the hair and nails. Disorders of the oral cavity and lips. Skin manifestations of metabolic disorders of aminoacids, mucopolysaccharides, vitamins and lipids. Paraneoplastic dermatosis. Skin manifestation of internal diseases. Specific skin characteristics of infants and children. Genodermatosis: disorders of keratinization, hereditary epidermolysis. Porphyria. Mastocytosis. Disorders of connective tissue. Nevi.	
Recommended literature: Buchvald, J.: Praktikum z dermatovenerológie pre stážujúcich. Bratislava,UK,1996.72 s. Skriptá.	

Šimaljaková, M., Buchvald,D.: Dermatovenerológia, UK Bratislava, 2019, 543 s..
Buchvald,J. Buchvald,D.: Dermatovenerológia. Bratislava, SAP 2002, 520 s.
Švecová,D., Danilla.T.: Textbook of Dermatology. UK Bratislava, 2017, 384 s.
Švecová, D.: Handbook of Dermatovenerology for Practical Lessons , UK Bratislava 2018, 274 s.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 577

A	B	C	D	E	FX
53,9	19,58	14,04	7,45	3,47	1,56

Lecturers: prof. MUDr. Mária Šimaljaková, PhD., prof. MUDr. Danka Švecová, PhD., doc. MUDr. Dušan Buchvald, CSc., doc. MUDr. Tibor Danilla, PhD.

Last change: 04.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF/L-S-VLa-071/19	**Course title:** Diploma Work 1
Educational activities: **Type of activities:** independent work **Number of hours:** **per week:** **per level/semester:** 40s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: communication with the final thesis supervisor presentation of agreed outcomes and their evaluation by the thesis supervisor	
Learning outcomes: to elaborate the chosen topic at the level of a scientific study - appropriate choice of scientific literature - to apply an appropriate methodology and research methods	
Class syllabus: - topic selection and communication with the thesis supervisor - define the objectives of the final thesis - selection of bibliography	
Recommended literature: Internal Regulation No. 7/2018 Guideline of the Rector of Comenius University in Bratislava. The full text of Internal Regulation No. 12/2013 of the Guideline of the Rector of Comenius University in Bratislava on the Basic Requirements of Final Theses, Rigorous Theses, and Habilitation Theses, Originality Check, Storing and Accessibility at Comenius University in Bratislava as amended by Appendix No. 1 and Appendix No. 2 Internal Regulation No. 10/2020 Study Regulations Comenius University in Bratislava, Faculty of Medicine Bibliography according to the diploma thesis	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 559					
A	B	C	D	E	FX
91,06	4,65	1,25	1,07	1,79	0,18
Lecturers:					
Last change: 28.11.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF/L-S-VLa-072/19	**Course title:** Diploma Work 2
Educational activities: **Type of activities:** independent work **Number of hours:** **per week:** **per level/semester:** 50s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF/L-S-VLa-071/19 - Diploma Work 1	
Course requirements: communication with the final thesis supervisor presentation of agreed outcomes and their evaluation by the thesis supervisor	
Learning outcomes: - to elaborate the chosen topic at the level of a scientific study - appropriate choice of scientific literature - to apply an appropriate methodology and research methods	
Class syllabus: - preparation and study of selected literature (research, textbooks, monographs, offprints of works in particular scientific field) - preparation of diploma thesis synopsis - to start working on the core of the diploma thesis, which is the main part of the thesis	
Recommended literature: Internal Regulation No. 7/2018 Guideline of the Rector of Comenius University in Bratislava. The full text of Internal Regulation No. 12/2013 of the Guideline of the Rector of Comenius University in Bratislava on the Basic Requirements of Final Theses, Rigorous Theses, and Habilitation Theses, Originality Check, Storing and Accessibility at Comenius University in Bratislava as amended by Appendix No. 1 and Appendix No. 2 Internal Regulation No. 10/2020 Study Regulations Comenius University in Bratislava, Faculty of Medicine Bibliography according to the diploma thesis	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 546					
A	B	C	D	E	FX
83,88	6,41	5,49	1,47	2,38	0,37
Lecturers:					
Last change: 28.11.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF/L-S-VLa-073/19	**Course title:** Diploma Work 3
Educational activities: **Type of activities:** independent work **Number of hours:** **per week:** **per level/semester:** 50s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF/L-S-VLa-072/19 - Diploma Work 2	
Course requirements: communication with the diploma work supervisor presentation of agreed outcomes and their evaluation by the thesis supervisor	
Learning outcomes: - to elaborate the chosen topic at the level of a scientific study - appropriate choice of scientific literature - to apply an appropriate methodology and research methods	
Class syllabus: - working on the core of the diploma thesis - division into chapters, subchapters - preparation of introduction - preparation of conclusion - preparation of bibliography	
Recommended literature: Internal regulation CU n. 12/2013 Rector´s Directive of Comenius University in Bratislava, about the basic requirements of theses and qualification works, their bibliographic registration, control of originality, about archiving and publishing at Comenius University in Bratislava Internal regulation n. 12/2013 Study regulation FM CU in Bratislava Bibliography according to the diploma work	
Languages necessary to complete the course: english	
Notes:	
Past grade distribution Total number of evaluated students: 527	

A	B	C	D	E	FX
83,11	7,02	6,45	1,14	2,09	0,19

Lecturers:
Last change: 28.11.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF/L-S-VLa-074/19	**Course title:** Diploma Work 4
Educational activities: **Type of activities:** independent work **Number of hours:** **per week:** **per level/semester:** 100s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 11.	
Educational level: I.II.	
Prerequisites: LF/L-S-VLa-073/19 - Diploma Work 3	
Course requirements: communication with the diploma thesis supervisor presentation of agreed outcomes and their evaluation by the thesis supervisor	
Learning outcomes: - finalisation of the chosen topic - control by the thesis supervisor - thesis submission in the AIS2 information system	
Class syllabus: - abstract in Slovak and English language - introduction - conclusion - bibliography	
Recommended literature: Internal Regulation No 7/2018 Guideline of the Rector of Comenius University in Bratislava. The full text of Internal Regulation No. 12/2013 of the Guideline of the Rector of Comenius University in Bratislava on the Basic Requirements of Final Theses, Rigorous Theses, and Habilitation Theses, Originality Check, Storing and Accessibility at Comenius University in Bratislava as amended by Appendix No. 1 and Appendix No. 2 Internal Regulation No 10/2020 Study Regulations Comenius University in Bratislava, Faculty of Medicine Bibliography according to the diploma thesis	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 531					
A	B	C	D	E	FX
84,18	7,16	5,27	2,26	1,13	0,0
Lecturers:					
Last change: 28.11.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFBIT/L-S-VLa-121/19	**Course title:** Electromagnetic methods in medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Continuously: - Active participation in lectures – weight 0.1 - Passing continuous written tests (at least 60 %) – weight 0.2 Final exam: - Passing the final written test (at least 60 %) - weight 0.4 - Oral exam - presentation of the selected topic - weight 0.3 Test rating: A: 91 % – 100 %, B: 81 % – 90 %, C: 73 % – 80 %, D: 66 % – 72 %, E: 60 % – 65 %, Fx: 59 % and less. The overall rating is determined from the weighted average of the ratings obtained.	
Learning outcomes: Knowledge: Upon successful completion of the course, students should be familiar with the physical principles of electromagnetic methods in medicine as a diagnostic and therapeutic tool, including the physical effects of external factors on the body, in particular in terms of health protection. Skills: Ability to determine the suitability of using an electromagnetic method for a particular patient in terms of the usefulness of the information obtained in diagnostic methods or patient benefit in therapeutic methods and patient safety.	
Class syllabus: Anatomical, physiological and physical basics of bioelectromagnetism. Transport processes at the cellular level. Biophysics of excitation processes. Biological signals as a basis for diagnostic methods in medicine (ECG, EEG, ERG, EGG, EMG, MCG, MEG, MMG). Basics of biomedical electronics. Types of electrodes. Passive electrical and magnetic properties of cells, tissues and organs as the basis of therapeutic methods. Electrical and magnetic stimulation of nervous and cardiac tissue, defibrillation of the heart. Impedance plethysmography, impedance tomography, electrodermal response. Characteristics of electromagnetic fields and their interaction with organism. Application of DC and AC - electrotherapeutic systems.	

Electromagnetic spectrum, its basic characteristics and assignment of regions to individual spectroscopic and tomographic methods. Influence of non-ionizing electromagnetic radiation to the body. Laser as optical electromagnetic radiation - its interaction with organism, use.
Health and safety at registration and application of electrical and magnetic signals.

Recommended literature:

- JIRÁK, D., VÍTEK, F. Basics of Medical Biophysics. Prague : Charles University, Karolinum Press, 2017, 224 p. ISBN 978-80-246-3810-2 – selected chapters.
- HRAZDIRA, I., MORNSTEIN, V., BOUREK, A., ŠKORPÍKOVÁ, J. Fundamentals of Biophysics and Medical Technology. Brno : MU Brno, 2012, 326 p. ISBN 9788021057586 – selected chapters.
- MACFARLANE, P.W., OOSTEROM, A., PAHLM, O., KLIGFIELD, P., JANSE, M., CAMM, J. (Eds.) Comprehensive Electrocardiology. London: Springer, 2010 (2nd edition). In 4 volumes. 2308 p. ISBN: 978-1-84882-045-6 – selected chapters.
- MALMIVUO,J., PLONSEY, R. Bioelectromagnetism - Principles and Applications of Bioelectric and Biomagnetic Fields. Boca Raton – London - New York: CRC Press, 15, 641 p. ISBN: 978-0-19-505823-9 – selected chapters (https://www.bem.fi/book/bem.fi).
- WEBSTER, J. G. (ed.) The Physiological Measurement Handbook. New York : John Wiley&Sons, Inc., 2015 (4th edition). 587 p. ISBN 978-1-4398-0841-1 – selected chapters.
- Lectures on the MEFANET FM CU portal - section Biophysics (http://portal.fmed.uniba.sk/).
- Blended e-course (www.moja.uniba.sk).
- Other innovated printed and internet sources available.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 1

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

Lecturers: doc. RNDr. Mgr. Katarína Kozlíková, CSc.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚE/L-S-VLa-010/20	**Course title:** Epidemiology
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9., 10..	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the practicals - 1 written test (minimum 70% of correct answers) Test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. Final exam: oral - theoretical exam: 3 question (methods in epidemiology, epidemiology of communicable diseases, epidemiology of noncommunicable diseases) The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: Knowledge of epidemiologic situation of the most frequent communicable and noncommunicable diseases in the world, Europe and Slovakia. Knowledge of methods of monitoring of population health status, ability to list and interpret basic health indicators. Ability to define and describe basic epidemiologic methods and their use in monitoring and assessment of disease occurrence. Ability to define and find data sources on disease occurrernce in Slovakia, Europe and in the world. Ability to interpret principles of vaccinology and vaccine effectiveness evaluation. Knowledge on prevalence of the most important determinants of population health. Ability to describe international and national situation in nosocomial infection prevalence, monitoring, risk factors and preventive measures. Ability to define strength of evidence coming from epidemiological studies and interpret its use in evidence-based medicine. Skills: Skill to find up-to-date information on communicable and noncommunicable disease prevalence in national and international databases. Ability to use basic epidemiological methods - description and analysis - for description of specific disease occurrence and calculation of strength of association between disease outcome and determining factor. Skill to calculate basic indicators of population health status from available data and to interpret the findings. Ability to define principles of communicable diseases dissemination, steps of outbreak investigation and skill to propose outbreak response measures in model situation. Skill to critically read outputs of epidemiologic studies	

published in scientific literature - ability to assess the used methods and limitations, correctly interpret published results.

Class syllabus:

Lectures:

Use of epidemiology as a source of evidence for evidence-based medicine. Epidemiologic situation of communicable and noncommunicable diseases in the world, Europe and in the Slovak Republic. Burden of diseases. Epidemiology and prevention of nosocomial infections. Immunization programmes and vaccine effectiveness assessment.

Practicals:

Epidemiologic situation of communicable and noncommunicable diseases in the world, Europe and in the Slovak Republic. Population health indicators. Epidemiologic methods - description and analysis. Data collection and processing. Epidemiologic studies. Epidemic process, classification and prevention of infectious diseases. Immunization and vaccine effectiveness assessment. Epidemiology and prevention of nosocomial infections.Risk factors and prevention of most frequent noncommunicable diseases. Importance of epidemiologic monitoring and assessment for evidence based medicine.

Recommended literature:

Špaleková M. (ed.) Epidemiology for Study of Public Health. Volume 1 & 2. Comenius University in Bratislava. 2015

Celentano D. Gordis Epidemiology. 6th Edition. Elsevier Science 2019. ISBN 0323552293

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 478

A	B	C	D	E	FX
42,47	28,45	16,95	9,83	1,67	0,63

Lecturers: prof. MUDr. Alexandra Bražinová, PhD., MPH, MUDr. Vanda Výrosteková, CSc., MUDr. Mgr. Miriam Fulová, PhD.

Last change: 29.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.FyÚ/L-S-VLa-166/22	**Course title:** Essentials of Physiological and Clinical Nutrition
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100 % presence in lectures and seminars Submitting of all written assignments, oral presentation of an assigned topic Examination: final written assignment Evaluation: A: 95 - 100 %, B: 89 – 94 %, C: 83 – 88 %, D: 77 – 82 %, E: 70 – 76 %, Fx: 69 % or less. The overall rating is determined as the average of the marks for assignments and the mark for the final written assignment.	
Learning outcomes: Knowledge: Presenting the impact of food components on body functions and health. Explaining the concept of nutritional value of food and nutrition. Distinguish the specifics of nutritional requirements of specific groups (children, pregnant women, seniors, patients, etc.). To argue the role of nutrition and its components in the prevention and treatment of health disorders. To interpret the principles of clinical nutrition and diet system, the ability to apply them in clinical situations. Ability to analyse the risks and benefits of alternative nutrition. To analyse patients' diet. Nutritional counselling and design of dietary recommendations for a patient. Skills: Ability to analyse and evaluate an individual's nutrition. Evaluate the basic indicators of an individual's nutritional status. Provide basic nutritional counselling based on current scientific knowledge and recommendations, determine the energy needs of the individual and the optimal representation of macronutrients in the diet. Design a nutrition plan / diet for healthy people and people with special nutritional needs. Assess the benefits and potential health risks of different dietary approaches. Justify and select relevant sources of nutritional information in scientific literature.	
Class syllabus: Nutrients and their functions. Fats, carbohydrates and proteins - classification, food sources, importance for body function and health. Dietary fibre, vitamins and minerals - food sources, importance for body function and health. Optimal intake of nutrients. Other nutritionally important food components and their effect on the body. Phytochemicals and nutraceuticals. Nutritional supplements, their risks and benefits. Main food groups, healthy food choices. Energy requirements of the body and calculation of energy needs. Energy and nutritional value of food. Balanced	

diet, foods with a high nutritional value. Current concept of healthy nutrition. Current trends and deficiencies in nutrition. Nutritional recommendations. Nutrition of population groups with special dietary requirements (children, seniors, athletes, etc.). Nutrition in the prevention and treatment of diseases - obesity, cardiovascular diseases, cancer, osteoporosis, diabetes mellitus, diseases of the digestive system. Food allergies and intolerances. Anorexia nervosa and bulimia nervosa. Dietetics, dietary system in hospitals, characteristics of diets. Enteral and parenteral nutrition. Alternative and fad diets, approaches to assessing their potential risks and benefits. Nutrition as part of a healthy lifestyle. Nutrition and information resources. Counselling in nutrition.

Recommended literature:

Human Nutrition. University of Hawaii at Manoa, Food Science and Human Nutrition Program. Edition 2020. http://pressbooks.oer.hawaii.edu/humannutrition2/
Sobotka, L. et al. Basics in Clinical Nutrition 5th Edition, Praha: Galén, 2019, 676 pp. 978-80-7492-427-9
Ostatníková, D. et al. Basics of Medical Physiology. Bratislava: Comenius University, 2021. 298 p. ISBN 978-80-223-5129-4.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 38

A	B	C	D	E	FX
65,79	28,95	5,26	0,0	0,0	0,0

Lecturers: doc. MUDr. Katarína Babinská, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KUVM/L-S-VLa-061/18	**Course title:** First Aid
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 9s / 9s **Form of the course:** on-site learning	
Number of credits: 1	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% participation Practical CPR Written exam – test with minimum achievement of 60% + 2 theoretical questions Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less Final evaluation will be calculated as the average of achieved partial evaluations.	
Learning outcomes: Knowledge: - ethical and legal issues of providing first aid - theoretical foundations necessary for providing proper first aid at the scene of a sudden incident as an equal part of medical care. - the structure of the Integrated Rescue System in the Slovak Republic (IRS), the organization of IRS intervention in mass accidents and disasters. Introduction to the issue of disaster medicine. Individual and collective protection in the event of a terrorist attack. Skills: Practically master basic resuscitation (basic life support), basics of wound care, transport of the wounded. Handling of the automatic external defibrillator.	
Class syllabus: Basic vital functions, their functional anatomy and mutual connections. Diagnosis of basic vital functions. Basic life-saving actions. Cardiopulmonary resuscitation of adults and children. Automated external defibrillation. First aid in selected sudden injuries (acute coronary syndrome – heart attack, stroke, traffic accidents and other injuries, unconsciousness, choking, breathlessness, stopped blood circulation, heavy bleeding, cramps). Prevention of sudden injuries.	
Recommended literature: European Resuscitation Council Guidelines 2021	

Wyatt, J., Illingworth, Graham, c., Hogg, K. : Oxforf Handbook of Emergency Medicine, Oxford University Press, 2015

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1243

A	B	C	D	E	FX
12,47	16,09	20,6	23,81	26,23	0,8

Lecturers: MUDr. Teodor Bachleda, PhD., MBA, PhDr. Hana Belejová, PhD., prof. MUDr. Oto Masár, CSc., PhDr. Dušan Sysel, PhD., PhDr. Adrián Fabiny

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSL/L-S-VLa-066/20	**Course title:** Forensic Medicine
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 25s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9., 10..	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the interships Final exam: - theoretical exam: 2 questions Exam evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. The overall rating is determined on the basis of the theoretical exam results.	
Learning outcomes: Knowledge and skills: To learn the basics of forensic medicine and orientation in criminal matters in medical practice. To learn the basics about external and internal examination of a dead body and about determination of the cause of death. To acquire the knowledge about the compilation of medical certificates and expert's opinions and about the process of their interpretation in front of the court. Examination of a dead body and filling in official documents. Participation in the process of identification of persons with undetected identity. Examination of an alleged assailant (principles, documentation). Examination of a victim (principles, documentation). Compilation of medical certificates.	
Class syllabus: Forensic medicine, its importance and role in medicine and society. Principles of criminal proceedings. Merits of selected crimes. Courts and prosecution offices. Doctor as a witness, doctor as an expert. Protective treatment. Bodily injury, severe bodily harm. Medical liability. Death and process of dying. Procedures taken after death. Categories and manners of death. Early and late postmortem changes. Sudden death in children and in adults. Abrasions, contusions. Lacerations, incised, slash, stab and chopping wounds. Firearm injuries – single projectile injuries, shot-gun pellets injuries, explosive injuries. Mechanical asphyxia and its forms - hanging, ligature strangulation, manual strangulation (throttling), smothering, postural asphyxia, and drowning. Fall from height. The effect of changes in atmospheric pressure and of elevated and reduced temperature. The effect of electricity and lightning. Forensic procedures to detect poisoning.	
Recommended literature:	

Simpson's Forensic Medicine 14th ed. Jason Payne – James, Richard Jones, CRC Press Taylor & Francis, London, 2020

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 495

A	B	C	D	E	FX
91,31	5,66	2,22	0,4	0,4	0,0

Lecturers: Dr.h.c. prof. MUDr. Štefan Galbavý, DrSc., prof. MUDr. Jozef Šidlo, CSc.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚVL/L-S-VLa-069/19	**Course title:** General Medicine
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 10s / 5s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9., 10..	
Educational level: I.II.	
Prerequisites: LF.ÚFKF/L-S-VLa-012/19 - Pharmacology 2	
Course requirements: 100% participation in internships Evaluation of the student, the level of his knowledge by the lecturer after completing the internship. Writing medical report – Case report and evaluation sheet from internship.	
Learning outcomes: Knowledge: - Know the basic differential – diagnostic and therapeutic procedures in the general practitioner's office - Know the ethical and legal principles of providing healthcare - Correct communication with patients - Recognize acute conditions in a general practitioner's outpatient office - Describe the physical examination in a general practitioner's outpatient office - Know the specifics of the work of a general practitioner, e.g. preventive examination, preoperative examination, vaccination, arterial hypertension, dyslipidemia. - Know the prescription of medicines and medical devices - Identify violence in all forms, cooperate with competent authorities - Know the organization and work system of the general practitioner Skills: - Analyze the information obtained - Master basic diagnostic, therapeutic and evaluation procedures in the general practitioner's office, including POCT, ECG, ancle brachial index with pulse wave velocity. - Manage acute conditions in the general practitioner's office - Demonstrate the ability to communicate effectively with patients - Manage medical documentation electronically and in writing form - Apply evidence-based work - Knowledge about technics how to apply i.v., sc. and i.m. therapy, vaccination, blood examination	
Class syllabus: Lectures	

• Introduction of Department of General Medicine. How general practitioners work in Slovakia. How and why do we stratify the patient in the general office ?
• History and introduction to subject General medicine. How to write case report ?
Metabolic syndrom - case from my practice. Preoperative examination.
• Prevention and preventive programs.
• Vaccination in the general practitioner´s office.
• Measurement of ankle brachial index and pulse wave in the general practitioner´s office.
Young general practitioners in the world.
• Upper and lower respiratory tract infections – differential diagnosis and correct procedure.
Practical training
History of general medicine. Basic terms.
2. Management of general medicine for adults - overview: medical, partially medical and non-medical activities.
3. Diagnosis and treatment of patients in a general practitioner's outpatient clinic - from symptom and syndrome to diagnosis (diagnosis, differential diagnosis and therapeutic options, SV and LZ, cooperation with SAS).
4. Specifics of general practitioner's work – preventive and preoperative examinations, vaccination, diagnostics, pre-hospital medical care, visiting service, cooperation with the Social and Health Insurance Agency.
5. Acute conditions in the general practitioner's office.
6. Correct Communication with the patient.
7. Keeping medical documentation in the general practitioner's office.
8. Assessment activity.

Recommended literature:
Kumar, P., Clark, M. Kumar and Clark´s Clinical Medicine. Philadelphia: Saunders Ltd., 2012.1352 s. ISBN-13: 978-0-7020-449-91

Languages necessary to complete the course:
English

Notes:
1. practical internship in the general office (the student can choose from the list): 1 day, anytime during actual semester
- the student must contact (by phone or email) the trainer at the acredited training offices (listed in contacts) and arrange an internship at the office in time
- the trainer trains optimally one, maximum two students in one day
2. the trainer evaluates the student´s knowledge, his activity and presence
3. the student is required to prepare a structured evaluation sheet in which he briefly describes his first day in the general office and the most interesting case study

Past grade distribution
Total number of evaluated students: 574

A	B	C	D	E	FX
30,49	7,84	19,34	26,31	16,03	0,0

Lecturers: MUDr. Beata Špániková, PhD., doc. MUDr. Marek Kučera, PhD., MPH

Last change: 24.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KG1/L-S-VLa-124/19	**Course title:** Geriatrics
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-093/22 - Internal Medicine 4	
Course requirements: general faculty requirements for COS, 80 % attendance at the lectures, final exam: 2 question (general geriatrics – 1 question, special geriatrics – 1 question)	
Learning outcomes: Knowledge: the main outputs obtained by the student by completing the subject are the knowledge and abilities necessary to understand the basic set of facts, principles, theories and procedures of clinical geriatrics according to the subject syllabus, with particular regard to the diagnostics and treatment of diseases with high specificity for seniors and/or high incidence in seniors. Skills: after successful completion of the subject, the student should be able to carry out basic examination and to consider the diagnostics and treatment of the senior, taking into account his/her specificities given in particular by polymorbidity and social status, with particular regard to the diagnostics and treatment of diseases with high specificity for seniors and/or high incidence in seniors, based on the logical and creative use of acquired knowledge.	
Class syllabus: 1. Ageing theories; Premature aging syndromes. 2. Demography of ageing. 3. Social factors in geriatrics. 4. System of providing healthcare to seniors. 5. Healthy aging and prevention in geriatrics. 6. Communication with senior and his family. 7. Legal aspects more specific to geriatrics. 8. Fragility of senior. 9. Polymorbidity. 10. Specifics of clinical course of diseases in seniors (general). 11. Specifics of disease diagnostics in seniors (general). 12. Specifics of disease treatment in seniors (general). 13. Specifics of diseases (cardiovascular, respiratory, gastrointestinal, nephrological - urological/gynaecological, endocrine, haematological, infectious, of locomotor apparatus, neurological, psychiatric, sensory) in seniors; geriatric giants	

Recommended literature:
Fillit HM, Rockwood K, Young J (Eds.). Brocklehurst´s textbook of geriatric medicine and gerontology (8th edition). Philadelphia, Elsevier 2017, 1143 p.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 8

A	B	C	D	E	FX
87,5	0,0	12,5	0,0	0,0	0,0

Lecturers: doc. MUDr. Martin Dúbrava, CSc.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-145-4/22	**Course title:** German Language 1
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the assessment of the written part of the exam) and one exam test (100 points, makes 85% of the assessment of the written part of the exam). Oral part of the exam – discussion on a selected professional topic. 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 weighted average of the grades obtained in the midterm (15%) and exam (85%) test and the result of the oral part of the exam.	
Learning outcomes: Knowledge: Acquisition of professional vocabulary from individual medical fields; deepening of knowledge in the field of morphology of a foreign language. Correct use of syntax when preparing lectures, papers and presentations. Skills: Language competence enabling the highest possible level of obtaining information and knowledge from foreign language sources; written and oral presentation of own knowledge and opinions in a foreign language; ability to communicate with the patient; ability to understand oral speech, lectures on professional medical topics.	
Class syllabus: Anatomy and the medical profession - vocabulary (body parts, organs, structures), expression of opinion and assumptions. Hospital - departments, processes, equipment, staff and their roles, relative sentences. Oncology - diagnosis and treatment procedures, prepositions. Infectology - description of symptoms, information retrieval and summarizing. Trauma medicine - first aid, the past participle. Emergency medicine - case studies, adjectives. Urology - most common urological problems and their treatment, summarising texts. Endocrinology - thyroid diseases, compound nouns. Cardiology - high blood pressure, heart attack, formation of nouns from verbs. Dermatology - skin and vascular diseases, subordinate clauses. Ophthalmology - diseases of the eyes, gradation of adjectives. Sports medicine - musculoskeletal diseases and injuries, genitive case. Rehabilitation medicine - patient roles and communication, past tenses.	

Recommended literature:
Ivanová, A., Hromadová, K.: Deutsch für medizinische Berufe. Bratislava: Univerzita Komenského 2013. 262 p. ISBN 978-80-223-3400-6
Wortberg, Ch.: Menschen im Beruf – Medizin B2/C1, Kursbuch mit Audio-CD. Max Hueber Verlag 2016. 152 p. ISBN 9783197011905

Languages necessary to complete the course:
German, English

Notes:

Past grade distribution
Total number of evaluated students: 28

A	B	C	D	E	FX
89,29	7,14	3,57	0,0	0,0	0,0

Lecturers: PhDr. Tomáš Hamar, PhD., Mgr. Katarína Hromadová, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Lucia Lauková, PhD., Mgr. Zuzana Motešická, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-146-4/22	**Course title:** German Language 2
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the assessment of the written part of the exam) and one exam test (100 points, makes 85% of the assessment of the written part of the exam). Oral part of the exam – discussion on a selected professional topic. 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 weighted average of the grades obtained in the midterm (15%) and exam (85%) test and the result of the oral part of the exam.	
Learning outcomes: Knowledge: Acquisition of professional vocabulary from individual medical fields; deepening of knowledge in the field of morphology of a foreign language. Correct use of syntax when preparing lectures, papers and presentations. Skills: Language competence enabling the highest possible level of obtaining information and knowledge from foreign language sources; written and oral presentation of own knowledge and opinions in a foreign language; ability to communicate with the patient; ability to understand oral speech, lectures on professional medical topics.	
Class syllabus: Orthopaedics - the impact of lifestyle, past tenses. Rheumatology - symptoms and causes of disease, infinitive constructions. Paediatrics - basic childhood diseases, reflexive pronouns. Internal medicine - history of medicine, acute appendicitis, defining technical terms. Neurology - nervous system and diseases, suffixes. Physiology - anatomy and function of the heart and liver, blood pressure, compound nouns. Pharmacology - indication of drugs, placebo effect, modal verbs. Otorhinolaryngology - hearing disorders, verb prefixes. Surgery - basic surgical procedures and instruments, present participle. Diabetology - disease manifestations and lifestyle modification, antonyms. Psychology - stress and its regulation, discussion. Alternative medicine - supportive treatment methods, presentation techniques.	
Recommended literature:	

Ivanová, A., Hromadová, K.: Deutsch für medizinische Berufe. Bratislava: Univerzita Komenského v Bratislave 2013. 262 p. ISBN 978-80-223-3400-6
Wortberg, Ch.: Menschen im Beruf – Medizin B2/C1, Kursbuch mit Audio-CD. Max Hueber Verlag 2016. 152 p. ISBN 9783197011905

Languages necessary to complete the course:
German, English

Notes:

Past grade distribution
Total number of evaluated students: 30

A	B	C	D	E	FX
86,67	6,67	6,67	0,0	0,0	0,0

Lecturers: PhDr. Tomáš Hamar, PhD., Mgr. Katarína Hromadová, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Lucia Lauková, PhD., Mgr. Zuzana Motešická, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-146-5/22	**Course title:** German Language 2
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.ÚCJ/L-S-VLa-145-5/22 - Nemecký jazyk 1	
Course requirements: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the assessment of the written part of the exam) and one exam test (100 points, makes 85% of the assessment of the written part of the exam). Oral part of the exam – discussion on a selected professional topic. 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 weighted average of the grades obtained in the midterm (15%) and exam (85%) test and the result of the oral part of the exam.	
Learning outcomes: Knowledge: Acquisition of professional vocabulary from individual medical fields; deepening of knowledge in the field of morphology of a foreign language. Correct use of syntax when preparing lectures, papers and presentations. Skills: Language competence enabling the highest possible level of obtaining information and knowledge from foreign language sources; written and oral presentation of own knowledge and opinions in a foreign language; ability to communicate with the patient; ability to understand oral speech, lectures on professional medical topics.	
Class syllabus: Orthopaedics - the impact of lifestyle, past tenses. Rheumatology - symptoms and causes of disease, infinitive constructions. Paediatrics - basic childhood diseases, reflexive pronouns. Internal medicine - history of medicine, acute appendicitis, defining technical terms. Neurology - nervous system and diseases, suffixes. Physiology - anatomy and function of the heart and liver, blood pressure, compound nouns. Pharmacology - indication of drugs, placebo effect, modal verbs. Otorhinolaryngology - hearing disorders, verb prefixes. Surgery - basic surgical procedures and instruments, present participle. Diabetology - disease manifestations and lifestyle modification, antonyms. Psychology - stress and its regulation, discussion. Alternative medicine - supportive treatment methods, presentation techniques.	
Recommended literature:	

Ivanová, A., Hromadová, K.: Deutsch für medizinische Berufe. Bratislava: Univerzita Komenského v Bratislave 2013. 262 p. ISBN 978-80-223-3400-6
Wortberg, Ch.: Menschen im Beruf – Medizin B2/C1, Kursbuch mit Audio-CD. Max Hueber Verlag 2016. 152 p. ISBN 9783197011905

Languages necessary to complete the course:
German, English

Notes:

Past grade distribution
Total number of evaluated students: 1

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

Lecturers: PhDr. Tomáš Hamar, PhD., Mgr. Katarína Hromadová, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Lucia Lauková, PhD., Mgr. Zuzana Motešická, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.GPK2/L-S-VLa-125-4/19	**Course title:** Gynaecological Oncology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 80 % attendance at the lectures Final exam: - theoretical exam: 2 question The overall rating is determined from the average of the ratings obtained	
Learning outcomes: Knowledge: Basics of tumor growth biology, differential diagnosis of benign and malignant tumors of female genitalia and breasts, their classification, principles and goals of their surgical treatment, postoperative care, follow-up, dispensarization of women with genetic risk of cancer, prophylactic measures in women with high genetic risk of ovarian and breast malignancies. Skills: Pap smear from the cervix uteri, basics of colposcopy, basics of ultrasound imaging of woman's genitalia, principles of lymphatic mapping of the breast, principles of fine-needle and large core-needle biopsies, possibilty in assistance in oncogynecological and breast surgeries in OP theatre.	
Class syllabus: Basics of tumor growth biology, benign tumors of female genital organs and breasts, malignant tumors of female genital organs and breasts, their classification, principles and methods of their diagnosis, basics of their surgical treatment, postoperative care, follow up, dispensarization of women with genetic risk of cancer, prophylactic measures in women at high genetic risk for ovarian and breast cancer.	
Recommended literature: K. Pohlodek: An Introduction to Breast Diseases. UK Bratislava, 2014. 105 pp. https://www.fmed.uniba.sk/fileadmin/lf/sluzby/akademicka_kniznica/PDF/Elektronicke_knihy_LF_UK/An_Introduction_to_Breast_Diseases.pdf Gynaecology by Ten Teachers, 20th Edition, CRC Press, 2017. 254 pp. Online ppt presentations on MS Teams (Prof. Pohlodek, Faculty of Medicine, Comenius University)	

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 115

A	B	C	D	E	FX
56,52	36,52	2,61	3,48	0,87	0,0

Lecturers: prof. MUDr. Kamil Pohlodek, PhD., MPH, prof. MUDr. Pavel Šuška, PhD., prof. MUDr. Vladimír Ferianec, PhD., doc. MUDr. Ivan Hollý, CSc., doc. MUDr. Martin Šimko, PhD., doc. MUDr. Mikuláš Redecha, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.GPK2/L-S-VLa-125-5/19	**Course title:** Gynaecological Oncology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 80 % attendance at the lectures Final exam: - theoretical exam: 2 question The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: Basics of tumor growth biology, differential diagnosis of benign and malignant tumors of female genitalia and breasts, their classification, principles and goals of their surgical treatment, postoperative care, follow-up, dispensarization of women with genetic risk of cancer, prophylactic measures in women with high genetic risk of ovarian and breast malignancies. Skills: Pap smear from the cervix uteri, basics of colposcopy, basics of ultrasound imaging of woman's genitalia, principles of lymphatic mapping of the breast, principles of fine-needle and large core-needle biopsies, possibilty in assistance in oncogynecological and breast surgeries in OP theatre.	
Class syllabus: Basics of tumor growth biology, benign tumors of female genital organs and breasts, malignant tumors of female genital organs and breasts, their classification, principles and methods of their diagnosis, basics of their surgical treatment, postoperative care, follow up, dispensarization of women with genetic risk of cancer, prophylactic measures in women at high genetic risk for ovarian and breast cancer.	
Recommended literature: K. Pohlodek: An Introduction to Breast Diseases. UK Bratislava, 2014. 105 pp. https://www.fmed.uniba.sk/fileadmin/lf/sluzby/akademicka_kniznica/PDF/Elektronicke_knihy_LF_UK/An_Introduction_to_Breast_Diseases.pdf Gynaecology by Ten Teachers, 20th Edition, CRC Press, 2017. 254 pp. Online ppt presentations on MS Teams (Prof. Pohlodek, Faculty of Medicine, Comenius University)	

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 35

A	B	C	D	E	FX
25,71	65,71	5,71	0,0	2,86	0,0

Lecturers: prof. MUDr. Kamil Pohlodek, PhD., MPH, prof. MUDr. Pavel Šuška, PhD., prof. MUDr. Vladimír Ferianec, PhD., doc. MUDr. Ivan Hollý, CSc., doc. MUDr. Martin Šimko, PhD., doc. MUDr. Mikuláš Redecha, PhD.

Last change: 01.12.2022

Approved by:

STATE EXAM DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.GPK1/L-VLa-ŠS-1/15	**Course title:** Gynaecology and Obstetrics
Number of credits: 2	
Recommended semester: 11., 12..	
Educational level: I.II.	
State exam syllabus:	
Last change:	
Approved by:	

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.GPK1/L-S-VLa-105/20	**Course title:** Gynaecology and Obstetrics - practice
Educational activities: **Type of activities:** practice **Number of hours:** **per week:** **per level/semester:** 80s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance on practicals	
Learning outcomes: Knowledge: o acquaintance with the day-to-day work at the gynaecological-obstetric department o acquaintance with parmacological treatment in gynaecology and obstetrics o acquaintance with pre-operative and post-operative care by patient in gynaecology and obstetrics o acquaintance of knowledge of asepsis and antisepsis Practical skills: o to conduct 2 physiological labours o assistance by gynaecological and obstetrical surgeries o the management of the patient documentation in gynaecology and obstetrics o observing of the labour and puerperium	
Class syllabus: 1. acquaintance of the organisation of the work at the gynaecological and obstetrical depertment 2. under the supervision of older doctor work in a position of secondary doctor 3. the aquirement of practical skills in gynaecology and obstetrics with the main focus on conducting physiological labour, assistance by gynaecological and obstetrical surgeries and the admission and examination of gynaecological and obstetrical patient	
Recommended literature: 1. Monga, A. et al.: Gynecology by ten Teachers. 19th ed. Oxford University Press, 2011. 224 p. ISBN 978-0340983546 2. Baker, P.N. et al.: Obstetrics by ten Teachers. 19th ed. Oxford University Press, 2011. 352 p. ISBN 978-0340983539	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 379
ABS0
100,0
Lecturers: prof. MUDr. Jozef Záhumenský, PhD.
Last change: 28.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.GPK1/L-S-VLa-015/20	**Course title:** Gynaecology and Obstetrics 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 35s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals - 1 written test (minimum 60% of correct answers) 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: Knowledge: - anatomy and physiology of female genital tract, small pelvis , abdominal cavity and breast, - embryology and the congenital developmental disease of urogenital tract, - patophysiology, screening, diagnosis, clinical course and treatment of the inflammatory diseases of female genitla tract, - family planning and contraception, - fertilization and the development of fertilased ovum, - physiological process of the pregnancy, labour and puerperium. Skills: - administration of the admission of the patient – taking history and communication, attendance on the morning rounds at the department, - basic gynaecological and obstetrical examination, - evaluation of the physiological and pathological cardiotokography, - the examination and evaluation of the basic microbiological smear, - the examination and evaluation of the functional vaginal cytology.	
Class syllabus: • Gynaecology: o The history of gynaecology and obstetrics o Anathomy of femal genital tract # The anatomy of external and internal female genital tract # The development and congenital developmental abnormalities of female genital tract o Menstrual cycle - physiology and abnormalities	

o Life periods in womans life
o Examination methods in Gynaecology and Obstetrics
o Sexual life of women and its abnormalities
o Family planing and contraception
o Inflamation of female genital tract
• Obstetrics:
o Physiological pregnancy
o Puerperium
o Vaginal labour
Physiological labour - occipital presentation
Breech position
Complication of duration of labour
o Risk and pathological pregnancy
o Iregularities of fertilised ovum / Early pregnancy complication
o Management of the fetus during pregnancy

Recommended literature:
Main responsible teacher: prof. MUDr. Miroslav Borovský, CSc.
Lectures: prof. MUDr. Miroslav Borovský, CSc., prof. MUDr. Jozef Záhumenský, PhD., MPH, prof. MUDr. Kamil Pohlodek, PhD., MPH, doc. MUDr. Miroslav Korbeľ, CSc., doc. MUDr. Alexandra Krištúfková, PhD., doc. MUDr. Rastislav Sysák, PhD., MBA, doc. MUDr. Martin Šimko, PhD., doc. MUDr. Vladimír Ferianec, PhD., doc. MUDr. Mikuláš Redecha, PhD., MUDr. Zuzana Nižňanská, PhD., MUDr. Ladislav Maršík, PhD.
Practicals/interships: doc. MUDr. Peter Štencl, CSc., MUDr. Zuzana Nižňanská, PhD., MUDr. Ladislav Maršík, PhD., MUDr. Mária Vargová, PhD., MUDr. Adam Adamec, PhD., MUDr. Ľubomír Divéky, PhD., MUDr. Michaela Feriancová, PhD., MUDr. Martin Foltín, PhD., MUDr. Petra Oťapková, PhD., MUDr. Peter Papcun, PhD., MUDr. Petra Pšenková, MUDr. Martin Alföldy, PhD., MUDr. Pavel Doležal, PhD., MUDr. Paula Drabiščáková, PhD., MUDr. Jozef Španka.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 508

A	B	C	D	E	FX
65,75	15,16	3,54	8,07	7,48	0,0

Lecturers: prof. MUDr. Miroslav Borovský, CSc., doc. MUDr. Peter Štencl, CSc., doc. MUDr. Miroslav Korbeľ, CSc., doc. MUDr. Martin Redecha, PhD., doc. MUDr. Martin Šimko, PhD., prof. MUDr. Pavel Šuška, PhD., doc. MUDr. Ivan Hollý, CSc., prof. MUDr. Jozef Záhumenský, PhD., prof. MUDr. Kamil Pohlodek, PhD., MPH, doc. MUDr. Rastislav Sysák, PhD., MBA

Last change: 28.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.GPK1/L-S-VLa-016/20	**Course title:** Gynaecology and Obstetrics 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 35s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.GPK1/L-S-VLa-015/20 - Gynaecology and Obstetrics 1	
Course requirements: - 100% attendance at the practicals - 1 written test (minimum 60% of correct answers) 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: Knowledge: o Etiology, diagnosis and treatment of sterility and infertility o Etiology, diagnosis, clinical course and treatment of urogynaecological diseases o Etiology, diagnosis, clinical course and treatment of female genital tract tumors o Etiology, diagnosis, clinical course and treatment of child and adolescenta gynaecological diseases o Theoretical knowledge about basi gynaecological and obstetric surgerical procedures o Pathological pregnancy, labour and puerperium o Birth injuries – clasification, managment and complication Skills: o Assist by the physiological labour o Basic examination of patient with urogynaecological diseases o Basic examination of patient with female oncological disease o Basic examination of the gynaecological child or adolescent patient o Basic interpretation of oncytology (PAP smear) o Assit by small gynaeolcogical surgeries (curettage, conisation, termination of pregnancy/ evacuation of uterine cavity after incomplete I.trimester abortion)	
Class syllabus: • Gynaecology: o Endometriosis o Female genital tract tumors o Breast diseases o Iregular positions of female genital organs	

o Infertile couple
o Child and adolescent gynaecology
o Gynaecological urology / urogynaecology
o Emergencies in gynaecology
o Basic gynaecology surgeries
• Obstetrics:
o Iregular positions of fetus
o Irregularities of birth mechanism, deflexion of the fetus head
o Emergencies from side of fetus during the labour
o Irregularities of the III. stage of the labour
o Birth injuries
o Pathology of puerperium
o Emergencies in obstetrics / Maternal deaths
o Basic obstetric surgeries

Recommended literature:
1. Monga, A. et al.: Gynecology by ten Teachers. 19th ed. Oxford University Press, 2011. 224 p. ISBN 978-0340983546
2. Baker, P.N. et al.: Obstetrics by ten Teachers. 19th ed. Oxford University Press, 2011. 352 p. ISBN 978-0340983539

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 514

A	B	C	D	E	FX
98,25	1,75	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Miroslav Borovský, CSc., doc. MUDr. Peter Štencl, CSc., doc. MUDr. Miroslav Korbeľ, CSc., doc. MUDr. Martin Redecha, PhD., prof. MUDr. Kamil Pohlodek, PhD., MPH, doc. MUDr. Martin Šimko, PhD., prof. MUDr. Pavel Šuška, PhD., doc. MUDr. Ivan Hollý, CSc., prof. MUDr. Jozef Záhumenský, PhD., doc. MUDr. Rastislav Sysák, PhD., MBA

Last change: 28.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.GPK1/L-S-VLa-017/19	**Course title:** Gynaecology and Obstetrics 3
Educational activities: **Type of activities:** seminar / practicals **Number of hours:** **per week:** **per level/semester:** 18s / 54s **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 11., 12..	
Educational level: I.II.	
Prerequisites: LF.GPK1/L-S-VLa-016/20 - Gynaecology and Obstetrics 2	
Course requirements: - 100% attendance on practicals and seminars State exam o practical part – administration of the medical report, taking history, examination of the patient, 2 additional practical questions theoretical part: 3 questions (in diferent topics of gynaecology and obstetrics)	
Learning outcomes: Knowledge: o theoretical knowledge about diferential diagnosis and management of emergencies in gynaecology and obstetricsa o theoretical knowledge about maternofetal medicine o basics in diferential diagnosis in gynaecology o theoretical basics in radiological methods used in gynaecology and obstetrics o the problems of marginal medical specialisation in the the relation to the gynaecology and obstetrics o ethical aspects in gynaecology and obstetricsa o management and resuscitation of newborn Skills: o improvement in the assistance by the gynaecological and obstetrical surgeries o basic interpretation of the radiological findings in gynaecology and obstetrics o improvement in gynaecological and obstetrical propedeutics o management and resuscitation of newborn	
Class syllabus: During the practicals before the state exams medical students act as secondary doctors at the department. The aim is their improvement if the gynaecological and obstetrical propedeutics, diferential diagnosis, management of patient – conservative and surgical way of management in gynaecology and obstetrics. The advanced radiological methods used in gynaecology and obstetrics are demonstrated. Medical students assisst at the operation theatre at gynaeological	

and obstetrical surgeries. They attend on the day-to-day practice on the outpatient deparment and acquire knowledge in the subspecialised fields of gynaecology and onstetrics.

Recommended literature:

1. Monga, A. et al.: Gynecology by ten Teachers. 19th ed. Oxford University Press, 2011. 224 p. ISBN 978-0340983546
2. Baker, P.N. et al.: Obstetrics by ten Teachers. 19th ed. Oxford University Press, 2011. 352 p. ISBN 978-0340983539

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 533

A	B	C	D	E	FX
83,68	9,57	5,07	1,5	0,19	0,0

Lecturers: prof. MUDr. Miroslav Borovský, CSc., doc. MUDr. Rastislav Sysák, PhD., MBA, doc. MUDr. Peter Štencl, CSc., doc. MUDr. Miroslav Korbeľ, CSc., doc. MUDr. Martin Redecha, PhD., prof. MUDr. Kamil Pohlodek, PhD., MPH, prof. MUDr. Pavel Šuška, PhD., doc. MUDr. Ivan Hollý, CSc., prof. MUDr. Jozef Záhumenský, PhD.

Last change: 28.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚHE/L-S-VLa-018/16	**Course title:** Histology and Embryology 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 28s / 38s **Form of the course:** on-site learning	
Number of credits: 6	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	

Course requirements:

The student is evaluated on the basis of his/her academic performance during the semester (control questions, written partial tests, independent work tasks, drawing and description of observed histological specimens) and participation in obligatory forms of study. Attendance at lectures is recommended, as the partial tests also contain information from the lectures.

Conditions for obtaining credits are successful completion of partial tests with an overall average of 70% (or, if necessary, passing a repeat full semester test with a minimum of 70%) and 100% attendance at the practical exercises (1 excused absence will be tolerated). If the student fails to meet the requirements, he/she may take an oral examination at a date set by the Head of the Institute during the examination period.

Grade average of partial tests or repeat full semester test: A: 100 - 95 %, B: 94 - 88 %, C: 87 - 80 %, D: 79 - 75 %, E: 74 - 70 %, Fx: 69 % and less.

Learning outcomes:

Knowledge: At the end of the course students should be able to:

1. Define and use the terms necessary to describe tissues (i.e. cytology and general histology).
2. Theoretically understand the basic steps of histological technique, from the collection of tissues to the fixation of tissues and the examination of histological specimens.
3. Identify tissue types, cells and components of the extracellular matrix in various organs of the human body.
4. Correlate the microscopic structure of tissues with their function.
5. Describe and explain fertilisation, early embryonic development and the progression of embryogenesis from fertilisation to the end of week 8.
6. Lead a discussion on these topics with regard to medical applications.

Skills: At the end of the course students should be able to:

1. Use the light microscope to identify and systematically describe various cell types and other microscopic structures within human tissues.
2. Identify basic cellular and subcellular structures from electron micrographs.

Class syllabus:

Lectures:

1. Introduction to the study of histology. History and current status of histology in the curriculum of general medical studies. Histological technique and its relevance to practice.
2. Cytomorphology. Electron microscopy. Description of selected specialised cells.
3. Introduction to the study of human tissues. Characteristics and origin of epithelial tissue. Classification of epithelial tissue. Covering and lining epithelia and glandular epithelia.
4. Connective tissue: Connective tissue proper. Functional histology of connective tissue cells and their clinical significance. Classification of connective tissue proper types. Mononuclear phagocyte system.
5. Connective tissue: Cartilage, bone and ossification. Microscopic structure of the joint, synovial membrane and articular cartilage.
6. Connective tissue: Blood and hemopoiesis. Morphology of formed blood elements. Microscopic structure of bone marrow.
7. Muscle tissue. Functional histology of skeletal, smooth and cardiac muscle.
8. Nervous tissue. Morphology of neurons and neuroglial cells. Structure of the grey and white matter of the central nervous system.
9. Introduction to the study of embryology. History and current status of embryology in the curriculum of general medical studies.
10. Fertilisation. Zygote cleavage and blastocyst development. Implantation of the blastocyst and decidual reaction of the uterine mucosa.
11. Development of extraembryonic structures (development of the amniotic cavity, yolk sac, chorionic cavity and chorion). Multiple gestation and fetal membranes of twins.
12. Clinical embryology and assisted reproduction. Teratology and teratogens. Current options for prenatal diagnosis.
13. Embryogenesis (3rd and 4th week of development) and formation of the body of the embryo. Somites. Development of the notochord and neural tube. Overview of the derivatives of the germ layers.
14. Development and functional morphology of the placenta. Placental barrier.
Practical exercises:
Introduction to practical exercises from histology and embryology. Light and electron microscope. Principles of histological technique. Study of the cell by light and electron microscopy. Introduction to tissues. Covering and lining epithelia. Glandular epithelia. Connective tissues proper. Cartilage, bone and ossification. Blood. Blood elements, differential blood count. Blood smear stained by the Pappenheim method. Muscle tissue. Nervous tissue. Histochemical and immunohistochemical methods for the demonstration of selected structures.

Recommended literature:

Mescher, A.L. Junqueira´s Basic Histology. Text and Atlas, 15th Ed, McGraw-Hill Medical Books, 2018, ISBN: 1260026175, 576 p.
Balko, J., Tonar, Z., Varga, I. and Hudák, R., 1st ed. Memorix Histology. Triton, 2018, ISBN: 9788075535771, 584 p.
Sadler, T. W. Langman´s Medical Embryology, 14th Ed, Lippincott Raven, 2018, ISBN: 1496383907, 456 p.
Moore, K.L., Persaud, T.V.N., Torchia, M.G. Before We Are Born, 10th Ed, Saunders, 2019, ISBN: 9780323608497, 350 p.

Languages necessary to complete the course:
english

Notes:

Past grade distribution Total number of evaluated students: 1570					
A	B	C	D	E	FX
18,85	13,25	22,29	15,41	28,79	1,4

Lecturers: prof. RNDr. Ivan Varga, PhD., MUDr. Paulína Gálfiová, PhD., MVDr. Ján Líška, CSc., MUDr. Mgr. Michal Miko, PhD., MUDr. Renáta Mikušová, PhD., MUDr. Simona Polakovičová, PhD., MUDr. Vanda Rísová, PhD., RNDr. Mária Kleinová, PhD., Mgr. Miroslava Juríková, PhD., MUDr. Martin Klein, PhD., MUDr. Mária Lorencová, PhD., MUDr. Abdolreza Majidi, doc. RNDr. Marianna Danková, PhD.

Last change: 27.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚHE/L-S-VLa-019/17	**Course title:** Histology and Embryology 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 28s / 38s **Form of the course:** on-site learning	
Number of credits: 7	
Recommended semester: 3.	
Educational level: I.II.	
Prerequisites: LF.ÚHE/L-S-VLa-018/16 - Histology and Embryology 1LF.ÚLBG/L-S-VLa-007/16 - Biology and Human Genetics 2	

Course requirements:

The student is evaluated on the basis of his/her academic performance during the semester (control questions, written partial tests, independent work tasks, drawing and description of observed histological specimens) and participation in obligatory forms of study. Attendance at lectures is recommended, as the partial tests also contain information from the lectures.

Conditions for obtaining credits are successful completion of partial tests with an overall average of 70% (or, if necessary, passing a repeat full semester test with a minimum of 70%) and 100% attendance at the practical exercises (1 excused absence will be tolerated). If the student fails to meet the requirements, he/she may take an oral examination at a date set by the Head of the Institute during the examination period.

Grade average of partial tests or repeat full semester test: A: 100 - 95 %, B: 94 - 88 %, C: 87 - 80 %, D: 79 - 75 %, E: 74 - 70 %, Fx: 69 % and less.

Final examination requires knowledge of Histology and Embryology 1 and Histology and Embryology 2 and consists of three parts:

• Multiple choice test with a minimum of 70%.

• Practical part consists of the evaluation of 10 histological slides, in which the student must correctly identify at least 7 organs and their staining.

• Theoretical (oral) part in which the student has to answer one question from each of the following three sections 1) histological technique, cytomorphology and general histology (tissues); 2) microscopic structure of human organs; 3) human embryology.

Failure to pass any part of the final exam is graded Fx. If the student fails the test or the practical part of the exam on the third attempt, he/she has a chance to be admitted to the theoretical (oral) part of the exam.

Learning outcomes:

Knowledge: At the end of the course students should be able to:

1. Define and use terms necessary to describe the microscopic structure of human organs (i.e. special histology).
2. Correlate the microscopic structure of organs with their function.

3. Have basic knowledge of intrauterine development of the individual from fertilisation, through the formation of germ layers and organogenesis, to birth. The course provides valuable information on the mechanism of congenital developmental defects.
4. Describe and explain human organogenesis, with particular emphasis on the anatomical structure and variability of the organs of the human body from the perspective of their prenatal development.
5. Lead a discussion on these topics with regard to medical applications.
Skills: At the end of the course students should be able to:
1. Use the light microscope to identify and systematically describe human organs with a specific focus on the craniofacial region.
2. Draw and describe simplified diagrams of the microscopic structure of organs.

Class syllabus:
Lectures:
1. Microscopic structure of the heart and blood vessels. Types of capillaries. Development of the human cardiovascular system. Fetal blood circulation and its changes after birth.
2. Microscopic structure of the digestive tube - from the oral cavity to the rectum.
3. Development of the primitive gut and its derivatives. Overview of the microscopic structure of the liver and pancreas.
4. Functional histology of lymphoid organs. Thymus, bone marrow, spleen, lymph nodes and tonsils. MALT (Mucosa associated lymphoid tissue).
5. Development and microscopic structure of the respiratory system. Self-cleaning of the respiratory system. Blood-air barrier.
6. Development of the urinary system. Microscopic structure of the kidney and the urinary tract.
7. Development of the male and female reproductive systems.
8. Microscopic structure of the testis and clinical aspects of sperm development.
9. Microscopic structure of the female reproductive system. Ovarian and menstrual cycle.
10. Pharyngeal region of the embryo and its derivatives. Development of the face and anterior neck. Microscopic structure of endocrine organs.
11. Overview of the microscopic structure of the central nervous system. Structure of the cerebral cortex, cerebellum, spinal cord and peripheral nervous system.
12. Neural tube and the development of the central and peripheral nervous system. Neural crest and its derivatives.
13. Development of the skin and skin appendages. Development of the skull, vertebral column and limbs. Overview of the microscopic structure of the skin.
14. Overview of the microscopic structure and development of human sensory organs.
Practical exercises:
Microscopic structure of the heart and blood vessels. Types of capillaries Microscopic structure of lymphoid organs. Microscopic structure of endocrine glands, hypothalamo-hypophyseal system. Microscopic structure of the oral cavity and tongue, taste buds. General microscopic structure of the wall of the digestive tract. Microscopic structure of the liver, pancreas and salivary glands. Ultrastructure of the hepatocyte. Dissé's space and sinusoids of the liver. Microscopic structure of the exocrine and endocrine parts of the pancreas. . Microscopic structure of the respiratory system. Microscopic structure of the kidney and the urinary tract. Filtration barrier of the kidney, juxtaglomerular apparatus. Microscopic structure of the male reproductive system. Testis and spermiogenesis. Glands associated with the male reproductive system. Penis a morphological basis of erection. Microscopic structure of the female reproductive system. Ovarian and menstrual cycle. Microscopic structure of the yellow body. Microscopic structure of selected organs during pregnancy (placenta, fetal membranes, umbilical cord). Microscopic structure of the brain, spinal cord and peripheral nervous system. Microscopic structure of the sensory organs. Microscopic structure of the skin and its derivatives.

Recommended literature:

Mescher, A.L. Junqueira´s Basic Histology. Text and Atlas, 15th Ed, McGraw-Hill Medical Books, 2018, ISBN: 1260026175, 576 p.

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

Sadler, T. W. Langman´s Medical Embryology, 14th Ed, Lippincott Raven, 2018, ISBN: 1496383907, 456 p.

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

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 1135

A	B	C	D	E	FX
16,74	14,54	20,26	16,74	15,42	16,3

Lecturers: prof. RNDr. Ivan Varga, PhD., MUDr. Paulína Gálfiová, PhD., MVDr. Ján Líška, CSc., MUDr. Renáta Mikušová, PhD., MUDr. Simona Polakovičová, PhD., MUDr. Vanda Rísová, PhD., MUDr. Mgr. Michal Miko, PhD., MUDr. Mária Lorencová, PhD., doc. RNDr. Marianna Danková, PhD., RNDr. Mária Kleinová, PhD., Mgr. Miroslava Juríková, PhD., MUDr. Martin Klein, PhD.

Last change: 27.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-126/19	**Course title:** History of Medicine in Slovakia
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 90% attendance at the lectures Final exam: test 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: Knowledge: The aim is to get an overview of the development of medicine and health care in the territory of today's Slovakia from the earliest times to the present day. It shows the specifics of the development in the region, within the broader context of the history of medicine in Europe. The students will gain a comprehensive picture of medieval, modern and contemporary physicians or healers, the origins and development of medical and social care, and also the development of medical sciences as such in the territory of today's Slovakia. The aim is also to show students that medicine was not an individual scientific discipline and thus to provide a general overview of social and intellectual history. The lectures are designed interdisciplinary and are conducted interactively. Skills: Among practical skills may be included critical work and interpretation of primary historical sources.	
Class syllabus: 1) Organizational meeting, introduction, terminology, chronology and periodization 2) Antiquity, Greek and Roman medicine, antiquity in Slovakia 3) The Romans and the "barbarians", the transformations of the Roman world and its traditions 4) Early Middle Ages, general description and phenomena, intellectual and spiritual climate, influence on sciences and medical theories 5) The medieval hospital, practice and physicians, universities, diseases, the Black Death 6) Personalities of humanism and the Renaissance, specifics of the early modern period and new trends in the sciences 7) Advances in medical sciences, discoveries, institutional developments in Slovakia 8) Slovak physicians, students and medicine in the 19th century	

9) Faculty of Medicine of Comenius University in Bratislava in the context of social and political changes in the first half of the 20th century
10) Summary - alternative substitute lesson

Recommended literature:

1. BOWERS, Barbara S. (ed.). The Medieval Hospital and Medical Practice. London 2007.
2. DUIN, Nancy – SUTCLIFFE, Jenny. A History of Medicine: from Prehistory to the year 2020. London; New York 1992.
3. PORTER, Roy (ed.). The Cambridge History of Medicine. Oxford 1962.
4. PRIORESCHI, Plinio. A History of Medicine, vol. IIII: Roman Medicine. Omaha 2001.
5. PRIORESCHI, Plinio. A History of Medicine, vol. V: Medieval Medicine. Omaha 2003.
6. SIRAISI, Nancy G. Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice. Chicago 2009.
7. PARK, Katharine: Medicine and Society in Medieval Europe, 500–1500. In: Medicine in Society: Historical Essays. Cambridge 1992, p. 59–90.
8. MAJOROSSY, Judit – SZENDE, Katalin: Hospitals in Medieval and Early Modern Hungary. In SCHEUTZ, Martin (ed.). Europäisches Spitalwesen : institutionelle Fürsorge in Mittelalter und früher Neuzeit. Wien - München 2008, p. 409–454.
9. GRMEK, Mirko D. (ed.): Western Medical Thought from Antiquity to the Middle Ages. Translated by Antony Shugaar. Cambridge 1998.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 54

A	B	C	D	E	FX
44,44	11,11	33,33	7,41	3,7	0,0

Lecturers: Mgr. Adam Mesiarkin, PhD.

Last change: 17.07.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚH/L-S-VLa-020/19	**Course title:** Hygiene
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 24s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2 and LF.ÚPA/L-S-VLa-055/18 - Pathological Anatomy 2	
Course requirements: - 100% attendance at the practicals - 1 written test (minimum 60% of correct answers) Final exam: - oral exam: 3 questions, the student has 20 minutes to prepare 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: Knowledge: - on the environmental impact on population health status - on the health protection and health promotion of the population and the individual - on the principles of disease prevention - on basic legislation in this areaSkills: - to know how to use the basic methods of monitoring internal and external environmental factors and the health status of population groups - to examine the nutritional status and formulate the necessary corrections to protect the health and to prevent disease of individuals and population groups - to communicate with the public on environmental, behavioral, and psychosocial factors and health at an appropriate level - to cooperate with public health managers - to work independently in the field of health counseling - ability to implement the obtained results into the practice of general practitioner and/or pediatrician	
Class syllabus: Living conditions and health. Education, training, and lifestyle concerning health. The environment and its chemical, physical, biological, and psychosocial factors. Indoor and outdoor air pollution and morbidity. Water and morbidity. Hazardous waste. Health risks of ionizing and non-ionizing radiation. Environmental noise. Urbanization and housing concerning health. Nutritional health	

risks. Unconventional nutrition. Self-assessment of nutrition and nutritional status. Public health counseling. Xenobiotics. Environmental factors concerning infectious diseases. Environment, lifestyle and chronic diseases. Basics of psychohygiene. Alcoholism, drug addiction, and prevention. Age and physiological peculiarities in primary prevention. Hygiene in the educational process. Environmental risks for children and young people. Work and health, risk factors. Physical and biological factors in the work environment. Toxic substances in the work environment. Work-related health impairment, categorization of workplaces. Work and rest regimen and occupational disease prevention. Hospital hygiene, outpatient facilities, and inpatient wards. Nosocomial infections. Hygiene documentation, current legislation. Health risk assessment and health impact assessment. The role of hygiene in disasters (natural and technological disasters, war conflicts, epidemics), problems of alternative accommodation, water supply, and nutrition.
Lectures: Introduction to Hygiene; Principles of Environmental Health, Risk Assessment; Preventive Occupational Health and Safety, Emergencies; Nutrition in Public Health and Food Safety Hygiene of Children and Youth
Practicals: Principles of the Basic Environmental Factors; Evaluation of Nutritional Status; Hospital Hygiene; Prevention of Cardiovascular Diseases; Radiation and Health Hazards, Evaluation of Hospital Hygiene; Estimation of Cardiovascular Risk

Recommended literature:
Ševčíková Ľ. and contributors: Hygiene – Environmental Medicine. Bratislava: Comenius University, 2011. 322 s. ISBN 978-80-223-2900-2.
Ševčíková Ľ. and contributors: Environmental Health – Hygiene. Bratislava: Comenius University, 2015. 253 s. ISBN 978-80-223-3930-8
Babjaková J., Sekretár S. Nutrition and Food Safety in Public Health. Bratislava: Comenius University, 2015. 136 p. ISBN 978-80-223-3932-2.
Fabiánová, E., Bátora, I. Occupational Health and Toxicology. 1st Ed. Bratislava: Comenius University, 2015. 146 p. ISBN 978-80-223-3931-5.
Bencko, V. et al. Hygiene and Epidemiology. Selected chapters. Praha: Karolinum, 2020. 238 p. ISBN 978-80-246-4306-9

Languages necessary to complete the course:
English

Notes:
The course is offered only in the summer semester.

Past grade distribution
Total number of evaluated students: 626

A	B	C	D	E	FX
51,28	28,43	14,06	4,95	1,28	0,0

Lecturers: prof. MUDr. Jana Jurkovičová, CSc., prof. MUDr. Ľubica Argalášová, PhD., MUDr. Jana Babjaková, PhD., MPH, Mgr. Alexandra Filová, PhD., RNDr. Diana Vondrová, PhD.

Last change: 31.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFBIT/L-S-VLa-169/19	**Course title:** Imaging methods in medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Continuously: - Active participation in lectures – weight 0.1 - Passing continuous written tests (at least 60 %) – weight 0.2 Final exam: - Passing the final written test (at least 60 %) - weight 0.4 - Oral exam - presentation of the selected topic - weight 0.3 Test rating: 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 weighted average of the ratings obtained.	
Learning outcomes: Knowledge: Upon successful completion of the course, students should be familiar with the physical principles of image creation in medicine as a diagnostic tool focusing on digital methods including physical effects of external factors on the body. Skills: Ability to determine the suitability of using the selected imaging method for a particular patient in terms of the usefulness of the information obtained and patient safety.	
Class syllabus: Physical principles of radiation, radiation dosimetry, radiation detection, protection against ionizing radiation, safety regulations. X-ray imaging methods - sources and properties of radiation, X-ray interaction with matter, image creation and imaging systems, skiagraphy, fluoroscopy, digital radiography, computed tomography, artifacts, application. Imaging methods using radionuclides - sources and properties of radiation, interaction of radiation with matter and its detection, preparation of radionuclides, labelling, image creation and imaging systems, positron emission tomography, single photon emission computed tomography, artifacts, application. Magnetic resonance imaging - physical principles of nuclear magnetic resonance, image creation and imaging systems, artifacts, application.	

Ultrasound imaging methods - sources and properties of ultrasound, interaction with matter, ultrasound detection, image creation and imaging systems, probes, modes, artifacts, Doppler phenomenon, Doppler systems, application.
Optical and optoelectric diagnostic methods - physical principles of methods, light reflection and refraction, light sources and properties, image creation and imaging systems, light and electron microscopy, atomic force microscopy, optical coherent tomography, endoscopy, artifacts, application.
Thermometry and thermography - infrared radiation, physical principles, properties and sources, liquid crystals, image creation and imaging systems, artifacts, application.

Recommended literature:

Allisy-Roberts, P., Wiliams, J. Farr's Physics for Medical Imaging. Edinburgh : Saunders - Elsevier, 2008, 207 p. ISBN 978-0-7020-2844-1
Webster J. G. (ed.) Medical Instrumentation. Application and Design. New York : John Wiley&Sons, Inc., 2010 (4th edition). 675 p. ISBN 978-0471-67600-3 – selected parts
Kúš P. a spol. Moderná mikroskopia a digitálne spracovanie obrazu. Bratislava : FMFI UK, 2008. 125 s. ISBN: 978-80-89186-37-2 – selected parts
Hrazdira, I., Moernstein, V., Škorpíková, J. Lékařská biofyzika a přístrojová technika. Brno : Neptun, 2006. 309 s. ISBN 80-86850-01-3 – selected parts
Holá, O., Holý, K. Radiačná ochrana. Ionizujúce žiarenie, jeho účinky a ochrana pred ionizujúcim žiarením. Bratislava : STU, 2010. 200 s. ISBN 978-80-227-3240-6 – selected parts.
Lectures on portal Mefanet – section Biophysics (http://portal.fmed.uniba.sk/)
Additional e-course (www.moja.uniba.sk)
Other available innovated literary and internet sources.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 21

A	B	C	D	E	FX
47,62	38,1	4,76	4,76	4,76	0,0

Lecturers: doc. RNDr. Mgr. Katarína Kozlíková, CSc.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IÚ/L-S-VLa-092/22	**Course title:** Immunology
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 37s / 19s **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 5.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100 % participation on the practical exercises Passing 2 written tests (each with at least 60 %) Passing final test from practicals: with at least 60 % Examination: Written part: test Test evaluation: A: 91 – 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: less than 59 % Oral part: the student answers 3 questions (from basic immunology: 2 questions; from clinical immunology: 1 question)	
Learning outcomes: Knowledge: After completing the course, the student will receive: 1. knowledge of general and clinical immunology; knowledge of innate and adaptive T-cell and antibody immunity, inflammation, cytokines, the development of the immune response and the fundamental role of cells and humoral immune factors in the immunopathogenesis of diseases. 2. knowledge of transplant immunology, autoimmune diseases, hypersensitivity reactions, allergies, anti-infective immunity, vaccinations, immunodeficiencies, anti-tumor immunity and pregnancy immunology. 3. a comprehensive view of immunity as part of the psycho-neuro-endocrine system of the body. 4. acquires knowledge about the examination of the individual's immune profile and basic knowledge about the immunodiagnostics of immunodeficiencies and, in part, immunopathological processes. Skills: 1. Know the clinical symptoms of allergies, the difference between atopy, anaphylaxis. Recognizes the manifestations of allergic diseases, anaphylactic, anaphylactoid shock, and serum sickness. 2. Knows the manifestations of basic congenital immunodeficiency conditions, their diagnosis, and treatment.	

3. He knows when and what material to take for immunological examination, he knows the basic methods for examining the immune profile of immunocompromised patients.
4. He should be able to interpret the results of basic immunological tests.

Class syllabus:

Lectures:

Milestones in the development of immunology. Immune system, definition, structure and function; tissues, organs, cells and humoral factors of immunity. Forms of immunity. Properties of innate and adaptive immunity. Organs and tissues of the immune system. Antigen. Antigen, its characteristics and properties. B-lymphocytes, plasma cells and antibodies. Basics of antibody production. Immunoglobulins, structure, their classes and subclasses. Domains, constant and variable sections, modules. Antibody binding site. Primary and secondary antibody response. Function of individual classes of immunoglobulins. Antibody genetics. Hybridomas and monoclonal antibodies. Complement system. Classical, alternative and lectin activation pathway. Vasoactive and chemotactic effects of complement. Regulatory proteins and receptors of the complement system. Biological significance of the complement system. Complement disorders, hereditary angioedema. Acute phase proteins. Humoral and cellular indicators of inflammation. Phagocytosis and professional phagocytes. Phases of phagocytosis and killing mechanisms of phagocytes. Netosis. Origin, differentiation, types and subpopulations of macrophages and their significance. Pathogen associated molecular patterns (PAMPs) and danger associated molecular patterns (DAMPs) and their recognition by pattern recognition receptors (PRR). Infectious (sepsis) and non-infectious inflammation. Membrane antigens. The most important membrane antigens of individual populations of immune system cells and their significance. T-lymphocytes, NK-, NKT-, ILC- and MAIT- cells. Origin and differentiation of T-lymphocytes. Characteristics and properties of T-lymphocytes. T-cell antigen receptor. T cell subpopulations. NK- and NKT -cells, their receptors and mechanism of their action. Natural and induced regulatory T cells. HLA-complex and its biological and medical significance. Gene map of the HLA-complex. Distribution and inheritance of HLA-molecules. HLA-molecules, biochemical structure and biological function. HLA-G as a checkpoint molecule. Presentation of antigens. Endogenous and exogenous pathways of protein antigen presentation. Presentation of lipid antigens. Cell cooperation in the immune response. Apoptosis. Cytokines. General properties of cytokines. Cytokines and their role in psycho-neuro-endocrine regulation. Role of sympathetic and parasympathetic nerve system in immune modulation. Cytokines regulating innate and adaptive immunity. The role of cytokines in the development and polarization of the immune response. Th1, Th2, Th5, Th9 and Th17 lymphocytes and their role in immunity. Pro-inflammatory cytokines and cytokines with anti-inflammatory and immunosuppressive activity. Cytokines stimulating hematopoiesis, chemokines. Immune tolerance. T-cell differentiation in the thymus; dominant and recessive tolerance. Autoimmunity. Mechanisms leading to the development of autoimmunity. Autoantigens. Genetic and hormonal predisposition to the development of autoimmune processes. Pathogenetic mechanisms of autoimmune processes. Diagnostic possibilities and immunotherapy. Autoinflammatory diseases. Hypersensitivity reactions types I-V. Immunopathogenesis of hypersensitivity conditions, classification. Type I of hypersensitivity reactions. Allergies, atopy, anaphylaxis. Diagnosis, therapy and prevention. Anaphylactic and anaphylactoid shock - symptoms and treatment. Type II of hypersensitivity reactions. ABO incompatible blood transfusions, Rh-incompatibility, drug reactions. Type III of hypersensitivity reactions. Immunocomplex inflammation. Serum sickness, Arthus reaction. Type IV of hypersensitivity reactions. Tuberculin reaction. Contact dermatitis. Granulomas. Type V. hypersensitivity reactions. Tumors and the immune system. Immunology of cancer. Immunoediting. The mechanisms of the escape of malignant cells from the reach of effector mechanisms of the immune system. Metastatic process. Immunodiagnostics and immunotherapy of tumors. Tissue, organ and stem cells transplantation. Nomenclature of transplants. HvG, GvH,

GvL reactions, selection of donor-recipient pairs, immunosuppression. Immunology of human reproduction. Immune response during physiological pregnancy. Embryo implantation. Immune system in fetal development. Immune system in the pathology of pregnancy. Immune system of the fetus, newborn and infant. Immune system of a woman's urogenital tract. Aging and immunity. Primary and secondary immunodeficiencies. General manifestations of immunodeficiencies, occurrence, division. Immunodeficient conditions with a predominance of antibody disorders, and cellular immunity. Autoimmune polyglandular syndrome (APS). Combined immunodeficiencies. Deficiency of components of the complement system. Disorders of phagocytosis. AIDS. Immunotherapy and immunoprevention. Immunostimulants, immunosuppressants, monoclonal antibodies, cytokines, enzyme therapy, vaccines, stem cell therapy.
Practicals:
Specimen collection and delivery for immunology testing. Methods based on antibody - antigen interactions. Classical serological techniques: agglutination (blood group typing), precipitation, immunoelectrophoresis, immunodiffusion techniques and nephelometry, turbidimetry. Progressive serology methods: ELISA, RIA, immunoblotting, immunofluorescence, chemiluminescence, immunochromatography (detection of antibodies against H. pylori, pregnancy rapid test). Laboratory diagnosis of SARS-CoV-2 infection – antigen and antibody tests, LAMP test. Evaluation of innate humoral immunity: Total complement activity assays (CH50, AH50). Evaluation of individual complement components (RID, turbidimetry and nefelometry). Determination of acute phase proteins (CRP-determination from capillary blood by reflectometry). Case study – hereditary angioedema and anaphylactoid shock. Evaluation of innate cellular immunity components: Isolation of leukocytes from peripheral blood, enumeration of neutrophils. Functional analysis of neutrophils - chemotactic activity, phagocytic activity and phagocytic index, microibicidal activity, metabolic activation (NBT test). Case study - chronic granulomatous disease. Evaluation of adaptive humoral and cellular immunity component: Isolation of lymphocytes. Separation of T cell subpopulations and evaluation of the number of T and B cells and their subsets (flow cytometry, FACS, MACS). Evaluation of the function of T and B cells (blastic transformation assay, determination of the levels of immunoglobulins and specific antibodies). Immunoskin tests. Diagnostics of infectious diseases based on lymphocyte activation (IGRA – principle, casuistic of tuberculosis). Laboratory methods used in transplantation immunology – HLA-typing. Serologic methods: microlymphocytotoxicity assay. Cellular methods: MLC (mixed lymphocyte culture). DNA-based methods: PCR –SSP. Video-presentation explaining DNA-based HLA-typing. Diagnostics of allergic diseases: atopy and anaphylaxis, clinical symptomatology. Anaphylactic shock – symptomatology and therapy, EpiPen demonstration. Skin tests: prick test, scarification test, intradermal skin test, epidermal test. Determination of total and allergen–specific IgE levels. Basophil-degranulation test, CD63 basophil counts. Case studies: of allergic diseases, anaphylactic shock, Arthus reaction and a serum sickness. Laboratory methods used in the diagnostics of autoimmune disorders. Determination of acute phase proteins, levels of immunoglobulins, total complement level, C3, C4 complement levels, CD4/CD8 ratio, detection of autoantibodies, determination of circulating immune complexes. Casuistic: Autoimmune polyglandular syndromes (APSII and IV). Practical experiment - rheumatoid factor determination by latex agglutination. Diagnostics of tumour processes (CRP, oncomarkers, immunophenotyping, immunohistochemistry). Laboratory diagnosis of HIV infection (ELISA, Westtern blot, CD4+ T cell counts, virus load). Laboratory assessment of the immune status – overview: evaluation of innate and acquired immunity – summary, differential blood cell counting, inflammatory markers, diagnostics of infectious diseases. Case studies, and how to solve the problem. Immunocompromised patient.

Recommended literature:
Obligatory textbooks:

1. Buc M. Basic and Clinical Immunology. 5th ed. Bratislava: Comenius University 2020, 554 pp.
2. Shawkatová I. et al. Laboratory Methods in Immunology, Bratislava: Comenius University 2014, 128 pp.
3. Video-presentations of lecturers.
Recommended textbooks:
1. Abbas AK, Lichtman, AH, Pillai S: Cellular and Molecular Immunology. 9th ed. New York: Elsevier 2022, 565 pp. (internet edition available too)
2. Chapel H, Haeney M, Misbah S, Snowden N.: Essentials of Clinical Immunology. Willey Oxford: Blackwell 2014, 365 pp.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 250

A	B	C	D	E	FX
3,2	23,2	37,2	18,0	16,4	2,0

Lecturers: prof. MUDr. Milan Buc, DrSc., doc. MUDr. Mária Bucová, CSc., doc. RNDr. Vladimíra Ďurmanová, PhD., doc. Mgr. Ivana Shawkatová, PhD., MUDr. Monika Homolová, PhD., MUDr. Juraj Javor, PhD., MUDr. Zuzana Párnická, PhD., MUDr. Magda Suchánková, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KIGM/L-S-VLa-028/20	**Course title:** Infectology
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 25s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9., 10..	
Educational level: I.II.	
Prerequisites: LF.NK1/L-S-VLa-048/19 - Neurology 2	
Course requirements: 100 % attendance during practicals - elaboration and report of seminar work - written and oral report of patient´s case Exam: - written part – test (minimum 60 %) - oral part – 2 questions Test evaluation: A: 91 – 100%, B: 81 – 90%, C: 73 – 80%, D: 66 – 72%, E: 60 – 65% Fx: 59% and less The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: general overview of the clinical presentation, diagnosis, differential diagnosis, treatment and prevention of most important infectious diseases. Basics of antibiotic stewardship. Skills: Differential diagnostics of most important syndromes in infectology (e.g. meningistis, diarrhoea, fever in travellers, fever of unknown origin). The ability to develop an optimal algorithm for the diagnosis of infectious diseases, the ability to indicate invasive and non-invasive procedures in differential diagnostics of infectious diseases. The ability to evaluate the blood smear to diagnose malaria and microscopic examination of stool for parasitological examination. The ability to indicate empiric and targeted antibiotic, antiviral and antiparasitic treatment.	
Class syllabus: Pathogen-host interaction, the course of infectious diseases, haematological and biochemical changes in infectious diseases. Peculiarities of infectious diseases in special situations and age groups. Practical exercises and internships include seminars, demonstrations of selected case reports on a large screen, demonstrations of nosological and syndromological units at the patient's bedside, demonstrations and practical demonstrations of selected laboratory tests (blood tests, urine, cerebrospinal fluid, malaria blood smear).	
Recommended literature:	

Infectious Diseases a Clinical Short Course. 4th edition. McGraw-Hill. 2020.496 p. ISBN 9781259095207
Infectious diseaes. Jiřina Hobstova (ed.) Charles University in Prague – Karolinum Press 2012. 246 p.
SL Gorbach, M. Falagas. The 5-Minute Infectious Diseases Consult.2ND Edition. London. Lippincott Williams & Wilkins. 2012. 519 p.
Selected questions from the chapters in the textbook Harison´s. Principles of Internal Medicine, 19th edition. McGraw-Hill Companies, 2013 Principles of Internal Medicine.
Selected questions from the chapters in the textbook Mandell, Douglas and Bennett. Principles and Practice of Infectious Diseases. Seventh edition. Churchill Livingstone, Philadelphia 2015. 3904

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 506

A	B	C	D	E	FX
59,29	25,89	9,29	3,75	1,58	0,2

Lecturers: doc. MUDr. Igor Stankovič, CSc., doc. MUDr. Peter Sabaka, PhD., MUDr. Matej Bendžala, PhD., MUDr. Pavlína Bukovinová, PhD., MPH

Last change: 24.05.2024

Approved by:

STATE EXAM DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK/L-VLa-ŠS-3/15	**Course title:** Internal Medicine
Number of credits: 2	
Recommended semester: 11., 12..	
Educational level: I.II.	
State exam syllabus:	
Last change:	
Approved by:	

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK5/L-S-VLa-029/18	**Course title:** Internal Medicine 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 35s / 45s **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 6.	
Educational level: I.II.	
Prerequisites: LF.IK_1/L-S-VLa-035/18 - Internal Propedeutics	
Course requirements: 1/ Compulsory 100% attendance at the practicals. 2/ Pass the final credit written test (Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less). The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - Cardiology – diseases pathophysiology, epidemiology and the impact of the diseases, basic signs and symptoms, diagnostics and differential diagnostics, basics of the prevention and treatment - Angiology – pathophysiology of the diseases of arteries, veins and lymphatic vessels, epidemiology and the impact of the diseases, basic signs and symptoms, diagnostics and differential diagnostics, basis of the prevention and treatment - ECG examination – improvement of the knowledge, basic pathological findings on ECG and their correlation with clinical condition - Examination methods and therapeutic interventions in cardiology and angiology - Improvement of the knowledge of the Internal propaedeutic Skills: - Improvement of the skills when taking history and clinical examination - Individual examination of the patient with the cardiovascular diseases, elaboration of the patient's medical record - Description of the physiological and pathological findings on the ECG - Description of the chest X-ray (heart and lungs) - Assistance by echocardiography and ergometry - Assistance by ultrasound examination of the vein system of the lower extremities Venepuncture, collection of venous and arterial blood, administration of i.v., i.m. and s.c. medication, measurement of blood pressure, pulse and body temperature	
Class syllabus: Cardiovascular diseases (incidence, epidemiology, social status). Basic and special examinations in cardiology (ECG, chest X-ray, echocardiography, ergometry, coronarography, Holter-monitoring	

of blood pressure and ECG). Heart failure. Atherosclerosis. Atherosclerotic coronary heart disease. Acute coronary syndromes. Failure of peripheral circulation (shock, syncope). Acquired valvular dysfunctions. Myocarditis. Endocarditis. Pericarditis. Cardiomyopathy. Arhytmias. Arterial hypertension. Peripheral vascular diseases. Aortic diseases. Neurocirculatory asthenia. Chronic vein disease. Thromboembolic disease (pulmonary embolism, phlebotrombosis)

Recommended literature:

SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 804

A	B	C	D	E	FX
17,04	47,14	26,99	6,72	2,11	0,0

Lecturers: prof. MUDr. Juraj Payer, PhD., MPH, doc. MUDr. Peter Jackuliak, PhD., MPH, prof. MUDr. Viera Štvrtinová, PhD., doc. MUDr. Soňa Kiňová, PhD., doc. MUDr. Jozef Bulas, CSc., doc. MUDr. Martin Čaprnda, PhD., doc. MUDr. Denisa Čelovská, PhD., doc. MUDr. Ján Lietava, CSc., doc. MUDr. Ľudovít Lukáč, PhD., prof. MUDr. Ján Murín, CSc., doc. MUDr. Mária Szántová, PhD., prof. MUDr. Viera Kupčová, CSc., doc. MUDr. Viliam Mojto, CSc., prof. MUDr. Andrej Dukát, CSc., prof. MUDr. Tibor Hlavatý, PhD., doc. MUDr. Zdenko Killinger, PhD., doc. MUDr. Tomáš Koller, PhD., prof. MUDr. Stanislav Oravec, CSc., prof. MUDr. Viliam Bada, CSc.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK5/L-S-VLa-030/19	**Course title:** Internal Medicine 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 31s / 35s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-029/18 - Internal Medicine 1	
Course requirements: 1/ Compulsory 100% attendance at the practicals. 2/ Pass the final credit written test (Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less). The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - Pneumology – disease pathophysiology, epidemiology and the impact of the disease, signs and symptoms, diagnostics and differential diagnostics, basis of the prevention and treatment, including tuberculosis.s - Examinations and therapeutic interventions in pneumology. - Rheumatology - disease pathophysiology, epidemiology and the impact of the disease, signs and symptoms, diagnostics and differential diagnostics, basis of the prevention and treatment - Examinations and therapeutic interventions in rheumatology - Improvement of the knowledge of the Internal propaedeutic Skills: - Improvement of the skills when taking history and of the patient's clinical examination - Individual examination of the patient with respiratory tract disease, elaboration of the patient's medical record - Individual examination of the patient with musculoskeletal disorder, elaboration of the patient's medical record - Assistance by the pleural puncture, assistance in examination of lung volumes and flows, assistance by the bronchoscopy - Assistance by the application of inhalant drugs including oxygen - Assistance by the evaluation of X-ray of joints, assistance by DXA and its evaluation - Improvement of the skills in describing the ECG and chest X-ray - Venipuncture, collection of venous and arterial blood, administration of i.v., i.m. and s.c. medication, measurement of blood pressure, pulse and body temperature	
Class syllabus:	

Diseases of the respiratory tract and lungs (incidence, social impact). Basic and special examinations in pneumology. Bronchial diseases. Chronic obstructive pulmonary disease. Bronchial asthma. Lung tumors. Pleural and Mediastinal diseases. Diagnostics and treatment of tuberculosis.
Diseases of joints, tendoms and bones. Basic and special examinations in rheumatology. Rheumatoid arthritis. Lupus erythematosus. Scleroderma. Dermatomyositis. Periarteritis nodosa. Sjőrgen's syndrome. Gout. Polymyositis. Vasculitis. Osteoporosis and other metabolic diseases of bones.

Recommended literature:

SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 643

A	B	C	D	E	FX
25,19	44,95	21,0	6,38	2,49	0,0

Lecturers: doc. MUDr. Martin Čaprnda, PhD., doc. MUDr. Soňa Kiňová, PhD., prof. MUDr. Viliam Bada, CSc., doc. MUDr. Mária Szántová, PhD., prof. MUDr. Viera Kupčová, CSc., doc. MUDr. Viliam Mojto, CSc., prof. MUDr. Peter Ponťuch, CSc., prof. MUDr. Andrej Dukát, CSc., prof. MUDr. Juraj Payer, PhD., MPH, prof. MUDr. Tibor Hlavatý, PhD., doc. MUDr. Peter Jackuliak, PhD., MPH, doc. MUDr. Zdenko Killinger, PhD., doc. MUDr. Tomáš Koller, PhD., doc. MUDr. Martin Dúbrava, CSc., prof. MUDr. Silvester Krčméry, CSc., MUDr. Silvia Grančáková, MUDr. Rastislav Tahotný, PhD., MUDr. Marta Hájková, CSc., doc. MUDr. Štefan Urban, CSc.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK5/L-S-VLa-031/19	**Course title:** Internal Medicine 3
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 33s / 35s **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-030/19 - Internal Medicine 2	
Course requirements: 1/ Compulsory 100% attendance at the practicals. 2/ Pass the final credit written test (Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less). The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - Gastroenterology and hepatology - disease pathophysiology, epidemiology and the impact of the disease, basic signs and symptoms, diagnostics and differential diagnostics, basics of the prevention and treatment - Examinations and therapeutic interventions in gastroenterology and hepatology - Hematology - disease pathophysiology, epidemiology and the impact of the disease, basic signs and symptoms, diagnostics and differential diagnostics, basics of the prevention and treatment - Examinations and therapeutic interventions in haematology - Improvement of the knowledge of the Internal propaedeutic Skills: - Improvement of the skills when taking history and of the patient's clinical examination - Individual examination of the patient with the gastrointestinal disease, elaboration of the patient's medical record - Digital rectal examination - Assistance by ascites puncture, liver puncture, gastrofibroscopy, colonoscopy, ERCP, ultrasound of the abdomen, nasogastric tube insertion - Individual examination of the patient with haematologic disease, elaboration of the patient's medical record - Assistance by the bone marrow puncture - Blood transfusion, examination before blood transfusion. - Improvement of the skills in describing the ECG and chest X-ray - Venipuncture, collection of venous and arterial blood, administration of i.v., i.m. and s.c. medication, measurement of blood pressure, pulse and body temperature	

Class syllabus:

Diseases of gastrointestinal tract (epidemiology, social impact). Basic and special examinations in gastroenterology and hepatology. Oesophageal diseases. Diseases of stomach. Functional dyspepsia. Diseases of small intestine. Inflammatory bowel diseases. Diseases of colon. Gastrointestinal tumors. Diseases of gall-bladder and biliary tract. Liver diseases. Diseases of pancreas.

Anemia and anemic syndrome. Myelodysplastic syndrome. Myeloproliferative diseases. Hemocoagulation disorders. Leucopenias. Trombocytopenias. Acute and chronic leukemia. Lymphomas. Transfusion of blood products. Special examinations in hematology.

Recommended literature:

SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1

KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16

GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7

KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16

JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7

GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7

COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 662

A	B	C	D	E	FX
17,67	56,04	21,0	4,23	1,06	0,0

Lecturers: doc. MUDr. Martin Čaprnda, PhD., doc. MUDr. Soňa Kiňová, PhD., prof. MUDr. Viliam Bada, CSc., doc. MUDr. Mária Szántová, PhD., prof. MUDr. Viera Kupčová, CSc., doc. MUDr. Viliam Mojto, CSc., prof. MUDr. Peter Ponťuch, CSc., prof. MUDr. Andrej Dukát, CSc., prof. MUDr. Juraj Payer, PhD., MPH, prof. MUDr. Tibor Hlavatý, PhD., doc. MUDr. Peter Jackuliak, PhD., MPH, doc. MUDr. Zdenko Killinger, PhD., doc. MUDr. Tomáš Koller, PhD., doc. MUDr. Martin Dúbrava, CSc., prof. MUDr. Silvester Krčméry, CSc., MUDr. Silvia Grančáková, MUDr. Rastislav Tahotný, PhD., MUDr. Marta Hájková, CSc.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK5/L-S-VLa-093/22	**Course title:** Internal Medicine 4
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 29s / 40s **Form of the course:** on-site learning	
Number of credits: 5	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-031/19 - Internal Medicine 3	
Course requirements: 1/ Compulsory 100% attendance at the practicals. 2/ Pass the final credit written test (Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less). Successfully passed test (minimal score 60%) is required for the admission to the oral part of the exam 3/ Pass the oral exam (successful answering of all questions). The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - Endocrinology and diabetology - disease pathophysiology, epidemiology and the impact of the disease, basic signs and symptoms, diagnostics and differential diagnostics, basics of the prevention and treatment - Examinations and therapeutic interventions in endocrinology and diabetology - Nephrology - disease pathophysiology, epidemiology and the impact of the disease, basic signs and symptoms, diagnostics and differential diagnostics, basics of the prevention and treatment - Examinations and therapeutic interventions in nephrology - Eliminations methods in renal failure. - Improvement of the knowledge of the Internal propaedeutic Skills: - Improvement of the skills when taking history and of the patient's clinical examination - Individual examination of the patient with the endocrinal disease and diabetes mellitus, elaboration of the patient's medical record - Assistance by ultrasound of the thyroid gland - Individual examination of the patient with kidney disease, elaboration of the patient's medical record - Catheterisation of urinary bladder - Assistance during elimantions methods (hemodialysis, peritoneal dialysis). - Improvement of the skills in describing the ECG and chest X-ray	

- Venipuncture, collection of venous and arterial blood, administration of i.v., i.m. and s.c. medication, measurement of blood pressure, pulse and body temperature

Class syllabus:

Endocrinopathies (epidemiology, social impact). Diseases of hypophysis and hypothalamus. Pituitary tumors. Acromegaly and gigantism. Hyperprolactinemia. Pineal gland disorders. Syndrome of inappropriate secretion of ADH. Diabetes insipidus. Cushing's disease and syndrome. Addison's disease. Diseases of the adrenal medulla. Parathyroid diseases. Thyroid diseases (hyper- and hypothyroidism, thyroiditis, tumors of the thyroid gland). Testicular insufficiency. Tumors of testes. Ovarian insufficiency, ovarian tumors. Paraneoplastic endocrinopathies.

Diabetes mellitus and its complications. Dyslipidemia. Metabolic syndrome. Obesity. Porphyrias. Acute and chronic renal insufficiency. Extracorporeal elimination methods. Indications for dialysis and kidney transplantation. Acute and chronic glomerulonephritis. Nephrotic syndrome. Systemic diseases with renal manifestations. Infections of urinary tract. Interstitial nephritis. Urolithiasis. Polycystic kidneys. Renal dysfunctions by other metabolic diseases. Tumors of urogenital tract.

Recommended literature:

SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1

KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16

GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7

KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16

JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7

GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7

COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 245

A	B	C	D	E	FX
36,33	26,94	19,18	14,29	2,86	0,41

Lecturers: prof. MUDr. Ján Murín, CSc., doc. MUDr. Jozef Bulas, CSc., prof. MUDr. Stanislav Oravec, CSc., doc. MUDr. Martin Čaprnda, PhD., prof. MUDr. Viera Štvrtinová, PhD., doc. MUDr. Soňa Kiňová, PhD., doc. MUDr. Ján Lietava, CSc., prof. MUDr. Viliam Bada, CSc., doc. MUDr. Viliam Mojto, CSc., doc. MUDr. Mária Szántová, PhD., prof. MUDr. Viera Kupčová, CSc., prof. MUDr. Peter Ponťuch, CSc., prof. MUDr. Juraj Payer, PhD., MPH, prof. MUDr. Andrej Dukát, CSc., prof. MUDr. Tibor Hlavatý, PhD., doc. MUDr. Peter Jackuliak, PhD., MPH, doc. MUDr. Zdenko Killinger, PhD., doc. MUDr. Tomáš Koller, PhD., doc. MUDr. Martin Dúbrava, CSc., prof. MUDr. Silvester Krčméry, CSc.

Last change: 30.11.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK5/L-S-VLa-033/19	**Course title:** Internal Medicine 5
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 26s / 45s **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-093/22 - Internal Medicine 4	
Course requirements: 1/ Compulsory 100% attendance at the practicals. 2/ Pass the final credit written test (Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and lessThe overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - Geriatrics and gerontology, clinical issues of older age, care of the dying patient - Basic concepts e of occupational medicine, assessment and recognition of occupational diseases. Basic toxicological concepts. Professional damage of respiratory tract, liver and kidneys. Diseases from the long, one-sided and excessive load. Diseases from the physical factors. - Basics of physiotherapy and its importance in internal medicine. Physical therapy in diseases of various systems. - Basics of differential diagnostics and management of the patients with “major symptoms of internal medicine” (dyspnoea, chest pain, abdominal pain, loss of consciousness) - Improvement of knowledge of Internal propaedeutic Skills: - Individual examination of the geriatric patient with regard to the specifics of older age, clinical signs of diseases in older age and specifics of treatment - Physical therapy in diseases of various systems - Complex history taking from patient with an emphasis on occupational part of history, managing a medical preventive examination according to work risk factors, interpretation of hygienic survey at work, assessing the eligibility to the specific jobs. - Interpretation of the results by various intoxications and preparation of the toxicological information in the Center of Toxicology - Cardiopulmonary resuscitation in internal medicine - Mamanaging of a acute ill patient with major symptoms. - Improvement of the skills in describing the ECG and chest X-ray	

- Venipuncture, collection of venous and arterial blood, administration of i.v., i.m. and s.c. medication, measurement of blood pressure, pulse and body temperature

Class syllabus:

Introduction to the diagnostics, treatment and appraisal of diseases work related and diseases caused by physical and chemical factors of environment. Diagnostics and treatment of intoxications. Assessment and recognition of occupational diseases. Definition of geriatrics and gerontology. Theoretical basics of gerontology and geriatrics. Social peculiarities of older age. Physiotherapy in internal medicine – the effect of physical stimulation, heat and water therapy, inhalation therapy, massage. Balneology. Climatic therapy. Physical therapy in cardiovascular diseases, diseases of respiratory tract, digestive system, musculoskeletal system.

Problems in acute internal medicine. Pre-operative preparation – indications for surgery, risks assessment. Differential diagnostics of major symptoms in internal medicine (dyspnea, chest pain, abdominal pain, fever etc.)

Recommended literature:

SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1

KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16

GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7

KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16

JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7

GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7

COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 585

A	B	C	D	E	FX
42,56	43,76	10,6	2,39	0,68	0,0

Lecturers: prof. MUDr. Stanislav Oravec, CSc., doc. MUDr. Jozef Bulas, CSc., doc. MUDr. Martin Čaprnda, PhD., prof. MUDr. Viera Štvrtinová, PhD., doc. MUDr. Soňa Kiňová, PhD., doc. MUDr. Ján Lietava, CSc., prof. MUDr. Ján Murín, CSc., prof. MUDr. Viliam Bada, CSc., doc. MUDr. Mária Szántová, PhD., prof. MUDr. Viera Kupčová, CSc., doc. MUDr. Viliam Mojto, CSc., prof. MUDr. Peter Ponťuch, CSc., prof. MUDr. Andrej Dukát, CSc., prof. MUDr. Juraj Payer, PhD., MPH, prof. MUDr. Tibor Hlavatý, PhD., doc. MUDr. Peter Jackuliak, PhD., MPH, doc. MUDr. Zdenko Killinger, PhD., doc. MUDr. Tomáš Koller, PhD., doc. MUDr. Martin Dúbrava, CSc., prof. MUDr. Silvester Krčméry, CSc., doc. MUDr. Igor Bátora, CSc., MUDr. Marta Hájková, CSc., doc. MUDr. Štefan Urban, CSc., doc. MUDr. Marek Kučera, PhD., MPH, MUDr. Momen Yaghy, PhD., MBA

Last change: 29.11.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK5/L-S-VLa-094/22	**Course title:** Internal Medicine 6
Educational activities: **Type of activities:** seminar / practicals **Number of hours:** **per week:** **per level/semester:** 36s / 364s **Form of the course:** on-site learning	
Number of credits: 16	
Recommended semester: 11., 12..	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-033/19 - Internal Medicine 5	
Course requirements: 1/ Compulsory 100% attendance at the practicals. 2/ Compulsory 100% attendance at the seminars. 3/ Completion of circulations at the specialized department (Dept. of haematology, Dept. of oncology, Dept. cardiology and angiology, Dept. of laboratory medicine) 4/ 5 night shifts State exam: - Practical part: practical examination of the patient (history, physical examination, diagnostic workup, draft of differential diagnostic, draft of treatment), written report of patient's examination, practical description of ECG and chest X-ray. - Oral exam: Successful answering of 3 questions.	
Learning outcomes: Knowledge: - Improvement of knowledge of internal medicine }cardiology, pneumology, gastroenterology, hepatology, nephrology, hematology, endocrinology, diabetology, rheumatology - Differential diagnostics in internal medicine - Preparing a therapeutic plan Skills: - Stay at the outpatient clinic, get familiar with the work of doctor at outpatient clinic (range of physician), learn the procedures for dealing with urgent and emergency situations - Stay at the Department of oncology, and managing of oncology patients. - Stay at the Department of haematology and transfusiology. - Stay at the Department of cardiology and angiology. - Stay at the Department of laboratory medicine. - Stay at the intensive care unit. - Practical work at internal department in the range of resident doctor: presence at morning meeting, morning round, examining of the patients, reporting at the professor's round, medical report writing, preparing diagnostic and therapeutically procedures, case history, differential diagnostics - Improvement of propaedeutic examinations and their use in daily work.	

- Evaluation of the results of various examination methods. Improvement of diagnostic and standard therapeutic procedures in internal medicine. Get familiar with all the standard non-invasive methods used in internal medicine.
- Cardiopulmonary resuscitation in internal medicine
- Improvement of skills in describing the ECG and chest X-ray
- Improvement of practical skills (venepuncture, collection of venous and arterial blood, administration of i.v., i.m and s.c. medication, catheterisation of urinary bladder, rectal examination etc.)
- Pre-operative examination and assessment of operation risk

Class syllabus:

Practical work as physician – morning meeting, morning round, examining of patients, reporting to the professor, medical record writing, preparing diagnostic and therapeutical procedures, improving differential diagnostics thinking. Stay at the outpatient department; get familiar with the work of the doctor at outpatient clinic and with the work in urgent situations. Stay at the department of oncology, haematology and transfusiology, cardiology and angiology, and laboratory medicine. Stay at intensive care unit. Cardiopulmonary resuscitation, defibrillation. Improvement of propaedeutical examinations and their use in the diagnosis workup. Evaluation of the results of auxiliary examinations. Improvement in diagnostic and standard therapeutic practice in internal medicine. Get familiar with standard non-invasive methods used in internal medicine. Independent evaluation of X-ray (chest, abdomen, urography, cholecystography, irigography). Independent evaluation of ECG. Catheterization of urinary bladder. Collection of biologic material. Venepunction, administration of injections and infusions. Abdominal puncture. Pleural puncture and examination of punctate. Assistance by various diagnostic and therapeutic procedures.

Seminars: shock and hypotension. Hypertension and its differential diagnostics. Heart failure. Peripheral vascular diseases. Hemotherapy principles. Transplantation of bone marrow. Hemostasis. Respiratory insufficiency. Acute conditions in gastroenterology. Differential diagnostics of diarrhea. Liver insufficiency. Acute conditions in endocrinology. Osteoporosis. Novelties in rheumatology. Renal insufficiency. Principles of diabetes mellitus therapy and its acute complications. Principles of antibiotic's treatment. Disorders of consciousness. Intoxications.

Recommended literature:

SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:

english

Notes:

Past grade distribution
Total number of evaluated students: 206

A	B	C	D	E	FX
74,27	18,45	5,34	0,97	0,97	0,0

Lecturers: prof. MUDr. Ján Murín, CSc., doc. MUDr. Jozef Bulas, CSc., prof. MUDr. Stanislav Oravec, CSc., doc. MUDr. Martin Čaprnda, PhD., prof. MUDr. Viera Štvrtinová, PhD., doc. MUDr. Soňa Kiňová, PhD., doc. MUDr. Ján Lietava, CSc., doc. MUDr. Ľudovít Lukáč, PhD., prof. MUDr. Viliam Bada, CSc., doc. MUDr. Viliam Mojto, CSc., doc. MUDr. Mária Szántová, PhD., prof. MUDr. Viera Kupčová, CSc., doc. MUDr. Jozef Kalužay, PhD., prof. MUDr. Peter Ponťuch, CSc., prof. MUDr. Juraj Payer, PhD., MPH, prof. MUDr. Andrej Dukát, CSc., prof. MUDr. Tibor Hlavatý, PhD., doc. MUDr. Peter Jackuliak, PhD., MPH, doc. MUDr. Zdenko Killinger, PhD., doc. MUDr. Tomáš Koller, PhD., doc. MUDr. Eva Goncalvesová, CSc., doc. MUDr. Juraj Maďarič, PhD., MPH, doc. MUDr. Igor Bátora, CSc., prof. MUDr. Angelika Bátorová, CSc., doc. MUDr. Martin Dúbrava, CSc., prof. MUDr. Silvester Krčméry, CSc., MUDr. Momen Yaghy, PhD., MBA

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK5/L-S-VLa-102/19	**Course title:** Internal Medicine – practice
Educational activities: **Type of activities:** practice **Number of hours:** **per week:** **per level/semester:** 80s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Compulsory 100% attendance at the practice in the hospital.	
Learning outcomes: Knowledge: - deepening the acquired knowledge of internal propaedeutic and internal medicine in daily clinical practice Skills: - work as a doctor resident in the internal medicine department (in the inpatient and outpatient department) - complete admission and discharge of the patient (taking history, clinical examination, preparing diagnostic and therapeutic plan, writing medical records) - participation during the head physicians rounds - improvement in practical propaedeutic investigation methods - practical evaluation of ECG findings and X-rays of the chest and abdomen - assistance and performance of practical diagnostic and therapeutic procedures (sternal, thoracic, abdominal, hepatic) and in various more complex examinations (gastroscopy, colonoscopy, bronchoscopy, ERCP), ultrasonography examination of the abdomen and vessels, - administration of various types of injections, infusions, transfusions (under the guidance of a doctor), blood sampling for various examinations, collection of urine, sputum and other biological material - work during night shifts and ER shifts	
Class syllabus: During this internship, students become acquainted with the work of a resident doctor. They work in the inpatient and outpatient departments. The student makes all necessary documentation during the admission and discharge of the patient (history taking, writing medical records for new patients and daily records of patients assigned to him, about 4 - 5 patients). All work is performed under the guidance of the head physician. In addition, the student participates during head physicians rounds. The student learns about the main pathological physical findings, in order to gain as much as possible from inspection, percussion, palpation and auscultation during the practice. Throughout the internship, students have to practically evaluate ECG findings and X-rays. Students are also	

involved in practical diagnostic and therapeutic procedures - administration of various types of injections, infusions, transfusions (under the guidance of a doctor), blood collection for various examinations, and collection of urine, sputum and other biological material. They participate in various punctures (sternal, thoracic, abdominal, hepatic) and in various more complex examinations (gastroscopy, bronchoscopy), or newer examination methods and procedures. Students should perform 3 night shifts.

Recommended literature:

SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 534

ABS0
100,0

Lecturers: prof. MUDr. Juraj Payer, PhD., MPH, doc. MUDr. Soňa Kiňová, PhD., doc. MUDr. Viliam Mojto, CSc.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.IK_1/L-S-VLa-035/18	**Course title:** Internal Propedeutics
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 37s / 50s **Form of the course:** on-site learning	
Number of credits: 6	
Recommended semester: 5.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-VLa-003/17 - Anatomy 3 and LF.FyÚ/L-S-VLa-014/17 - Physiology 2	
Course requirements: 1/ Compulsory 100% attendance at the practicals. 2/ Pass the final credit written test (Evaluation of the test: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less). Successfully passed test (minimal score 60%) is required for the admission to the oral part of the exam 3/ Pass the oral exam (successful answering of all questions). The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: - History of internal medicine. Content and mission of internal medicine. - Parts of patient's history and their importance in the differential diagnostics. - Symptoms and syndromes of various system diseases and their importance in internal propaedeutic. - Basics of physical examination of the patient }inspection, palpation, percussion, auscultation, examination of head, neck, chest, abdomen and limbs) - ECG – basic parts of ECG curve, basic physiological and pathological findings on ECG - X-ray of the chest and abdomen – description, basic findings. - Theoretical basis of laboratory exams in internal medicine, review, indications and evaluation of the results. - Theoretical basis of special examinations in internal medicine (ultrasound, endoscopy etc.). - Theoretical basis of diagnostic and therapeutic procedures in internal medicine (puncture of ascites, pleural puncture, puncture of bone marrow, urine examination etc). Skills: - First contact with the patient and history taking. - Basis of clinical examination of the patient – status praesens generalis and status praesens localis (examination of head, neck, chest, abdomen and limbs). - Individual examination of the patient and medical record writting. - Basic description of ECG - Basic description of chest and abdomen X-ray	

- Venipuncture, collection of venous and arterial blood, administration of i.v., i.m. and s.c. medication, measurement of blood pressure, pulse and body temperature

Class syllabus:
Patient's history – general (current disease, personal and family history, epidemiological and social history, lifestyle, habits). Patient's history – special (according to the disease), main clinical symptoms of the diseases. Status praesens generalis. Status praesens localis. Physical examination (inspection, palpation, percussion, auscultation) of the head, neck, chest, abdomen, limbs and musculoskeletal system. Evaluation of ECG. X-ray diagnostics and imagining techniques. Laboratory examinations in internal medicine. Special examination in internal medicine. Individual examination of the patient and medical record writing.

Recommended literature:
SWARTZ, MH. Textbook of physical diagnosis: history and examination, 7th edition. Philadelphia: Elsevier Saunders 2014. ISBN: 978-0-3232-2148-1
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
KUMAR, P., CLARK, M. Kumar and Clark´s Clinical Medicine, 9th edition. Philadelphia: Elsevier Saunders, 2016.1456 pp. ISBN: 978-0-70020-660-16
JAMESON, L., FAUCI, A., KASPER, D., HAUSER, S., LONGO, D., LOSCALZO J. Harrison´s Priniciples of Internal Medicine 20th ed. New York: McGraw-Hill, 2018. ISBN 978-1-25-964404-7
GOLDMAN, L. et al. Goldman´s cecil medicine, 25th edition. Philadelphia: Elsevier Saunders, 2016.3024 pp. ISBN 978-1-4577-5017-7
COLLEDGE, N.R. et al. Davidson´s Principles and Practice of Medicine, 22nd edition. Edinburgh: Churchill Livingstone, 2014. 1392 pp. ISBN 978-0-7020-5035-0

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 796

A	B	C	D	E	FX
31,91	25,0	20,1	11,56	11,06	0,38

Lecturers: prof. MUDr. Stanislav Oravec, CSc., doc. MUDr. Jozef Bulas, CSc., prof. MUDr. Viera Štvrtinová, PhD., doc. MUDr. Soňa Kiňová, PhD., doc. MUDr. Ján Lietava, CSc., doc. MUDr. Ľudovít Lukáč, PhD., prof. MUDr. Ján Murín, CSc., doc. MUDr. Martin Čaprnda, PhD., doc. MUDr. Denisa Čelovská, PhD., prof. MUDr. Viliam Bada, CSc., doc. MUDr. Mária Szántová, PhD., prof. MUDr. Viera Kupčová, CSc., doc. MUDr. Viliam Mojto, CSc., prof. MUDr. Andrej Dukát, CSc., prof. MUDr. Juraj Payer, PhD., MPH, prof. MUDr. Tibor Hlavatý, PhD., doc. MUDr. Peter Jackuliak, PhD., MPH, doc. MUDr. Zdenko Killinger, PhD., doc. MUDr. Tomáš Koller, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-160/19	**Course title:** Introduction to Healthcare Management
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 90% attendance at the lectures Final exam: - completing the task on the assigned topic - oral exam: 1 question	
Learning outcomes: The course aims to provide students with basic knowledge and skills in healthcare management and enhance the professional competencies of future medical doctors. Knowledge: After successful completion of the course, students will be able to: - Understand the importance and functions of management and explain the basic managerial terms and processes. - Discuss the role of the management in healthcare. - Understand the organization and financing of health care in different types of health systems - Understand the role of organizational and human resource management in healthcare. - Understand the core concepts and measurement tools of quality and safety in health care and the role of organizational culture. - Describe the new approaches and strategies for process improvement and problem-solving in healthcare. - Understand the basic principles of health technology assessment Skills: After successful completion of the course, students will be able to: - Apply systemic, professional, and creative approaches to identify and address the problems and challenges in healthcare facilities. - Demonstrate and apply knowledge of strategic planning and decision-making in healthcare organizations. - To analyse and benchmark different types of health systems - To collect data and analyze the external and internal environment of health care organizations. - Apply new managerial tools and models in the management of healthcare facilities	

- Work effectively in a team and apply principles of holistic leadership.
- Apply the principles of HTA in decision-making process in provision of healthcare

Class syllabus:

Lectures:

Management – basic terminology, functions, history. Healthcare management. External environment and internal environment of healthcare organizations. Financing health care. Health systems: structure, typology and benchmarking. Healthcare organizations: characteristics, types, forms. Organizational structure. Organizational culture (typology). Mobbing and discrimination at workplace and its prevention. Strategic management and planning. Mission, goals and tasks of organization. SWOT analysis. Functions, roles and skills of manager. Managerial processes. Leadership. Management styles. Work groups, teamwork. Managerial communication. Human resource management. Assessment and motivation of employees in health care organization. Patient safety and risk management in health care organizations. Quality management in health care. Lean management in healthcare (Lean Six Sigma). Health technology assessment.

Recommended literature:

Kosticova M. (ed.). Social Medicine. Bratislava: Comenius University, 2015.
Robbins P., Coulter M. Management. 11th ed. New Jersey: Pearson Education, Inc., 2012
Walshe K., Smith J. (eds). Healthcare Management. Maidenhead, England: Open University Press, 2011.
Healey, B.J., Marchese, M. C. Foundations of Health Care Management : Principles and Methods. John Wiley & Sons, 2012
Lampe, A., Challenges and Opportunities in Healthcare Leadership: Voices From the Crowd in Today's Complex and Interprofessional Healthcare Environment, NC: Information Age Publishing. 2022
World Health Organization: Patient safety incident reporting and learning systems: technical report and guidance. Geneva: World Health Organization; 2020
Dheepa Rajan, Irene Papanicolas, Marina Karanikolos, Kira Koch, Katja Rohrer-Herold, Josep Figueras. Health system performance assessment: A primer for policy-makers. Policy Bref 49, WHO, 2022

Languages necessary to complete the course:

english

Notes:

The course has a limited capacity of 20 students.

Past grade distribution

Total number of evaluated students: 109

A	B	C	D	E	FX
95,41	2,75	0,92	0,92	0,0	0,0

Lecturers: doc. MUDr. Michaela Kostičová, PhD., MPH, doc. Ing. Milan Fekete, PhD., Mgr. et Mgr. Silvia Capíková, PhD., Ing. Magdaléna Veselská

Last change: 17.07.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚMB/L-S-VLa-068/17	**Course title:** Introduction to Science
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 25s **Form of the course:** on-site learning	
Number of credits: 1	
Recommended semester: 4.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Successful completion of a written test (at least 60% correct answers) Evaluation of the test: A: 91-100%, B: 81–99%, C: 73–80%, D: 66–72%, E: 60–65%, Fx: 59% and less	
Learning outcomes: Knowledge: - The principles of evaluation of the quality of scientific research will be explained, the students will gain knowledge about the possibilities of searching and retrieving relevant information as well as about the evaluation of information sources. - Students will acquire knowledge about the principles of scientific work in biomedicine, the planning, evaluation and critical evaluation. - Students will become familiar with the requirements for master theses and dissertations, they will learn basics of writing of scientific publications. Skills: - Students will learn how to find and evaluate information in bibliographic databases. - Students will be able to correctly apply the most frequently used statistical tests. - Students will be able to critically evaluate a scientific article in terms of its content, form and source. - Students will be able to interpret the results of scientific work.	
Class syllabus: Scientific principles in biomedicine. Information sources and their quality. Bibliographic databases and search. Descriptive statistics. Statistical testing. Scientific texts and diploma theses. Abstract, citations and references. Design of experiments. Presentation and interpretation of results. Biases and frauds in science.	
Recommended literature: Lectures at www.imbm.sk Katz, MJ: From Research to Manuscript: A Guide to Scientific Writing, Springer, 2009 Glasser, SP: Essentials of Clinical Research, Springer, 2008	

Doumont, J: English Communication for Scientists. Cambridge, MA: NPG Education, 2010

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 1198

A	B	C	D	E	FX
12,44	12,35	17,78	21,87	24,21	11,35

Lecturers: doc. MUDr. Ing. Peter Celec, DrSc., doc. MUDr. RNDr. Roman Gardlík, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-161-4/19	**Course title:** Introduction to the History of Medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance - written test (minimum 60% of correct answers) and essay on chosen topic 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: A comprehensive look at medicine through the eyes of history, using the most interesting medical practices of the past. Provide medical students with a general overview of the history of medicine and health care. Knowledge: Periodisation of the history of medicine, knowledge of the most important doctors and discoveries related to the history of medicine. Skills: Orientation in space and time, critical thinking, working with historical sources and scientific literature.	
Class syllabus: Introducing the topic; History of medicine as a scientific discipline. Prehistoric medicine through the eyes of paleopathology; Advantages/disadvantages of the Neolithization (Neolithic revolution). Papyrus as a source Common and unusual medical procedures; Medicine in Mesopotamia. Tradition of Chinese and Indian Medicine; Past - present – future? Ancient Greece - the cradle of scientific medicine? Hippocrates, the Father of Medicine? Medicine of Ancient Rome; Galenos, his prodecessors and followers. Eastern and Western healthcare systems; Parallels and differences; Monastic medicine Christianity as a social religion. Medieval Islamic medicine; Islam as a social religion. Schola Medica Salernitana and Septem artes liberales; First European universities; The most famous faculties of medicine in Early modern period. Renaissance and Enlightenment not only in medicine; Human anatomy and Andreas Vesalius; Scientific medicine of the 19th century; Soul and body; Women in science, women in medicine. Questions and answers or what it was all about.	
Recommended literature:	

BOWERS, Barbara S. (ed.). The Medieval Hospital and Medical Practice. London 2007 DUIN, Nancy – SUTCLIFFE, Jenny. A History of Medicine: from Prehistory to the year 2020. London; New York 1992.
HALIOUA, Bruno – ZISKIND, Bernard. Medicine in the Days of Pharaohs. London 2005.
PORTER Roy. The Greatest Benefit to Mankind: A Medical History of Humanity. London 1999.
PORTER, Roy (ed.). The Cambridge History of Medicine. Cambridge 2006.
PRIORESCHI, Plinio. A History of Medicine, vol. I: Primitive and Ancient Medicine. Omaha 1996.
PRIORESCHI, Plinio. A History of Medicine, vol. IV: Byzantine and Islamic Medicine. Omaha 2001.
PRIORESCHI, Plinio. A History of Medicine, vol. V: Medieval Medicine. Omaha 2003.
SIRAISI, Nancy G. Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice. Chicago 2009

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 73

A	B	C	D	E	FX
98,63	0,0	1,37	0,0	0,0	0,0

Lecturers: Mgr. Matej Gogola, PhD.

Last change: 17.07.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-038/16	**Course title:** Latin Medical Terminology 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% 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 basic medical terminology with an emphasis on anatomical nomenclature. Mastery of basic grammar to understand the structure of specialized anatomical terms. Knowledge of terms of Latin and Greek origin, which are the basis of professional medical terminology. Skills: Language competence enabling the highest possible level of obtaining information and knowledge from professional sources; the ability to understand the structure of Latin anatomical terms and to use them correctly; ability to use Latin medical terminology in oral speech or professional text.	
Class syllabus: Introduction to the study of Latin. Brief historical overview. Pronunciation, basic grammatical concepts, declension of nouns, overview of declensions, structure of multi-word terms. First Latin and Greek declension. Adjective of the first declension. Second Latin and Greek declension. Adjective of the second declension. Third declension – consonant stems. Third declension – vowel stems: masculine and feminine. Third declension - vowel stems: neuter. Fourth and fifth declination. Adjectives of the third declension. Comparison of adjectives.	
Recommended literature: Bujalková, M., Šimon, F.: Graeco-Latin Medical Terminology. Martin: Osveta 2017. 190 p. ISBN 978-80-8063-451-3	
Languages necessary to complete the course: English	

Notes:					
Past grade distribution Total number of evaluated students: 1629					
A	B	C	D	E	FX
38,74	23,27	15,96	10,5	10,13	1,41
Lecturers: PhDr. Tomáš Hamar, PhD., Mgr. Angela Škovierová, PhD., Mgr. Eva Taranová, PhD., Mgr. Oľga Vaneková, PhD., Mgr. Daniela Rošková, PhD., Mgr. Melinda Vasiľová, PhD., Mgr. Ema Pavľáková, PhD., Mgr. Ivan Lábaj, PhD., Mgr. Mária Šibalová, PhD., Ing. Janka Bábelová, PhD., Mgr. Radoslav Ďurajka, PhD., Mgr. Lucia Lauková, PhD., Mgr. Marek Šibal, PhD.					
Last change: 23.05.2024					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-039/16	**Course title:** Latin Medical Terminology 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: 2	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.ÚCJ/L-S-VLa-038/16 - Latin Medical Terminology 1	
Course requirements: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the overall assessment) and one exam test (200 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 basic medical terminology with an emphasis on clinical nomenclature. Learning the basics of word formation. Acquiring knowledge from clinical terminology, creation of professional terms. Ability to read professional texts with understanding. Reading and analyzing medical reports. Knowledge of terms and phrases used in medical prescriptions. Skills: Language competence enabling the highest possible level of obtaining information and knowledge from professional sources; ability to understand the structure of Latin and Greek anatomical and clinical terms; ability to understand medical reports; competence to use professional terms correctly; ability to use Latin medical terminology in oral speech or professional text.	
Class syllabus: Anatomical nomenclature and clinical terminology (differences). Repetition and consolidation of declensions. Comparison of adjectives. Third Greek declension – consonant and vowel. Formation of clinical terms with suffixes -itis, -osis, -oma. Numerals and verb forms in medical terminology. Recipe construction and recipe examples. Practicing writing recipes. Latin and Greek prefixes. Latin and Greek suffixes. Adaptation of Greek names of diseases. Adverbs in medical terminology. Compound word in medical terminology. Pathological-anatomical diagnosis, examples. The Hippocratic Oath. Latin memorabilia.	
Recommended literature: Bujalková, M., Jurečková, A.: Greco-Latin Medical Terminology. Martin: Osveta 2017. 190 p. ISBN 978-80-806-3451-3	
Languages necessary to complete the course:	

English

Notes:

Past grade distribution

Total number of evaluated students: 1573

A	B	C	D	E	FX
44,12	26,32	15,58	8,07	5,34	0,57

Lecturers: PhDr. Tomáš Hamar, PhD., Mgr. Angela Škovierová, PhD., Mgr. Oľga Vaneková, PhD., Mgr. Melinda Vasiľová, PhD., Mgr. Ema Pavľáková, PhD., Mgr. Mária Šibalová, PhD., Ing. Janka Bábelová, PhD., Mgr. Radoslav Ďurajka, PhD., Mgr. Lucia Lauková, PhD., Mgr. Marek Šibal, PhD.

Last change: 22.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLChB/L-S-VLa-041/17	**Course title:** Medical Biochemistry 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 36s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 3.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% participation in practical exercises and seminars, elaboration of protocols Course evaluation: credit test - 24 questions 4 answers + 6 creative questions (achieve at least 80% points) Test rating:A: 97-100%, B: 93-96%, C: 89-92%, D: 85-88%, E: 80-84%, Fx: 79% and less	
Learning outcomes: Knowledge: - acquisition of basics of metabolic processes - acquisition of basic knowledge of cell energy, carbohydrate, lipid, amino acid and nucleotide metabolism - gaining basic knowledge about regulation metabolic processes Skills: - acquisition of basic skills from laboratory practice - acquire the ability to understand the basics of metabolism and molecular mechanisms of functioning of organs and tissues of the human body - acquisition of the ability to evaluate the results of laboratory tests in relation to potential pathological changes in the body	
Class syllabus: Biological oxidations and their importance in the body. Energy production in the cell - terminal oxidation. Principles of allosteric and hormonal regulation in the body. Intermediate metabolism - compartmentation and energy balance of metabolic pathways. Carbohydrate metabolism (glycolysis, gluconeogenesis, glycogenesis and glycogenolysis, pentose metabolism). Influence of substrate and oxygen availability on energy production for the organism. Maintenance and disorders of glycemic control. Metabolism of lipids, phospholipids and steroids (FA synthesis, FA oxidation, TAG synthesis, lipolysis, ketogenesis, phospholipid and cholesterol synthesis). Lipoprotein function and metabolism, hyperlipoproteinemia. Amino acid and protein metabolism. Ammonia detoxification - organ and cell compartmentation. Disorders of ammonia metabolism. Tetrapyrrole metabolism. The role of the kidneys in maintaining homeostasis and excretion of waste products.	

Recommended literature:
Practical exercises in biochemistry. Bratislava, Asklepios, the last edition
Champe, Harvey: Biochemistry. J.B. Lippincott Company, the last edition

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 1190

A	B	C	D	E	FX
4,45	11,68	15,88	20,0	32,52	15,46

Lecturers: prof. MUDr. Ladislav Turecký, CSc., doc. RNDr. Monika Ďurfinová, PhD., prof. RNDr. Jana Muchová, PhD., doc. MUDr. Viera Rendeková, CSc., doc. RNDr. Eva Uhlíková, CSc., prof. Ing. Ingrid Žitňanová, PhD., doc. Ing. Mária Chomová, PhD., RNDr. Zuzana Országhová, PhD., Mgr. Ľubomír Kuračka, PhD., Ing. Lucia Laubertová, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLChB/L-S-VLa-042/17	**Course title:** Medical Biochemistry 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 36s / 36s **Form of the course:** on-site learning	
Number of credits: 6	
Recommended semester: 4.	
Educational level: I.II.	
Prerequisites: LF.ÚLChB/L-S-VLa-037/16 - Medical Chemistry and LF.ÚLChB/L-S-VLa-041/17 - Medical Biochemistry 1	
Course requirements: 100% participation in practical exercises and seminars, elaboration of protocols Course evaluation: - writen part – 50 questions (achieve at least 80% points) - oral part – 2 questions (metabolism + functional biochemistry) Test rating:A: 97-100%, B: 93-96%, C: 89-92%, D: 85-88%, E: 80-84%, Fx: 79% and less	
Learning outcomes: Knowledge: - to gain knowledge about metabolic processes in the cells of the human body as a basis for understanding the function of organs - to gain knowledge for understanding the biochemical basis of the function of tissues and organs of the human body - gain knowledge about the molecular mechanisms of regulation of organ function from gene expression to the level of the whole organism - to gain knowledge about the relationships of metabolic processes in tissues as a basis for understanding the context important for the needs of clinical biochemistry Skills: - acquire basic laboratory skills for examination by bed side chemistry methods and in a reference laboratory - the ability to understand the functioning of the tissues and organs of the human body at the molecular level - on the basis of an understanding of the function of tissues and organs at the molecular level, to acquire the ability to understand changes in molecular processes in pathological circumstances and to understand the molecular mechanisms of drugs action	
Class syllabus: Nucleotide and nucleic acid metabolism. Proteosynthesis. Gene expression, apoptosis and regulation of cell cycle. Signal transmission mechanisms, autocrine and paracrine regulation. Endocrine regulation - insulin, glucagon, thyroid hormones, steroid hormones, adrenal medulla	

hormones, protein hormones. The role of the autonomous nervous system in regulatory processes. CNS biochemistry - specific characteristics of metabolism in CNS tissue and their relation to CNS function and structure. Plasma proteins. Biochemistry of connective tissue, bone and adipose tissue. Biochemistry of muscle and muscle contraction. Biochemistry of kidneys and pathological components of urine. Liver biochemistry and xenobiochemistry. GIT biochemistry and digestion. Acid-base balance. Biochemistry of minerals and trace elements. Biochemistry of diabetes. Clinically important enzymes.

Recommended literature:
Practical exercises in biochemistry. Bratislava, Asklepios, the last edition
Champe, Harvey: Biochemistry. J.B. Lippincott Company, the last edition

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 1000

A	B	C	D	E	FX
21,2	11,9	17,9	15,7	22,4	10,9

Lecturers: prof. MUDr. Ladislav Turecký, CSc., doc. MUDr. Viera Rendeková, CSc., doc. RNDr. Eva Uhlíková, CSc., doc. Ing. Mária Chomová, PhD., doc. RNDr. Monika Ďurfinová, PhD., Ing. Lucia Laubertová, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFB/L-S-VLa-040/16	**Course title:** Medical Biophysics
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 36s **Form of the course:** on-site learning	
Number of credits: 8	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals - 2 written test (minimum 60% of correct answers) - 14 protocols from practicals must be measured Final exam: -written test (min. 60 %) Test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%. - oral theoretical exam: 2 question from theoretical and practical lessons	
Learning outcomes: 1. To provide the main knowledge about basic physical phenomenon occuring in human body under health and illness. 2. To teach the prevention from damage by physical factors and to study their targeted elimination 3. To gain the both theoretical and practical knowledge and skills in application of diagnostics and therapeutics methods in medicine.	
Class syllabus: Lectures: Biophysics of the cell. Active and passive transport through cell membrane. Diffusion, osmosis, medical application. Physical properties of cell membrane, organs and tissues. Registration and propagation of the signal. Resting membrane potential, action potential. Processing and diagnostic use of proper and induced biosignals. Biophysics of blood circulation. Heart as a pump. Blood flow. Blood pressure, principles of measurement. Thermal radiation. Thermography. Liquid crystals. Biophysics of breathing. External and internal breathing. Sound. Biophysics of sound analyser. Origin of human voice. Physical characteristic of human voice. Therapeutic use of interaction of physical factors with human body. Application of electrical impulses in medicine. Electrical safety. Physical ground and use of ultrasound in medicine. Doppler effect. Biophysical grounds of optical methods in medicine. Sources of light. Reflection, refraction and diffraction of light. Optical and electron microscope. Biophysics of eye. Concept of electric dipole and double-layer. Effect of electric current on human body. Alternating and direct electric current and their	

application. Biophysics of tissues and organs. Biophysics of locomotion system. Biophysics of bones, tends and joints. Biophysics of muscles, muscle contraction. Biophysics of excitation processes. Electrical properties of cells, tissues and organs. Electric signals measured on the body surface (ECG, EEG, EMG, ERG). Structure of matter from biophysical point of view. Kinds of radioactive radiation. Radioactive decay. Interaction of ionising and non-ionising radiation with environment. Dosimetry. Medical use of radiation. Radiometry and photometry. Use of ionising radiation in medicine. Imaging methods using radionuclides. X-rays and imaging methods. Basics of thermodynamics. First, second and third thermodynamic law. Thermodynamics of biological systems. Thermodynamic properties of biological systems. Molecular biophysics. Interactions among particles (chemical bonds). Creation of molecules. Properties of water. Gases and condensed systems. Physical properties of biological liquids and gases. Fluids flow. Basic laws for gases.
PRACTICAL TRAININGS:
Safety and health protection rules, physical quantities, conversion of physical units, measurement errors and uncertainties, tables and graphs, basic statistics, microclimatic factors, thermometry, illuminance, visual acuity, refractometry, spectrophotometry, stalagmometry, viscometry, ECG analysis, electrical heart axis, anthropometry, body composition, blood pressure measurement, ultrasonography imaging, blood flow velocity measurement, radiation absorption, dosimetry

Recommended literature:

1.Practical tasks in medical biophysics. Martin: Osveta, 2013. 143 s. ISBN 978-80-8063-402-5
2.KUKUROVÁ ELENA et al. Basics of Medical Physics and Biophysics for electronic education of health professionals. Digital study text. Bratislava : Asklepios, 2013, 232 p. ISBN 978–80–7167–177–0. [online]. Available on Internet: <http://www.fmed.uniba.sk/fileadmin/user_upload/editors/ustavy/fyzika/Literatura_2013/Basics_of_Biophysics.pdf>.
3. KUKUROVÁ ELENA et al. Medical Physics in questions and answers. Interactive study text. Bratislava : Asklepios, 2013, 95 p. ISBN 978–80–7167–174–3. [online]. Available on Internet: <http://www.fmed.uniba.sk/fileadmin/user_upload/editors/ustavy/fyzika/Literatura_2013/Physics_in_questions.pdf>.
4. KOZLÍKOVÁ, K. – MARTINKA, J. Theory and tasks for practicals on medical biophysics. 1. vyd. Brno : Tribun, 2010. 248 s. ISBN 978-80-7399-881-3
5. Silverthorn D.U. Human physiology: An integrated approach. New York: Pearson, 2018, ISBN-13: 978-0-321-55980-7

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 1599

A	B	C	D	E	FX
3,06	18,7	35,27	24,89	11,38	6,69

Lecturers: doc. RNDr. Martin Kopáni, PhD., doc. RNDr. Mgr. Katarína Kozlíková, CSc., doc. RNDr. Pavol Vitovič, PhD., doc. RNDr. Beata Čunderlíková, PhD., RNDr. Eva Kráľová, PhD., RNDr. Jaroslav Varchola, PhD., PhDr. Michal Trnka, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLChB/L-S-VLa-037/16	**Course title:** Medical Chemistry
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 36s / 36s **Form of the course:** on-site learning	
Number of credits: 7	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Conditions for the recognition of the practical part of the teaching: - 100% attendance at practical exercises - completion of laboratory protocols - passing weekly tests (minimum 50% score required on each test) Final exam: written form Part A - progressive online test (minimum 60% score required to proceed to parts B and C) Part B - calculations questions Part C - two creative questions Evaluation of the exam (Part B + C): A: 93 - 100%, B: 86 - 92%, C: 80 - 85%, D: 75 - 79%, E: 70 - 74%, Fx: 69% and below.	
Learning outcomes: Knowledge: - Acquiring knowledge about the relationship between the structure, properties, and functions of biologically significant compounds such as carbohydrates, lipids, proteins, nucleic acids, and vitamins, which enable effective study and comprehensive understanding of metabolic processes in the human body and their regulation under physiological and pathophysiological conditions. - Gaining knowledge about the biological function and possible toxicity of inorganic and organic compounds. Skills: - Developing the ability to understand the mechanisms of reactions occurring in cells. - Acquiring practical experience in the field of physicochemical and biochemical methods used in laboratory and clinical practice. - Ability to independently create a clear record of performed laboratory procedures and to evaluate and correctly interpret the obtained results.	
Class syllabus: Lectures: Chemical composition of living systems, function of biogenic elements in the body. Toxicologically significant elements and their compounds, therapeutic chelating agents. Oxidative stress, its	

consequences on the body, and antioxidant systems in the body. Dispersed systems in relation to the organism, types of dispersed systems. Colligative properties of solutions. Significance of osmotic pressure in the body, edema. Use of dialysis in medicine.
Kinetics and equilibrium of chemical and biochemical processes. Protolytic reactions, acid-base balance of the internal environment of the body. Oxidation-reduction processes as the basis of biological oxidations.
Organism as a thermodynamic system, acquisition, transformation, and utilization of energy in biological systems. Characterization of the structure of bioorganic compounds and their biochemically significant reactions. Properties and biochemically important reactions of natural substances:
Saccharides - monosaccharides, their structure, reactions, and biological significance. Derivatives of monosaccharides and their biological significance. Non-enzymatic glycation in conditions of diabetes mellitus. Disaccharides. Homo- and heteroglycans, proteoglycans, and glycoproteins.
Lipids - classification of lipids, their composition, and biological function. Chemical composition and function of biological membranes, regulatory functions of steroids and eicosanoids. Lipoproteins, their classification, and function. Terpenes.
Amino acids - structure of proteinogenic amino acids, their properties, and basic reactions occurring within their metabolism. Peptide hormones and other biologically active peptides. Proteins - classification, properties, and biological function.
Nucleic acids - nucleotides and their components. DNA, RNA - structure, properties, and biological significance. Structure of biologically significant free nucleotides. Mutations and mutagenic agents.
Enzymes as biocatalysts - structure and biological function, kinetics, and mechanism of their action. Activation and inhibition of enzymes as the basis for the regulation of biochemical processes. Importance and utilization of enzymes in medicine. Vitamins and their coenzyme forms as enzyme cofactors.
Seminars:
Physicochemical methods used in chemical and biochemical laboratories. Spectrophotometry, chromatographic methods, potentiometry, and centrifugation. Biogenic elements and their biological significance, toxic elements and their compounds. Properties and significance of free radicals in physiological and pathophysiological processes of the body, antioxidants. Composition and properties of solutions, diffusion, dialysis, osmosis, and osmotic pressure. Colloidal osmotic pressure, its significance in the body. Calculations of composition, osmolarity, and ion strength of solutions. pH and its significance for the course of chemical processes. Biochemical significance of protolytic reactions, buffering systems, and maintenance of acid-base balance in the body. Calculations of pH of acids, bases, and buffer solutions. Characterization of the structure of bioorganic compounds. Biochemically significant reactions of organic compounds. Structure of mono-, di-, and polysaccharides. Significant reactions of monosaccharides. Lipids - classification, composition, and function in the body. Biochemical reactions of amino acids, significant peptides, overview of proteins and their biological functions. Thermodynamic calculations of biochemical reaction quantities. Enzymes - kinetics of enzyme reactions, enzyme specificity. Regulation of enzyme activity. Michaelis-Menten constant, its significance. Calculation of enzyme activity.
Practical exercises:
Principles of physicochemical methods and their practical application in laboratory diagnostics (spectrophotometry, potentiometry, chromatography). Effect of metal ions on the elimination of free radicals in biological material. Monitoring of osmotic fragility of erythrocytes. Determination of the acidity constant of weak monobasic acids. Qualitative and quantitative determination of significant physiological and pathological metabolites such as urea, glucose, ketones, and total lipids. Thin-layer and gel chromatography of amino acids and proteins. Monitoring the effect of activators and inhibitors on enzyme activity. Determination of Michaelis-Menten constant of enzymes.

Recommended literature:
Országhová, Z., Žitňanová, I. 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: 1775

A	B	C	D	E	FX
2,65	8,28	17,8	16,73	25,01	29,52

Lecturers: prof. Ing. Zdeňka Ďuračková, PhD., prof. MUDr. Ladislav Turecký, CSc., doc. PharmDr. Vladimír Jakuš, CSc., prof. RNDr. Jana Muchová, PhD., prof. Ing. Ingrid Žitňanová, PhD., RNDr. Lucia Andrezálová, PhD., RNDr. Zuzana Országhová, PhD., Mgr. Ľubomír Kuračka, PhD., doc. RNDr. Monika Ďurfinová, PhD., Mgr. Monika Dvořáková, PhD., doc. MUDr. Viera Rendeková, CSc., RNDr. Mgr. Marián Koláček, PhD., doc. RNDr. Eva Uhlíková, CSc., Ing. Lucia Laubertová, PhD., RNDr. Zuzana Paduchová, PhD., RNDr. Zuzana Szentesiová, PhD., Ing. Katarína Koňariková, PhD., Ing. Miriama Ježovičová, PhD.

Last change: 17.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-044/17	**Course title:** Medical Ethics
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the practicals Students come prepared for the seminar. They complete assignments such as study of selected readings, written analysis, or argumentative essays. They actively participate in the learning activities. Written test (minimum 60%). 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: Knowledge: The student can - explain the basic concepts of ethics, medical ethics and philosophy of medicine; - explain the basic moral principles and requirements in the medical practice, the role of professionalism in medicine; - explain what is meant by a holistic view of the human person, respect for human dignity during human ontogeny and respect for patient autonomy; - identify current ethical problems in biomedicine and ways of addressing them; - identify key aspects of moral decision-making in clinical practice. Skills: The student is able to: - demonstrate critical thinking and basic moral reasoning necessary for decision-making in medical practice; - apply relevant scientific facts, and basic anthropological and moral theories relevant to the analysis of ethical issues in biomedicine; - identify and analyse an ethical problem in medical practice and justify their proposed solution; - apply basic moral principles and theories in solving selected case studies from medical practice; - demonstrate the ability to apply basic moral principles and requirements in simulation-based medical training.	

Class syllabus:
Lectures: Medicine as a human practice at the intersection of the natural sciences and the humanities. The interconnectedness of philosophy, science and medicine. Ethics, morality and professionalism of the physician. Moral reasoning and decision making in medical practice. Human rights and patients' rights. Ethical problems at the beginning of human life. Ethical issues at the end of life. Ethics and new technologies in medicine.
Practicals: Medicine, its essence and goals. The concept of health, disease and the goals of medicine. Historical overview of the development of medical ethics. Moral norms, ethics and law. The basic moral requirements and principles in medical work. Legitimacy of medical intervention. Autonomy, responsibility and conscience of the physician. The physician's judgment and the basic models of ethical reasoning (utilitarian ethics, deontological ethics, principlist ethics, virtue ethics). The ethos of the physician and the medical virtues. Basic conceptions of personhood, their implications in modern medicine. Human being, human dignity, identity and individuality. Historical transformations and contemporary models of the doctor-patient relationship. Respect for the physical integrity and autonomy of the patient. Informed consent and patient rights. The patient and his/her competence in decision-making. The main principles of optimal communication with the patient and his/her family. The shared decision-making model. Surrogate decision-making. Medical confidentiality. Truth and hope as part of the therapeutic process. Ethical codes, declarations, conventions. Ethical problems at the beginning of human life. Ethical issues in reproductive medicine. Ethical issues in molecular biology and genetics. Ethical issues in fetal medicine, neonatology and pediatrics. Critical situations and decision-making in emergency medicine and intensive care medicine. Ethics at the end of life - suffering, pain, dying and death. Palliative and hospice care. Euthanasia and physician-assisted suicide. Justice and allocation of limited resources in health care. Pandemic triage. Ethical issues in surgery and transplantology. Ethics of biomedical research, cellular research and therapy. Selected aspects of medical care for vulnerable populations. Artificial intelligence in medicine.

Recommended literature:
Devettere R. Practical Decision Making in Health Care Ethics. 3rd Edition. Georgetown University Press 2010, 529 p.
Williams, J.R. Medical Ethics Manual. A publication of the World Medical Association, 2015, 134 p.
Jonsen, A.R., Siegler, M., Winslade, W.J. Clinical Ethics. A Practical Approach to Ethical Decisions in Clinical Medicine. 7th edition. McGraw Hill Education / Medical, 2010, 240 p.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1431

A	B	C	D	E	FX
33,75	34,24	17,75	7,13	6,15	0,98

Lecturers: Mgr. Mária Kolesárová, PhD., doc. MUDr. Vojtech Ozorovský, CSc., MUDr. Mária Mojzešová, PhD., MUDr. Ján Štvrtina, PhD., Jakub Betinský, MUDr. Lucia Krčméryová

Last change: 11.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.PK/L-S-VLa-090/21	**Course title:** Medical Psychology and Communication
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 10s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 4.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% presence at practicals Exam: - Written test (60 % at least). Written test evaluation: A: 91-100%, B: 81–90%, C: 73–80%, D: 66–72%, E: 60–65 %, Fx: 59 % and less Overall evaluation will be assigned according to the result of the test.	
Learning outcomes: Knowledge: ~ To learn the basics of general and developmental psychology, personality psychology, psychology of the patient, the physician and the medical environment, and pathopsychology. ~ To know the psychological aspects of clinical examination and treatment. ~ To understand the personality mechanisms. ~ To know the basics of social communication. ~ To acquire communication skills including assertiveness. Skills: ~ Ability to identify individual mental functions and assess the significance of their changes in disease states. ~ Ability to identify personality mechanisms relevant to patient communication. ~ Ability to apply general principles and techniques of communication in interaction with the patient and his/her environment. ~ Ability to identify factors that determine the course of communication in clinical practice in relation to individual patient characteristics. ~ Demonstration of communication skills in the clinical examination of the patient and in dealing with challenging situations.	
Class syllabus: Lectures: ~ Medical psychology – concept and basic terms. Tasks of medical psychology in the system of medical sciences. Basic methods and concepts of the medical psychology. Structure of mental functions. Personality – typology, defense mechanisms of personality, Pathopsychology.	

Developmental psychology, life stages, psychological crises. Communication in medicine, relationships between health professionals and patients. Empathy, assertivity. Psychophysiology, psychosomatics, psychogenesis.
Practicals:
Psychology of the patient. Demonstration and assessment of some attitudes of the patient to his own disease. Psychology of the treatment (placebo effect). Communication: doctor – patient interaction (assessement and intervention). The skills of „active listening“, empathy, non-verbal communication opening, controlling and closing an interview. Specificity of communication with children and adolescents.

Recommended literature:
Coates G. T.: Notes of Communication: a Few Thougs about the Way We Interact With the Poeple We Meet (online)
Welsby P. D.: Communication skills in the Medical Interview (online)
Cernitanu M., Etco C.: Medical Psychology. Editorial-Polygraphic Center Medicina, Chisinau, 2011 (online)

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 529

A	B	C	D	E	FX
1,89	33,65	42,53	16,45	4,73	0,76

Lecturers: prof. MUDr. Ján Pečeňák, CSc., doc. MUDr. Ľubomíra Izáková, PhD., doc. PhDr. Eva Morovicsová, PhD., MPH, doc. MUDr. Jana Trebatická, PhD., doc. MUDr. Mária Králová, CSc.

Last change: 13.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFBIT/L-S-VLa-140/19	**Course title:** Medical Statistics
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.ÚSLLE/L-S-VLa-065/19 - Social Medicine	
Course requirements: Continuously: - Active participation in lectures – weight 0.1 - Passing continuous written tests (at least 60 %) – weight 0.2 Final exam: - Passing the final written test (at least 60 %) - weight 0.4 - Oral exam - presentation of selected topic - weight 0.3 Test rating: 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 weighted average of the ratings obtained.	
Learning outcomes: Knowledge: Upon successful completion of the course, students should be able to select and use a suitable method for statistical processing of medical data obtained from small-scale measurements and large studies as well as their correct graphic presentation. Skills: Ability to use an appropriate statistical and/or graphical method to solve a particular problem.	
Class syllabus: Measurement and statistical data processing in medicine. Probability and random variables. Population, sample, statistical variable. Descriptive Statistics - sample characteristics. Theoretical probability distributions and their application to biomedical measurements. Outliers. Inductive Statistics - hypothesis testing for one or two samples, paired and unpaired comparisons - parametric and nonparametric tests, confidence intervals. Testing of related data - regression and correlation. Categorical data testing - contingency tables. Comparing multiple samples, monitoring the impact of factors - analysis of variance. Survival analysis - survival curve, time series. Principles of discriminatory and cluster analysis. Data interpretation - use of statistical tables. Graphic presentation of data. Graphical and statistical data processing using a computer. Criteria for choosing the appropriate test and the appropriate graph.	

Recommended literature:
- SMITH, D. J. Basic Statistical Techniques for Medical and Other Professionals: A Course in Statistics to Assist in Interpreting Numerical Data. New York : Routledge, 2022. 137 p. ISBN 978-1-032-11495-8.
- BOWERS, D. Medical Statistics from Scratch. An Introduction for Health Professionals. 4th ed. Hoboken - Chichester: Blackwell Wiley , 2020, 498 p. ISBN 978-111952394X – selected chapters.
- Lectures on the MEFANET FM CU portal - section Biophysics (http://portal.fmed.uniba.sk/).
- Blended e-course (www.moja.uniba.sk).
- Other innovated printed and internet sources available.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 3

A	B	C	D	E	FX
33,33	33,33	33,33	0,0	0,0	0,0

Lecturers: doc. RNDr. Mgr. Katarína Kozlíková, CSc.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.MÚ/L-S-VLa-045/17	**Course title:** Microbiology 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: 4.	
Educational level: I.II.	
Prerequisites: LF.ÚLBG/L-S-VLa-007/16 - Biology and Human Genetics 2	
Course requirements: - 100% attendance at the practicals - 100% attendance at the lectures if on-line - 2 written test (minimum 60% of correct answers) 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: Knowledge: Knowledge on the morphology, structure and physiology of microorganisms, their genetic processes important in human medicine, virulence factors, the relationship between microorganisms and humans, human microbiota, the pathogenicity of microorganisms to humans, the mechanisms of establishment, development and complications of infectious diseases, interaction of microorganisms with the human immune system. Knowledge on the fight against microorganisms and prevention of infectious diseases (disinfection, sterilization, antimicrobial drugs). Information on the particular bacterial, viral, prion, fungal and parasitic agents of human infectious diseases. Overview of types of biological specimens for microbiological diagnostics and methods of their transport; overview of microbiologic diagnostic methods. Basic algorithms for detection and identification of medically important bacteria, fungi, viruses and parasites. Skills: Collection of biological specimens for microbiologic examination. Preparation and evaluation of microscopic preparations from biological specimens and from pure cultures of bacteria and fungi. Detection of microbial antigens in biological samples by rapid diagnostic tests. Inoculation of biological specimens on culture media, evaluation of bacterial growth on selective and diagnostic culture media, isolation of bacteria in pure culture. Performing and evaluation of simple biochemical and serological identification tests. Performing, evaluation and interpretation of antimicrobial susceptibility tests. Evaluation and interpretation of serological tests detecting specific antibodies	

against infectious agents. Performing, evaluation and interpretation of selected tests for detection and identification of bacteria, viruses, fungi and parasites.

Class syllabus:

Lectures:

Basic characteristics of microorganisms. Interaction of microorganisms and humans. The human microbiota. Establishment and course of microbial diseases.

Morphology, anatomy, metabolism, growth and multiplication of bacteria. Taxonomy and systematics of bacteria. Genetics of bacteria, bacteriophages. Molecular basis of bacterial pathogenicity and virulence. The role of biofilm and persistence of microorganisms in human medicine. Basic information on bacterial interaction with the human immune system. Decontamination, disinfection and sterilization. Antimicrobial drugs. Side effects of antimicrobial drugs. Antibacterial drugs and antimicrobial resistance mechanisms. Medically important bacteria. Structure and classification of viruses, replication of viruses, genetics of viruses. Antivirals. Viral infection at the level of the cell and the organism. Pathogenesis of viral infections and basic information about the interaction of viruses with the human immune system. DNA viruses and RNA viruses important for human medicine. Prions. Brief overview of taxonomy and systematics of medically important micromycetes, their morphology and physiology, pathogenicity and virulence. Pathogenesis of fungal infections and interaction of micromycetes with the human immune system. Antifungals. Agents of superficial, subcutaneous and systemic mycoses. A brief overview of the taxonomy and systematics of medically important parasites. General characteristics of human parasitoses agents. Epidemiology and prevention of parasitoses. Interaction of parasites with the human immune system. Antiparasitics. Overview of medically important parasitic protozoa and worms.

Practical exercises, seminars:

Safety rules in the laboratory of clinical microbiology. Clinical microbiology laboratory equipment. Basic algorithm of direct and indirect microbiologic diagnostics. Collection and transport of specimens for microbiologic diagnostics. Microscopic examination of clinical specimens (wet-mount, fixed preparation, monochromatic staining, diagnostic staining). Types of clinical specimens regularly examined by microscopy; information provided by microscopic examination. Detection of microbial antigens in clinical specimens. Microbial genome detection in clinical specimens. Microbial culture methods. Evaluation of the culture results and information provided by the microbial culture techniques. Bacteria that are not cultivable on laboratory culture media. Identification of bacteria - microscopic and biochemical; serotyping, identification by mass spectrum analysis (MALDI-TOF MS), identification by genome analysis (gene probes, PCR, sequencing). Antimicrobial susceptibility testing by disk diffusion test and dilution tests, interpretation of results. Detection of resistance mechanisms by phenotypic and genotypic methods. Indirect microbiologic diagnostics - collection of specimens for antibody detection; detection of antibodies by immunochemical methods - agglutination, precipitation, immunochromatographic tests, ELISA and immunofluorescence tests; confirmation of results by Western blot. Antibody quantification. Interpretation of antibody tests results. Detection of cell-mediated immunity - IGRA tests.

Basic algorithms for identification of gram-positive bacteria, gram-negative bacteria, fastidious and non-cultivable bacteria. Microbiologic diagnostics of viral, fungal and parasitic agents of human diseases.

Recommended literature:

Goering, R. et al.: Mims' Medical Microbiology and Immunology 6th ed, Elsevier, 2018, 568pp.
Murray, P.R. et al.: Medical Microbiology, 9th Edition, Elsevier, 2020. 872 pp.

Liptáková, A. et al.: Microbiological diagnostics for students of medicine. Bratislava, Univerzita Komenského v Bratislave , 2018, 246 pp.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 1161

A	B	C	D	E	FX
25,5	37,73	25,41	6,37	2,15	2,84

Lecturers: doc. MUDr. Adriana Liptáková, PhD., MPH, doc. RNDr. Lívia Slobodníková, CSc., Mgr. Zuzana Hubenáková, PhD., RNDr. Lucia Janošíková, MUDr. Ján Koreň, PhD., Mgr. Marek Straka, PhD., Mgr. Hana Dibalová, PhD., RNDr. Martina Dubinová, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.MÚ/L-S-VLa-046/18	**Course title:** Microbiology 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	
Number of credits: 4	
Recommended semester: 5.	
Educational level: I.II.	
Prerequisites: LF.MÚ/L-S-VLa-045/17 - Microbiology 1	
Course requirements: - 100% attendance at the practicals - 100% attendance at the lectures if on-line - 1 written test (minimum 60% of correct answers) and practical exam: two practical questions Final exam: - written test - theoretical exam: 3 questions (general microbiology, special microbiology, basics of clinical microbiology) 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: Knowledge: Knowledge of the microbiota and the causative agents of infectious diseases of individual organs and organ systems, the method of transmission of infectious agents, the most important virulence factors that apply to individual types of infectious diseases and the predisposing factors that support the emergence of these diseases. Knowledge of the use of the results of microbiological examinations in the prevention and treatment of infectious diseases of individual organs and organ systems; knowledge of active and passive immunization and immunomodulators of microbial origin. Knowledge about the collection and transport of material in infectious diseases of individual organs and organ systems and the algorithms of microbiological diagnostics of these diseases. Skills: Evaluation of microbiological tests, which are used in the diagnosis of infectious diseases of individual organs and organ systems, and interpretation of the results of microbiological examination on the example of individual model patients using simulators and case reports.	
Class syllabus: Lectures: Introduction to clinical microbiology. Algorithm for microbiological diagnostics of infectious diseases. Microbiological data for targeted antibiotic treatment. Brief overview of anti-infective	

immunity. Active and passive immunization. Immunomodulators of microbial origin. Microbiota of respiratory tract; upper and lower respiratory tract infections. Gastrointestinal mucosa microbiota; gastrointestinal tract infections; liver and biliary tract infections. Microbiota of the uropoietic system mucosa; uropoietic system infections. Microbiota of the skin and skin glands; skin, wound and soft tissue infections. Infectious osteomyelitis and arthritis. Infections caused by anaerobic bacteria. Bacteremia, sepsis, cardiovascular infections, endocarditis. Neuroinfections. Conjunctive microbiota; infections of the eye and its supporting tissues. Microbiotic mucosa of the genital tract; sexually transmitted infections and other infections of the genital system. Fetal and neonatal infections - congenital, perinatal and neonatal. Specifics of infectious diseases during pregnancy and after childbirth. Screening for infectious diseases during pregnancy. Immunocompromised patient infections. Infections associated with the presence of a foreign body and biofilm formation. Epidemiology and infection prevention. Nosocomial infections. Infections caused by resistant bacteria. Principles of rational use of antimicrobial drugs. Bioterrorism and diagnostics of biological agents during biological weapons threats.
Practical exercises, seminars:
Critical aspects of collection of biological material and transport for microbiological examination. Basic algorithm of microbiological diagnostics of infectious diseases. Methods of rapid microbiological diagnostics and their importance for the treatment of the patient and for the prevention of the spread of dangerous diseases. Microbiological diagnostics of respiratory tract infections, gastrointestinal system, uropoetic system, infectious skin diseases, wound infections, soft tissues, bones and joints. Microbiological diagnosis of infections caused by anaerobic bacteria. Microbiological diagnosis of septic conditions and infectious endocarditis, neuroinfections and eye infections. Microbiological diagnosis of infections of the genital system, infections of the fetus and newborn. The role of microbiological examination during pregnancy in the prevention of congenital infections. Microbiological diagnosis of foreign body infections and the presence of biofilm. Microbiological diagnosis of infectious diseases of an immunocompromised patient.

Recommended literature:

Goering, R. et al.: Mims' Medical Microbiology and Immunology 6th ed, Elsevier, 2018, 568pp.
Murray, P.R. et al.: Medical Microbiology, 9th Edition., Elsevier, 2020. 872 pp.
Liptáková, A. et al.: Microbiological diagnostics for students of medicine. Bratislava, Univerzita Komenského v Bratislave , 2018, 246 pp.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 848

A	B	C	D	E	FX
30,31	20,99	14,5	11,08	10,38	12,74

Lecturers: doc. MUDr. Adriana Liptáková, PhD., MPH, doc. RNDr. Lívia Slobodníková, CSc., MUDr. Ján Koreň, PhD., Mgr. Marek Straka, PhD., Mgr. Hana Dibalová, PhD., RNDr. Martina Dubinová, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFBIT/L-S-VLa-142/19	**Course title:** Modern Biophysics: From nanoparticles to quantum brain
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Continuously: - Active participation in lectures Final exam: - Semestral project submission Test rating: A: 91 % – 100 %, B: 81 % – 90 %, C: 73 % – 80 %, D: 66 % – 72 %, E: 60 % – 65 %, Fx: 59 % and less.	
Learning outcomes: Knowledge: to gain information on „the state of art“ knowledge in the areas of modern medicine, where experimental and diagnostic methods based on physical theories are heavily used. Students gain knowledge on theory of physical principles and phenomena will be taught through recent scientific works. Artificial intelligence in medicine, how it works, what is its potential usage and where lie its limits. Skills: basic level of working with brain modelling software Neuron, electron microscope	
Class syllabus: Introduction to modern physics, Bio-magnetism, Nanoparticles, Physical processes in human brain, DNA and chemical bonds, thermodynamics, entropy and the arrow of time, bioenergetics, experimental methods in biophysics, artificial inteligence, Machine Learning, structure of consciousness, quantum brain	
Recommended literature: 1. Davidovits, P. Physics in Biology and Medicine. San Diego, Elsevier, 2008, ISBN 978-0-12-369411-9 2. Hrazdira I, Morstein V, Škorpíková J. Lekářská biofyzika a přístrojová technika. Brno, Neptun, 2006, ISBN 80-86850-01-3	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 19					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Martin Kopáni, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFBIT/L-S-VLa-142-5/22	**Course title:** Modern Biophysics: From nanoparticles to quantum brain
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - Active participation in lectures Final exam: - Semestral project submission Test rating: A: 91 % – 100 %, B: 81 % – 90 %, C: 73 % – 80 %, D: 66 % – 72 %, E: 60 % – 65 %, Fx: 59 % and less.	
Learning outcomes: Knowledge: to gain information on „the state of art“ knowledge in the areas of modern medicine, where experimental and diagnostic methods based on physical phenomenons are applied. Students gain the brief theory on physical principles amd phenomenom accross modern works and papers, which are beyond biological processes. Artificial inteligence in medicine, basic principles, function, its limits, pros and cons. Skills: basic level of software Neuron, electron microscopy	
Class syllabus: Introduction to modern physics, Bio-magnetism, Nanoparticles, Physical processes in human brain, DNA and chemical bonds, thermodynamics, entropy and the arrow of time, bioenergetics, experimental methods in biophysics, artificial inteligence, Machine Learning, structure of consciousness, quantum brain	
Recommended literature: 1. Davidovits, P. Physics in Biology and Medicine. San Diego, Elsevier, 2008, ISBN 978-0-12-369411-9 2. Hrazdira I, Morstein V, Škorpíková J. Lekářská biofyzika a přístrojová technika. Brno, Neptun, 2006, ISBN 80-86850-01-3	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 13					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Martin Kopáni, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.PK/L-S-VLa-179/23	**Course title:** Narrative Medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.PK/L-S-VLa-062/19 - Psychiatry 1	
Course requirements: online form 80% attendance at lectures Active learning, discussing, and reading of relevant literature Grading will be based on a final essay project of one course topic A-E: Essays will be graded Fx: Essay insufficient or insufficient attendance to the course	
Learning outcomes: Knowledge: Basic knowledge about typical diseases in psychiatry (depression, psychosis…) while discussing movies and stories where they are shown. Knowledge about communication techniques such as motivational interviewing. Ethical implications and potential hazards for the own mental health as physician. Skills: self-reflection and reflection of their professional role, improvement of communication skills, free writing, close reading/listening, mental health resilience strategies, improvement of soft skills like empathy and tolerance of ambiguity	
Class syllabus: Week 1: Introduction to narrative medicine (“What the doctor said” by Raimond Carver) Week 2: narrative approach to psychosis (“A beautiful mind”) Week 3: narrative approach to motivational interviewing (The sandman by ETA Hoffmann) Week 4: narrative approach to neurosis (“Elling”) Week 5: narrative approach to depression (“The depressed Person” by David Foster Wallace) Week 6: recap, wishes for the next sessions, first evaluation Week 7: depending on students wishes Week 8: depending on students wishes Week 9: depending on students wishes Week 7: depending on students wishes Week 10: etical implications of the physician’s role (“Saturday” by Ian McEwan) Week 11: difficult situations as becoming physician (“House of god” by Samuel Shem) Week 12: closure session, final evaluation	

Recommended literature:
Books (only parts have to be read and will be discussed in the course):
“The sandman” by ETA Hoffmann
“House of god” by Samuel Shem
“Saturday” by Ian McEwan
Shorter texts:
“What the doctor said” by Raimond Carver
“The depressed Person” by David Foster Wallace
Films:
Elling
A beautiful mind

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 3

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

Lecturers: doc. MUDr. Ľubomíra Izáková, PhD.

Last change: 10.08.2023

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-145-5/22	**Course title:** Nemecký jazyk 1
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the assessment of the written part of the exam) and one exam test (100 points, makes 85% of the assessment of the written part of the exam). Oral part of the exam – discussion on a selected professional topic. 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 weighted average of the grades obtained in the midterm (15%) and exam (85%) test and the result of the oral part of the exam.	
Learning outcomes: Knowledge: Acquisition of professional vocabulary from individual medical fields; deepening of knowledge in the field of morphology of a foreign language. Correct use of syntax when preparing lectures, papers and presentations. Skills: Language competence enabling the highest possible level of obtaining information and knowledge from foreign language sources; written and oral presentation of own knowledge and opinions in a foreign language; ability to communicate with the patient; ability to understand oral speech, lectures on professional medical topics.	
Class syllabus: Anatomy and the medical profession - vocabulary (body parts, organs, structures), expression of opinion and assumptions. Hospital - departments, processes, equipment, staff and their roles, relative sentences. Oncology - diagnosis and treatment procedures, prepositions. Infectology - description of symptoms, information retrieval and summarizing. Trauma medicine - first aid, the past participle. Emergency medicine - case studies, adjectives. Urology - most common urological problems and their treatment, summarising texts. Endocrinology - thyroid diseases, compound nouns. Cardiology - high blood pressure, heart attack, formation of nouns from verbs. Dermatology - skin and vascular diseases, subordinate clauses. Ophthalmology - diseases of the eyes, gradation of adjectives. Sports medicine - musculoskeletal diseases and injuries, genitive case. Rehabilitation medicine - patient roles and communication, past tenses.	

Recommended literature:
Ivanová, A., Hromadová, K.: Deutsch für medizinische Berufe. Bratislava: Univerzita Komenského 2013. 262 p. ISBN 978-80-223-3400-6
Wortberg, Ch.: Menschen im Beruf – Medizin B2/C1, Kursbuch mit Audio-CD. Max Hueber Verlag 2016. 152 p. ISBN 9783197011905

Languages necessary to complete the course:
english, german

Notes:

Past grade distribution
Total number of evaluated students: 4

A	B	C	D	E	FX
50,0	25,0	25,0	0,0	0,0	0,0

Lecturers: PhDr. Tomáš Hamar, PhD., Mgr. Katarína Hromadová, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Lucia Lauková, PhD., Mgr. Zuzana Motešická, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.NK1/L-S-VLa-047/19	**Course title:** Neurology 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 25s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites: LF.ÚPA/L-S-VLa-055/18 - Pathological Anatomy 2 and LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2	
Course requirements: 100 % attendance on practicals patient examination and elaboration of complete patient record, written test – minimum 70 % Test evaluation: A: 95 - 100 %, B: 89 – 94 %, C: 83 – 88 %, D: 77 – 82 %, E: 70 – 76 %, Fx: 0 - 69 % The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: morphology of nervous system, molecular mechanisms underlying nervous system activity, functional neuroanatomy, major neurologic syndromes, manifestation of nervous system disorders, principles and techniques of clinical and instrumental neurological examination Skills: mastering of technique and interpretation of clinical and instrumental neurological examination	
Class syllabus: architecture, organization, and functioning of nervous system, functional neuroanatomy, signs and symptoms of nervous system disorders, major neurologic syndromes, clinical neurological examination – technique and interpretation, EEG, EP, EMG, USG, CT, MRI, lumbar puncture – principles, indications and interpretation	
Recommended literature: Biller J et al: The Neurological Examination, 7th ed., The McGraw-Hill Companies Inc, 2016, Benarroch E et al: Mayo Clinic Medical Neurosciences, 6th ed., Mayo Clinic Scientific Press 2018	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution
Total number of evaluated students: 651

A	B	C	D	E	FX
3,53	14,59	33,49	21,66	25,5	1,23

Lecturers: prof. MUDr. Peter Turčáni, PhD., prof. MUDr. Branislav Kollár, PhD., MPH, prof. MUDr. Peter Valkovič, PhD., doc. MUDr. Karin Gmitterová, PhD., doc. MUDr. Michal Minár, PhD., doc. MUDr. Jaroslav Pancák, PhD., prof. MUDr. Marek Sýkora, PhD., doc. MUDr. Pavel Šiarnik, PhD., prof. MUDr. Stanislav Šutovský, PhD., doc. MUDr. Gabriela Timárová, PhD., MPH, MUDr. Zoltán Goldenberg, PhD., doc. MUDr. Katarína Klobučníková, PhD., MUDr. Marián Kondáš, PhD., MUDr. Jozef Szabó, PhD., MUDr. Iveta Lisá, CSc., doc. MUDr. Zuzana Košutzká, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.NK1/L-S-VLa-048/19	**Course title:** Neurology 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 26s / 25s **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.NK1/L-S-VLa-047/19 - Neurology 1	
Course requirements: - 100% attendance at the practicals - 2 written test (minimum 70% of correct answers) Final exam: - practical exam: patient examination and writing medical report - theoretical exam: 3 question (general examination, special systems, laboratory test) Test evaluation: A: 95 - 100 %, B: 89 – 94 %, C: 83 – 88 %, D: 77 – 82 %, E: 70 – 76 %, Fx: 69 % - 0%. The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: etiopathogenesis, clinical manifestation, diagnosis and treatment of various neurological diseases, headaches and cranial neuralgia syndromes, neurodegenerative diseases, vertebrogenic diseases, neurooncology, craniocerebral injuries, demyelinating diseases, neurological complications of systemic and metabolic diseases Skills: Identification of symptoms and signs of the most common neurological diseases, determination of syndromology, proposal of diagnostic management, interpretation of ancillary examinations in the context of clinical settings, clinical diagnosis, preparation of a therapeutic plan	
Class syllabus: cerebrovascular diseases, paroxysmal disorders, headache and cranial neuralgia syndromes, neurodegenerative diseases, vertebrogenic diseases, neurooncology, craniocerebral injuries, neuroinflamatory diseases , demyelinating diseases, diseases of peripheral nervous system, neuromuscular disorders, neurological complications of systemic and metabolic diseases	
Recommended literature: Bloom, David: Clinical Adult Neurologie Manji: Oxford Handbook of Neurology Mumenthaler and Mattle: Neurologie/Neurology	

Lectures in MS TEAMS, web sources PUBMED, SCOPUS, WEB of SCIENCE

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 643

A	B	C	D	E	FX
0,31	4,2	22,86	37,64	31,73	3,27

Lecturers: prof. MUDr. Peter Turčáni, PhD., prof. MUDr. Branislav Kollár, PhD., MPH, prof. MUDr. Peter Valkovič, PhD., doc. MUDr. Michal Minár, PhD., doc. MUDr. Jaroslav Pancák, PhD., prof. MUDr. Marek Sýkora, PhD., prof. MUDr. Stanislav Šutovský, PhD., doc. MUDr. Gabriela Timárová, PhD., MPH, MUDr. Zoltán Goldenberg, PhD., MUDr. Marián Kondáš, PhD., MUDr. Iveta Lisá, CSc., doc. MUDr. Pavel Šiarnik, PhD., doc. MUDr. Zuzana Košutzká, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-051/16	**Course title:** Nursing 1
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 18s **Form of the course:** on-site learning	
Number of credits: 1	
Recommended semester: 1.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals - 3 written test (minimum 60% of correct answers) Final exam: written test (minimum 60% of correct answers) Test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%.	
Learning outcomes: The aim of the subject is to obtain knowledge and basic practical skills in professional procedures in patient nursing care. Knowledge: basic principles of providing nursing care, knowledge of the patient's medical records, knowledge necessary for the practical implementation of particular nursing procedures, Skills: safe working habits when providing nursing care, skills for providing basic nursing care, skills for vital signs monitoring, skills for collecting biological material for examination, skills for the administration of different forms of medication	
Class syllabus: Basic principles of providing nursing care. Cooperation of physicians and nurses in the treatment of patient. Nurses´ competencies. Nursing care management at outpatient and inpatient departments. Patient nursing care documentation. Care of the patients´ basic needs. Safety of healthcare workers. Patient´s safety. Patient´s mobility. Vital signs monitoring. Care of urinary elimination. Bowel care. Specimen collection. Drug administration: topical, enteral, parenteral administration. Oxygen therapy. Practical exercises (simulations and training professional procedures): Procedures of hand hygiene in healthcare. Use of personal protective equipment in patient care. Patient nursing care documentation. Patient positioning. Vital signs monitoring. Specimen collection (venous and capillary blood collection, swab collection, other sampling types). Urinary catheterization. Enema administration. Drug administration - topical, enteral administration. Oxygen administration.	
Recommended literature:	

Grežďová, I., Polhorská, M. 2018. Professional nursing procedures 1. Textbook for general medicine study programme. First edition. Slovak Academic Press s.r.o., Bratislava, 2018. 110 p. Polhorská, M. Grežďová, I., 2018. Professional nursing procedures 2. Textbook for general medicine study programme. 1st edition. Slovak Academic Press s.r.o., Bratislava, 2018. 104 p.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1595

A	B	C	D	E	FX
26,21	22,82	19,56	17,12	13,86	0,44

Lecturers: doc. PhDr. Anna Mazalánová, PhD., PhDr. Iveta Grežďová, PhD., PhDr. Miriam Polhorská, PhD.

Last change: 11.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-100/17	**Course title:** Nursing 1 - practice
Educational activities: **Type of activities:** practice **Number of hours:** **per week:** **per level/semester:** 40s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 4.	
Educational level: I.II.	
Prerequisites: LF.ÚSLLE/L-S-VLa-052/16 - Nursing 2	
Course requirements: 100% clinical practise attendance	
Learning outcomes: The aim of the subject is to obtain knowledge and practical skills from nursing care in inpatient internal departments. Clinical training of students is provided under the supervision of the head of the department and the head nurse. Knowledge: knowledge of nursing care conditions in internal department, knowledge of the patient's' medical records, knowledge necessary for the practical implementation of particular nursing procedures Skills: safe working habits in internal department, skills for providing basic nursing care, skills for vital signs monitoring, skills for collecting biological specimens, skills for the administration of different medication forms	
Class syllabus: Care of patient's basic needs. Vital signs monitoring. Blood specimen collection. Urine specimen collection. Collection of other types of biological specimen. Assistance with urinary catheterization. Assistance with enema administration. Drug administration - topical, enteral, parenteral administration. Oxygen therapy. Injection administration - intradermal, subcutaneous, intramuscular, intravenous. Intravenous cannulation. Administration of infusion therapy.	
Recommended literature: Grežďová, I., Polhorská, M. 2018. Professional nursing procedures 1. Textbook for general medicine study programme. First edition. Slovak Academic Press s.r.o., Bratislava, 2018. 110 p. Polhorská, M. Grežďová, I., 2018. Professional nursing procedures 2. Textbook for general medicine study programme. 1st edition. Slovak Academic Press s.r.o., Bratislava, 2018. 104 p.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 952
ABS0
100,0
Lecturers: PhDr. Iveta Grežďová, PhD., PhDr. Miriam Polhorská, PhD.
Last change: 11.06.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-052/16	**Course title:** Nursing 2
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 18s **Form of the course:** on-site learning	
Number of credits: 1	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.ÚSLLE/L-S-VLa-051/16 - Nursing 1	
Course requirements: - 100% attendance at the practicals - 3 written test (minimum 60% of correct answers) Final exam: written test (minimum 60% of correct answers) Test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % - 0%.	
Learning outcomes: The aim of the subject is to obtain knowledge and basic practical skills of professional procedures in patient nursing care. Knowledge: - basic knowledge of parenteral drug administration - principles of intravenous fluid therapy - principles of wound treatment - knowledge necessary for the practical implementation of particular nursing procedures Skills: - safe working habits when providing nursing care - skills for injection administration - skills for administering intravenous fluid therapy - skills for wound treatment	
Class syllabus: Principles of parenteral drug administration. Principles of injection administration: intradermal, subcutaneous, intramuscular, intravenous. Principles of intravenous fluid therapy. Principles of intravenous cannulation. Infusion therapy administration. Principles of blood transfusion therapy preparation and administration. Cooperation of physicians and nurses in wound treatment. Patient safety. Principles of wound treatment. Bandaging principles. Practical exercises (simulations and training professional procedures): Preparing and administering injections (intradermal, subcutaneous, intramuscular, intravenous). Preparing infusion container. Intravenous cannulation. Administration of infusion therapy.	

Assistance with blood transfusion therapy. Basic aseptic techniques in wound treatment. Assistance with wound treatment and redressing. Bandages application.

Recommended literature:
Grežďová, I., Polhorská, M. 2018. Professional nursing procedures 1. Textbook for general medicine study programme. First edition. Slovak Academic Press s.r.o., Bratislava, 2018. 110 p. Polhorská, M. Grežďová, I., 2018. Professional nursing procedures 2. Textbook for general medicine study programme. 1st edition. Slovak Academic Press s.r.o., Bratislava, 2018. 104 p.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1555

A	B	C	D	E	FX
26,37	23,92	19,23	16,21	13,7	0,58

Lecturers: doc. PhDr. Anna Mazalánová, PhD., PhDr. Iveta Grežďová, PhD., PhDr. Miriam Polhorská, PhD.

Last change: 11.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-101/18	**Course title:** Nursing 2 - practice
Educational activities: **Type of activities:** practice **Number of hours:** **per week:** **per level/semester:** 40s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 6.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% attendance at clinical practice	
Learning outcomes: The aim of the subject is to obtain knowledge and practical skills in nursing care in inpatient surgical departments. Clinical training of students is provided under the supervision of the head of the department and of the head nurse. Knowledge: knowledge of nursing care conditions in surgical department, knowledge of the patient's' medical records, knowledge necessary for the practical implementation of particular nursing procedures in surgical department. Skills: safe working habits in surgical department, skills for vital signs monitoring, skills for specimen collection, skills for administration of different medication forms, skills for wounds treatment and redressing	
Class syllabus: Vital signs monitoring. Blood specimen collection. Urine specimen collection. Collection of other types of biological specimen. Assistance with urinary catheterization. Care for patients with permanent catheter. Assistance with enema administration. Drug administration - topical, enteral, parenteral administration. Preparing and administering injections (intradermal, subcutaneous, intramuscular, intravenous). Intravenous cannulation. Administration of infusion therapy. Oxygen therapy. Assistance with blood transfusion therapy. Preparing and assisting with wound treatment and redressing. Bandages application.	
Recommended literature: Grežďová, I., Polhorská, M. 2018. Professional nursing procedures 1. Textbook for general medicine study programme. First edition. Slovak Academic Press s.r.o., Bratislava, 2018. 110 p. Polhorská, M. Grežďová, I., 2018. Professional nursing procedures 2. Textbook for general medicine study programme. 1st edition. Slovak Academic Press s.r.o., Bratislava, 2018. 104 p.	
Languages necessary to complete the course: English	

Notes:
Past grade distribution Total number of evaluated students: 685
ABS0
100,0
Lecturers: PhDr. Iveta Grežďová, PhD., PhDr. Miriam Polhorská, PhD.
Last change: 11.06.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KOH/L-S-VLa-149/21	**Course title:** Oncohematology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 80 % attendance at the seminars - 1 written test at final exam (minimum 60% of correct answers) Final exam: - test exam + theoretical exam: 1 question (according to syllabus) 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: Knowledge: basic diagnostics in haematological malignancies, treatment principles in patients with leukaemia, lymphoma, multiple myeloma; basics of supportive therapy; understanding of specific features of oncohaematology Skills: to propose basic diagnostic and therapeutic algorythm for the patients with haematological cance; to identify clinical specific features of patient	
Class syllabus: - Biology of hematological malignancies - Basics of diagnostic methods in oncohematology - Treatment principles (general and specific) - Acute leukemias (myeloid and lymphatic) - Chronic leukemias (myeloid and lymphatic) - Malignant lymphomas and multiple myeloma - Supportive care	
Recommended literature: Rodgers GP and Young NS: Clinical Hematology, 4th ed., Wolters Kluwer 2019 Farkas F: Acute Myeloid Leukemia and related neoplasms. Comenius University Press 2021	
Languages necessary to complete the course: english	

Notes:					
Past grade distribution Total number of evaluated students: 24					
A	B	C	D	E	FX
79,17	16,67	4,17	0,0	0,0	0,0
Lecturers: doc. MUDr. Ľuboš Drgoňa, CSc.					
Last change: 30.11.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.OnK1/L-S-VLa-050/19	**Course title:** Oncological Propedeutics
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 11s / 25s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.ÚPA/L-S-VLa-055/18 - Pathological Anatomy 2 and LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2	
Course requirements: 100% attendance at the practicals Final exams: 1 written test (minimum 60 % of correct answers) 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: Knowledge: General oncology: theoretical knowledge of cancer biology, tumour immunology, etiology, epidemiology, screening and prevention of tumours. Knowledge of medical documentation in oncology. Clinical research in oncology. Basic symptomatology and principles of cancer diagnostics and evaluation of the treatment response. Basic knowledge of therapeutic methods in oncology – surgery, radiotherapy, systemic therapy. Supportive and palliative care. Psychosocial support. Special oncology: epidemiology, etiology, pathology, symptomatology, diagnostics, therapy and prognosis of selected groups of cancer: head and neck cancers, cancers of the respiratory organs and mediastinum, gastrointestinal tumours, genitourinary tumours, gynaecological malignancies, breast cancer, bone and soft tissue tumours, skin cancer, endocrine neoplasms, CNS malignancies, carcinoma of unknown primary, haematological oncology, rare cancers, AIDS-associated malignancies, Tumours of childhood and adolescence. Cancer and pregnancy. Geriatric oncology. Skills: History taking, examination of oncological patient, acquaintance with medical documentation of oncological patient	
Class syllabus: Basics of general and special oncology.	
Recommended literature: Špánik, S., Balogová, S., Beržinec, P., Boboková, J., Durdík, Š., Gočárová, K. et al.: Introduction to Clinical Oncology. Bratislava: UK v Bratislave, 2021, 406 s.	

ISBN 978-80-223-4988-8.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 644

A	B	C	D	E	FX
11,18	28,57	37,89	18,17	3,88	0,31

Lecturers: prof. MUDr. Dalibor Ondruš, DrSc., prof. MUDr. Stanislav Špánik, PhD., doc. MUDr. Lýdia Heľpianská, CSc., MUDr. Ivana Krajčovičová, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KO/L-S-VLa-049/20	**Course title:** Ophthalmology
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 25s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9., 10..	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals - 2 written test (minimum 60% of correct answers) Final exam: - theoretical exam: 3 questions (general examination, special systems, laboratory test) 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: Acquisition of basic, theoretical and practical knowledge and skills in the field of ophthalmology of children and adults. Knowledge: Basic problems of clinical morphology and physiology of vision. Diagnostic procedures in ophthalmology, treatment procedures. Skills: Day and side light examination. Eye biomicroscopy. Ophthalmoscopy direct and indirect. Examination of visual acuity, field of vision and color vision. Additional examinations in ophthalmology: ultrasound diagnostics, fluorescein angiography of retinal vessels, optical coherence tomography, basics of radiodiagnostics in ophthalmology. Problems of pedophthalmology, ophthalmogenetics, ophthalmooncology, ophthalmogerontology, ophthalmogeriatrics. Relationship between ophthalmology and other medical disciplines. General diseases and their manifestations in the eye. Screening in ophthalmology. Diseases of the auxiliary organs of the eye. Diseases of the anterior segment of the eye. Cataracts and modern cataract surgery. Diseases of the refractive system of the eye. Basics of refractive surgery. Vascular and degenerative diseases of the retina and vitreous. Basics of vitreous-retinal surgery. Glaucoma diseases. Eye traumatology. Basics of neuroophthalmology. Therapy of the eye diseases and orbital diseases. Problems of social inclusion in patients with visual impairment in the environment - assessment activity. First aid and emergencies in ophthalmology.	

Class syllabus:
Diagnostic and therapeutic procedures in the field of ophthalmology

Recommended literature:
Richard A. Harper: Basic Ophthalmology: Essentials for Medical Students, , AAO, Tenth Edition,2016

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 504

A	B	C	D	E	FX
28,97	31,15	21,03	11,11	7,74	0,0

Lecturers: prof. MUDr. PhDr. Alena Furdová, PhD., MPH, prof. MUDr. Anton Gerinec, CSc., doc. MUDr. Vladimír Krásnik, PhD., doc. MUDr. Dana Tomčíková, PhD., doc. MUDr. Jana Štefaničková, PhD.

Last change: 27.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ORLK1/L-S-VLa-053/20	**Course title:** Otorhinolaryngology
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 14s / 35s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9., 10..	
Educational level: I.II.	
Prerequisites:	
Course requirements: All practicals need to be attended Ability to run patient's notes Test results need to reach 60% or more correct answers in order to pass (A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less) Practical exam Final evaluation takes into consideration all partial evaluations	
Learning outcomes: Knowledge: Profound theoretical knowledge in anatomy and physiology of ENT organs and neighboring areas. Knowledge on etiology, pathophysiology, diagnostics and treatment of ENT pathology. Basics of pharmacology in ENT, especially in infectious diseases. Theoretical knowledge on therapeutical approaches in ENT focused on oral cavity, nose, paranasal sinuses and the neck, principles of endoscopic diagnostic and surgical techniques in ENT. Principles of physiology and pathophysiology of hearing, basic knowledge of radiology in ENT. Basics of diagnostics and treatment in ENT oncology. Practical skills: History taking, physical examination of ENT organs, otoscopy, examination of the nose and nasal cavity including endoscopy, laryngoscopy including flexible laryngoscopy, epipharyngoscopy, examination of oral cavity and oropharynx, palpation of the neck. Reading and understanding of pure tone hearing test and tympanogram, principle of the neonatal hearing screening, evaluation of the CT and MRI of paranasal sinuses and the neck. Student must be able to make the provisional diagnosis including differential diagnoses, indicate appropriate examinations and therapeuticaly manage the patient.	
Class syllabus: : Basics of anatomy and physiology of ENT organs. Standard examination methods including audiological diagnostics, neonatal screening of hearing. Symptoms of ENT diseases, disaseas of ear, nose, sinuses, larynx, pharynx, oesophagus, thyroid and parathyroid glands, salivary glands and the neck. Tracheostomy, cricothyroidotomy, intubation. Tracheostomy care. Aspects of care after laryngectomy, tonsillectomy, ear and nose surgeries. ENT emergencies- choking, nose bleeds,	

bleedng from the mouth, managemet of inhaled and ingested foregin bodies. Management of the patient with head and neck cancer. Head and neck trauma.

Recommended literature:
Tedla et al.: Basic Otorhinolaryngology (Vydavateľstvo UK, 2016, in press)
Anniko M et al.: Otorhinolaryngology, Head and Neck Surgery, Springer-Verlag Berlin Heidelberg 2010, 737 pp.
Becker, W., Naumann, H.H., Pfaltz, C.R.: Ear, Nose, and Throat Diseases. Sec. Ed. Thieme Verlag, Stuttgart, 1994, 581 s.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 511

A	B	C	D	E	FX
39,92	34,83	15,85	7,44	1,96	0,0

Lecturers: prof. MUDr. Milan Profant, CSc., doc. MUDr. Zuzana Kabátová, CSc., MUDr. Irina Goljerová, CSc.

Last change: 30.11.2022

Approved by:

STATE EXAM DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.D_K/L-VLa-ŠS-4/15	**Course title:** Paediatrics
Number of credits: 2	
Recommended semester: 11., 12..	
Educational level: I.II.	
State exam syllabus:	
Last change:	
Approved by:	

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.D_K/L-S-VLa-058/20	**Course title:** Paediatrics 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 29s / 25s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.IK5/L-S-VLa-031/19 - Internal Medicine 3 and LF.ChK1/L-S-VLa-022/19 - Surgery 2	
Course requirements: 1) 100% presence at practicals and seminars (20% can be excused) 2) successful completion of 1 written or online-test at end of term (successful completion with 60% of total points) Test assessment: unsuccessful Fx: 59% and less points, successful 60% and more points, assessment of successful students based on percentiles as follows: A: equal and more points than 90% of successful students B: equal and more points than 75% but < 90% of successful students C: equal and more points than 25% but < 75% of successful students D: equal and more points than worst 10% but < 25% of successful students E: points < than worst 10% of successful student Testinting in 3 rounds: 1st round compulsory for all students (the grading scale is derived from the 1st round of testing), assessment in the 2nd and 3rd round according to percentiles from the 1st round of testing	
Learning outcomes: Knowledge: Physiology of the neonate, postnatal adaptation. Periods of childhood. Anatomical and physiological peculiarities of childhood (organ systems, growth, puberty, psychomotor development, nutritions) Preventive measures in paediatrics (screening, vaccination) Symptoms of selected organ system disorders (respiratory, cardiovascular, gastrointestinal, kidney and urinary system, blood, musculoskeletal and nervous) Skills: Paediatric history. Fever. Physical examination of the child (infant and more senior child) incl. neurologic and musculoskeletal examination (pGALS)	

Measurement and assessment of physiological functions (weight, height, head ant thorax circumference, body temperature, blood pressure, pulse rate and respiratory) incl. use of nomograms, percentiles and SDs, weight assessment before and following feeding, liquid balance, bone-age, pubertal stage (Tanner scale). Psychomotor development assessment.
Evaluations and interpretation of basic laboratory parameters (blood count, urine, biochemistry, acid-base balance)
Fluid management in children.

Class syllabus:
Lectures: Periods of childhood. Physiology and pathology of the newborn, postnatal adaptation, changes in the circulation. First examination and care for the newborn. Neurologic examination of the child, disorders of muscle tone and infantile cerebral paresis. Nutrition in infants - breast-feeding and formula-feeding, nutrition in older children. Malabsorption. Growth, chronic diseases and child development. Musculoskeletal examination. Disturbances of homeostasis, acute nutritional disorders, fluid therapy. Physiology and pathology of the respiratory system in children. Diagnostic and therapeutic procedures in children. Anatomy, physiological peculiarities, symptoms and examination methods of the cardiovascular, respiratory, gastrointestinal, urinary and endocrine system in children. Congenital heart anomalies, peculiarities of ECG in children.
Lecture methods: up to 30% TBL, 70% lectures, 20% co-operation with pre-clinical specialities (Dept. of Physiology LFUK, Dept. of Medical Biology, Genetics and Clinical Genetics LFUK and UNB , Institute of Microbiology LFUK and UNB)
Seminars: Physiology of the newborn. Postnatal care for the newborn. Peculiarities of childhood (growth, psychomotor development, nutrition), preventive measures in paediatrics. Anatomical and physiological peculiarities. Symptoms and examinations for diseases of selected organ systems (respiratory, cardiovascular, gastrointestinal, urinary, haematopoietic, musculoskeletal and nervous).
Seminar methods: interactive seminars using problem-based (PBL) and case-based (CBL) learning, up to 10% of study can be carried out online or as self-study for seminars and practicals with prepared recordings/study materials and recommended internet sources, respectively.
Practicals: Examination of the infant and older child (incl. weight, height, head and thoracic circumference measurement, body temperature, blood pressure, pulse and respiratory rate), interpretation of basic laboratory parameters (blood count, urine, biochemistry, acid-base balance). Fluid therapy. Fever.
Methods for practicals: 20% simulation teaching (tuition on medical simulators), medical procedure training devices, role-play

Recommended literature:
Kovács L. et al: Pediatric Propedeutics - Workbook for Medical Students, BUX, Bratislava, 2014, 150 s.
Lissauer T, Carroll W. Illustrated Textbook of Paediatrics, 6th Edition, Elsevier, 2021
Muntau AC. Kurzlehrbuch Pädiatrie. Urban&Fischer Elsevier 2015 (German)

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 508

A	B	C	D	E	FX
16,14	13,58	39,96	13,78	16,14	0,39

Lecturers: prof. MUDr. Ľudmila Podracká, CSc., prof. MUDr. Ingrid Brucknerová, PhD., doc. MUDr. Peter Čižnár, CSc., MUDr. Ivana Hulínková, PhD.
Last change: 29.11.2022
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.D_K/L-S-VLa-059/20	**Course title:** Paediatrics 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 29s / 25s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.D_K/L-S-VLa-058/20 - Paediatrics 1	
Course requirements: 1) 100% presence at practicals and seminars (20% can be excused) 2) successful completion of practical exam (examination of patient) 3) successful completion of 1 written or online-test at end of term (successful completion with 60% of total points) Test assessment: unsuccessful Fx: 59% and less points, successful 60% and more points, assessment of successful students based on percentiles as follows: A: equal and more points than 90% of successful students B: equal and more points than 75% but < 90% of successful students C: equal and more points than 25% but < 75% of successful students D: equal and more points than worst 10% but < 25% of successful students E: points < than worst 10% of successful student Testinng in 3 rounds: 1st round compulsory for all students (the grading scale is derived from the 1st round of testing), assessment in the 2nd and 3rd round according to percentiles from the 1st round of testing	
Learning outcomes: Knowledge: Acute nutritional disorders in infants and children (dehydration, disorders of acid-base balance and their management). Acute life-threatening conditions in children. Fever. Most common disorders of organs systems according to paediatric subspecialities (neurologic, ENT, cardiac, pneumologic, gastrointestinal, urologic and nephrological, haematological, dermatological, endocrine). Most common infections of childhood. Obesity, arterial hypertension. Skills: Paediatric history. Communication with the paediatric patient and parents. Clinical physical and neurologic examination of the newborn and infant, psychomotor development assessment, body temperature measurement (rectal and axillary), vital function measurement (pulse and respiratory rate), blood pressure measurement at all ages, chemical urine examination, preparation of transfusions – blood group determination, administration of infusions, blood sampling, I.v. line placement, intraosseal line placement, nasogastric tube placement, lumbar puncture, caloric content calculation, assessment of laboratory findings: blood count and differential leukogram, biochemical	

analyses, interpretation of radiologic findings, sampling for microbiologic examinations, drug administration, pedigree compilation.

Class syllabus:

Lecture: Fever. Life-threatening conditions in children. Infections. Meningitis, encephalitis. Convulsions, epilepsy. Respiratory diseases (acute disorders of the respiratory tract, pneumonia, recurrent respiratory disorder, bronchial asthma, cystic fibrosis, bronchiectasis, intersticial lung diseases). Acute nutritional disorders in children. Disorders of the thyroid and parathyroid. Disorders of sexual differentiation and pubertal development, congenital adrenal hyperplasia. Obesity. Disorders of food intake. Urinary tract infection, vesicle-urethral reflux, tubulopathies. Arterial hypertension. Glomerulonephritis, nephrotic syndrome, acute and chronic renal insufficiency. Cardiology: heart failure, inflammatory heart diseases, rheumatic fever, arrhythmias. Gastroenterology: malabsorption, inflammatory bowel disease, functional GI disorders. Blood disorders - anaemia, coagulation and thrombocyte disorders. Haemoto-oncologic diseases. Connective tissue disorders - juvenile idiopathic arthritis, jSLE, JDM, vasculitides. Congenital disorders. Inborn errors of amino-acid, fat and saccharide metabolism, lysosomal storage diseases. Intoxications in childhood. Drug side effects. Genetic disorders - monogenic, chromosomal aberrations.

Lecture methods: up to 30% TBL, 70% lectures, 20% co-operation with pre-clinical sub-specialities (Dept. of Physiology LFUK, Dept. of Medical Biology, Genetics and Clinical Genetics LFUK and UNB , Institute of Microbiology LFUK and UNB)

Seminars: Most frequent problems and diseases according to paediatrics subspecialities:

Neonatology: care for the physiological newborn, birth trauma, the premature and hypotrophic neonate and perinatal and neonatal complications, neonatal icterus, hemorrhagic disease of the newborn, haemolytic disease of the newborn, neonatal screening, breast-feeding.

Gastroenterology – congenital anomalies of the GI tract, malabsorption, food intolerance, nutrition in children, abdominal pain, inflammatory bowel disease

Metabolism - selected inborn errors of saccharide, amino-acid and fat metabolism. Skeletal disorders.

Immunology – development of the immune system, selected immune deficiencies, allergic diseases in children

Pneumology – congenital anomalies of the respiratory tract, most common respiratory diseases, respiratory insufficiency

Rheumatology: juvenile idiopathic arthritis, selected vasculitides, selected systemic connective tissue diseases

Cardiology – cardiologic assessment in children, congenital heart diseases

Nephrology - congenital anomalies of the urinary tract, urinary tract infections, glomerulonephritis, thrombotic microangiopathes, renal insufficiency

Endocrinology – puberty and disorders of pubertal development, disorders of sexual differentiation, disorders of the thyroid, disorders of the hypophysis and adrenal glands, growth disorders

Seminar methods: interactive seminars using problem-based (PBL) and case-based (CBL) learning, up to 10% of study can be carried out online or as self-study for seminars and practicals with prepared recordings/study materials and recommended internet sources, respectively.

Practicals: Paediatric history taking, physical examination of children of all ages, working diagnosis and differential diagnosis of paediatric diseases with patients or problem- and case-based learning

Methods for practicals: 20% simulation teaching (tuition on medical simulators): simulation of most frequent paediatric diagnoses – group training with simulators, communication skills training.

Medical procedure training on medical simulators (up to 10%): hand washing and disinfection, chemical urine examination, blood group determination, transfusion preparation, blood pressure measurement, infusion preparation and administration, blood sampling, placement of i.v. line,

intraosseal line and NG tube, lumbar puncture, s.c. and i.m. injections, chemical examination of the urine, biologic material collection for microbiologic examinations.

Recommended literature:

Lissauer T, Carroll W. Illustrated Textbook of Paediatrics, 6th Edition, Elsevier, 2021
Marcdante K, Kliegman RM, Schuh AM, Nelson Essentials of Pediatrics 9th Edition, Elsevier, 2022
Kovács L. et al: Pediatric Propedeutics - Workbook for Medical Students, BUX, Bratislava, 2014, 150 s.
Muntau AC. Pädiatrie Hoch2. Urban&Fischer Elsevier 2018 (German)
Muntau AC. Kurzlehrbuch Pädiatrie. Urban&Fischer Elsevier 2015 (German)

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 510

A	B	C	D	E	FX
13,73	23,73	29,8	20,39	12,16	0,2

Lecturers: prof. MUDr. Ľudmila Podracká, CSc., prof. MUDr. Ingrid Brucknerová, PhD., doc. MUDr. Tomáš Dallos, PhD., doc. MUDr. Peter Čižnár, CSc., doc. MUDr. Ľudmila Košťálová, CSc., doc. MUDr. Peter Olejník, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.D_K/L-S-VLa-060/21	**Course title:** Paediatrics 3
Educational activities: **Type of activities:** seminar / practicals **Number of hours:** **per week:** **per level/semester:** 64s / 280s **Form of the course:** on-site learning	
Number of credits: 14	
Recommended semester: 11., 12..	
Educational level: I.II.	
Prerequisites: LF.D_K/L-S-VLa-059/20 - Paediatrics 2	
Course requirements: 1) 100% presence at practicals and seminars (20% can be excused) with documented presence 2) successful completion of practical exam (examination of patient, model medical record and presentation of a case study at a student seminar) 3) successful completion of 1 written or online-test at end of teaching block (successful completion with 80% of total points), unsuccessful students may repeat max. twice Test assessment: unsuccessful Fx: ≤59% points, successful 60% points, assessment of successful students based on percentiles as follows: A: ≥90% of successful students; B: ≥75% but < 90% of successful students; C: ≥ 25% but < 75% of successful students; D: ≥10% but < 25% of successful students; E: points < than 10% of successful students. State exam: theory testing, 3 topics, examination board with at least 3 members	
Learning outcomes: Knowledge: Theoretical knowledge in the field of neonatal physiology, physiology of child growth and development. Physiological changes in the maturation of individual organ systems. Diagnosis and treatment of pathological conditions of neonatal age. Fluid management of the infant and child. The most common pathologies in infancy, preschool, school and adolescence according to organ systems. Diagnosis and treatment of the most common pathological conditions in pediatrics. The most common and serious infectious complications of childhood. Basics of preventive and social paediatrics. Specific pharmacotherapy in childhood. Skills: Diagnosis and principles of treatment of basic diseases of childhood under the conditions of a hospital children's ward. The practice work of the pediatrician of primary contact. Technique of feeding newborns and infants. Application of nasogastric tube. Vascular access in children - intravenous infusions into the veins of the head and limbs. Oral administration of drugs to neonates and infants. Methods of blood and urine collection. Bone marrow biopsy and lumbar puncture. Immunization. Tuberculous testing. Chloride sweat test. Sonography of the brain and abdomen. Resuscitation of the newborn. Primary neonatal care. Phototherapy. Neonatal screening.	
Class syllabus: Work at the clinical ward in the role of a junior secondary care physician, under the supervision of a certified physician. Assisting in diagnostic and therapeutic procedures with practical skills training	

in venous blood sampling, urinary catheter insertion, nasogastric tube insertion. Treatment of central venous access, tracheostomy cannula, permanent urinary catheter. Evaluation of radiographs, ECG, laboratory results. Working in a specialist paediatric outpatient clinics. Attending rounds and seminars. Night on-call 2x. Preparation of a sample medical history of a selected patient - detailed history, physical findings, differential diagnosis and treatment. Oral presentation of case report with a discussion in the presence of teacher and students - simulation of a grand rounds.
Circulation in pediatric department (4 weeks), pediatric dermatology department (1 week), pediatric neurology department (1 week), pediatric cardiology department (1 week)
Seminars: 14 seminars
Topics of the seminars: Growth disorders and pituitary diseases. Renal insufficiency and nephrotic syndrome. Diabetes, hypoglycemia and thyroid disorders. Inflammatory bowel disease and malabsorption syndrome. Hepatopathies and splenomegaly. Most common acute and chronic respiratory diseases. Arthritis and vasculitis. Genetically determined diseases. Inherited metabolic disorders. Dietary intake disorders. Intensive care in paediatrics. Sepsis in neonatal and paediatric age. Neonatal and postnatal adaptation. Pathologies in neonatology
Methods: interactive seminars using case based learning (CBL) 25%, team-based learning (TBL) 25%, collaboration with other departments 20% (Department of Physiology LFUK, Department of Medical Biology, Genetics and Clinical Genetics LFUK and UNB, Department Microbiology LFUK and UNB). Self-study with the help of pre-prepared recordings and study materials (mainly Standard Diagnostic and Therapeutic Guidelines) 30%.

Recommended literature:
Kovács L. et al: Pediatric Propedeutics - Workbook for Medical Students, BUX, Bratislava, 2014, 150 s.
Lissauer T, Carroll W. Illustrated Textbook of Paediatrics, 6th Edition, Elsevier, 2021
Marcdante K, Kliegman RM, Schuh AM, Nelson Essentials of Pediatrics 9th Edition, Elsevier, 2022
Muntau AC. Pädiatrie Hoch2. Urban&Fischer Elsevier 2018 (German)
Muntau AC. Kurzlehrbuch Pädiatrie. Urban&Fischer Elsevier 2015 (German)

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 313

A	B	C	D	E	FX
74,12	19,49	4,15	2,24	0,0	0,0

Lecturers: prof. MUDr. Ľudmila Podracká, CSc., prof. MUDr. Ingrid Brucknerová, PhD., doc. MUDr. Peter Čižnár, CSc., doc. MUDr. Tomáš Dallos, PhD., doc. MUDr. Ľudmila Košťálová, CSc., doc. MUDr. Peter Olejník, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.D_K/L-S-VLa-103/20	**Course title:** Paediatrics – practice
Educational activities: **Type of activities:** practice **Number of hours:** **per week:** **per level/semester:** 80s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100 % attendance at the practice	
Learning outcomes: Knowledge: broadening, reinforcement and practical application of knowledge acquired in the coursed Paediatrics 1 and Paediatrics 2 in clinical practice Skills: - students work as residents at a paediatric ward and perform patient admissions and discharges of children of all ages including history taking from parent and child, physical examination, preparation of a diagnostic and therapeutic plan, medical records, daily clinical report writing, compilation of a patient history, hospital information system use, writing of examination requests) - communication with parents and children - physical examination of children of all ages - patient reporting - practical assessment of laboratory a radiographic findings - medication dosing, i.v. medication and infusion preparation, administration of infusions, subcutaneous and intramuscular injections - provision of selected diagnostic a therapeutic procedures (measurement and monitoring of vital functions, fluid balance, venous and capillary blood sampling, glycemia monitoring, laying of i.v. lines, urinary bladder catheterizations, sampling of biologic material for microbiologic examinations, laying a nasogastric tube, ultrasound), assistance at diagnostic a therapeutic procedures (lumbar puncture, joint puncture, transfusion administration, endoscopic examinations, enema), accompanying patients at ancillary examinations (ultrasound, X-ray, echocardiography, CT, MRI) and specialist's consults - invasive access care (i.v. line, nasogastric tube, percutaneous endoscopic gastrostoumy and surgical stomas, permanent catheters, central venous catheters) - paediatric nursing care (feeding of infants and toddlers, daily hygiene of infants and toddlers, safe manipulation with infants and inpatient trauma prevention)	
Class syllabus:	

In the course of the compulsory practice, the student become acquainted and under the supervision of a qualified medical doctor carry out the standard tasks of a resident. The student becomes part of the medical staff of a paediatric ward and works with patients and their entire medical records at admission, follow-up and discharge. Under the supervision of nursing staff, the student provides nursing care to hospitalized children of all ages. The student joins daily and great rounds at which he reports about patients and become familiar with the diagnostic process and treatment of the entire spectrum of diagnoses and ancillary findings in childhood. The student acquires practical skills in diagnostic and therapeutic procedures as well as communication skills with parents and children. Two nightshifts are to be completed by the student in the course of this practice.

Recommended literature:

Lissauer T, Carroll W. Illustrated Textbook of Paediatrics, 6th Edition, Elsevier, 2021
Marcdante K, Kliegman RM, Schuh AM, Nelson Essentials of Pediatrics 9th Edition, Elsevier, 2022
Kovács L. et al: Pediatric Propedeutics - Workbook for Medical Students, BUX, Bratislava, 2014, 150 s.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 372

ABS0
100,0

Lecturers: prof. MUDr. Ľudmila Podracká, CSc.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.OnK2/L-S-VLa-180-4/23	**Course title:** Palliative Medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.IK_1/L-S-VLa-035/18 - Internal PropedeuticsLF.ChK1/L-S-VLa-026/18 - Surgical Propedeutics	
Course requirements: Exam: - written test at least 60% - oral theoretical part - 3 questions Test evaluation: A: 91 - 100%, B: 81 - 90%, C: 73 - 80%, D: 66 - 72%, E: 60 - 65%, Fx: 59% and less The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: 1. 1. Obtain basic information about accesibility and possibilities of integrated care of uncurable and terminally ill patients. 2. 2. Obtain information of basic symptom management to maintain quality of life in the presence of life threatening illness. 3. 3. Acquire principles of proper communication with patients and their families in the light of life threatening circumstances leading to framing therapeutical plan with emphasis on patients preferences and values. 4. 4. Obtain principles of multidisciplinary and multiprofessional approach that is essential to understanding medical, judicial, ethical, psychosocial and spirirtual dimensions of suffering at the end of life.	
Class syllabus: Basic charakteristics of palliative medicine: forms and capacities in the health care system. Basic pain assesment and managment Basic symptom management in the presence of incurable illness. Patophysiology of End of life. Prognostication and principles of communication bad news. Assesment of preferencies at the End of Life. Ethical dilemas at the End of Life. Principles of integration of social, psychological and spiritual aspects of care.	
Recommended literature: Cherny N, Fallon M, Kaasa S, Portenoy RK, Currow D., Oxford Textbook of Palliative Care, Oxford University Press, 2017	

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 19

A	B	C	D	E	FX
84,21	5,26	10,53	0,0	0,0	0,0

Lecturers: prof. MUDr. Michal Mego, DrSc., MUDr. Andrea Škripeková, PhD., MUDr. Mária Jasenková, Mgr. Mária Kolesárová, PhD., MUDr. Jana Trizuljaková, PhD.

Last change: 17.07.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.OnK2/L-S-VLa-180-5/23	**Course title:** Palliative Medicine
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.IK_1/L-S-VLa-035/18 - Internal PropedeuticsLF.ChK1/L-S-VLa-026/18 - Surgical Propedeutics	
Course requirements: Exam: - written test at least 60% - oral theoretical part - 3 questions Test evaluation: A: 91 - 100%, B: 81 - 90%, C: 73 - 80%, D: 66 - 72%, E: 60 - 65%, Fx: 59% and less The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: 1. 1. Obtain basic information about accesibility and possibilities of integrated care of uncurable and terminally ill patients. 2. 2. Obtain information of basic symptom management to maintain quality of life in the presence of life threatening illness. 3. 3. Acquire principles of proper communication with patients and their families in the light of life threatening circumstances leading to framing therapeutical plan with emphasis on patients preferences and values. 4. 4. Obtain principles of multidisciplinary and multiprofessional approach that is essential to understanding medical, judicial, ethical, psychosocial and spirirtual dimensions of suffering at the end of life.	
Class syllabus: Basic charakteristics of palliative medicine: forms and capacities in the health care system. Basic pain assesment and managment Basic symptom management in the presence of incurable illness. Patophysiology of End of life. Prognostication and principles of communication bad news. Assesment of preferencies at the End of Life. Ethical dilemas at the End of Life. Principles of integration of social, psychological and spiritual aspects of care.	
Recommended literature: Cherny N, Fallon M, Kaasa S, Portenoy RK, Currow D., Oxford Textbook of Palliative Care, Oxford University Press, 2017	

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 5

A	B	C	D	E	FX
40,0	60,0	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Michal Mego, DrSc., MUDr. Andrea Škripeková, PhD., MUDr. Mária Jasenková, Mgr. Mária Kolesárová, PhD., MUDr. Jana Trizuljaková, PhD.

Last change: 17.07.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚPA/L-S-VLa-054/18	**Course title:** Pathological Anatomy 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 48s / 48s **Form of the course:** on-site learning	
Number of credits: 7	
Recommended semester: 5.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-VLa-003/17 - Anatomy 3 and LF.ÚHE/L-S-VLa-019/17 - Histology and Embryology 2	
Course requirements: - 100% attendance at the Histopathology seminars - 100% attendance at the Autopsies - 2 written tests (minimum 60% of correct answers) Test evaluation: A: 91-100 %, B: 81-90 %, C: 73-80 %, D: 66-72 %, E: 60-65 %, Fx: <59 %. Autopsy – continuous oral testing of knowledge The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: Etiology and pathogenesis of pathological changes of tissues and organs. Connection between clinical presentation and pathologic-anatomical substrate of diseases. Pathomorphological changes of tissues and organs in correlation with functional changes. Skills: Work with the light microscope. Application of conventional and special staining methods and histochemical methods in differential diagnostics of pathological processes. Molecular-genetic methods in pathology Gross description of pathologic-anatomical changes. Arrangement of final diagnoses in the autopsy protocol.	
Class syllabus: General pathology: methods in pathology, pathology of the cell, regressive and progressive changes. Necrosis, atrophy, metabolic disorders, disorders of blood and lymph circulation, inflammation – acute, chronic, granulomatous, developmental disorders, malnutrition, immunopathology, AIDS, transplantation pathology, environmental pathology, genetically conditioned diseases. General oncology: classification and taxonomy of tumors, precancerosis, cancerogenesis, tumor growth and effect on the organism, benign and malignant neoplasms, histological diagnosis, grading, staging, invasion, metastasis, epithelial and mesenchymal neoplasms, neuroectodermal tumors, mixed tumors, teratomas, germinative tumors, tumors of placenta, mesothelioma. Tumor markers, genetics, epigenetics. Hemoblastoses, hemoblastomas, malignant lymphomas.	

Recommended literature:
Harsh Mohan: Textbook of Pathology, , Jaypee Brothers Medical Publishers, 2018, 1028 s.
ROBINs and COTRANs Pathologic basis of disease, 10th edition. SAUNDERS, 2020, 1464s.
Damjanov Ivan: Atlas of Histopathology, Jaypee Brothers Medical Publishers, 2012, 399.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 801

A	B	C	D	E	FX
56,68	37,33	5,49	0,5	0,0	0,0

Lecturers: prof. MUDr. Ľudovít Danihel, CSc., prof. MUDr. Pavel Babál, CSc., doc. MUDr. Zuzana Čierna, PhD., doc. MUDr. Pavol Janega, PhD., MUDr. Andrea Janegová, PhD., MUDr. Lucia Krivošíková, PhD., MUDr. Kristína Mikuš Kuracinová, PhD., MUDr. Kristína Mosná, PhD., MUDr. Hedviga Mrázová, PhD., MUDr. Michal Palkovič, PhD., MPH, MUDr. Mgr. Vladimír Šišovský, PhD., MUDr. Miriam Bollová, MUDr. Samuel Horák, MUDr. Katarína Letkovská, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚPA/L-S-VLa-055/18	**Course title:** Pathological Anatomy 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 48s / 48s **Form of the course:** on-site learning	
Number of credits: 9	
Recommended semester: 6.	
Educational level: I.II.	
Prerequisites: LF.ÚPA/L-S-VLa-054/18 - Pathological Anatomy 1	
Course requirements: - 100% attendance at the Histopathology seminars - 100% attendance at the Autopsies - 2 written tests (minimum 60% of correct answers) Test evaluation: A: 91-100 %, B: 81-90 %, C: 73-80 %, D: 66-72 %, E: 60-65 %, Fx: <59 %. Autopsy – continuous oral testing of knowledge Final examination: - Practical examination in Autopsy – oral form - Description of 1 histological slide - Final written multiple-choice test – minimal score - 75 % - Oral examination with 3 questions 1 – general pathology 1 – oncology 1 – special pathology The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: Morphological changes of different organs in neoplastic and nonneoplastic processes. Classification of tumors of different systems, grading, staging. Etiology, pathogenesis, complications and prognosis of pathological changes in different organs. Pathomorphological changes of tissues and organs in correlation with functional changes. Skills: Use of modern immunohistochemical, molecular biology and ultrastructural methods in diagnostics of disease processes. Basis of histological diagnostics. Conclusion of autopsy protocol on the basis of microscopic and gross findings.	
Class syllabus: Special pathology: Cardiovascular system – diseases of vessels, atherosclerosis, heart diseases, respiratory system – inflammation, allergies, emphysema, tumors, hemopoietic system, Pathology of the spleen, lymphatic nodes, nephropathology – vascular disorders, inflammation, tumors, GIT – inflammation, ulcerous colitis, Crohn disease, metabolic disorders, tumors, bones and	

joints – inflammation, degenerative diseases, myopathies, endocrine system – syndromes, tumors, neuroendocrine system, skin – inflammation, tumors, genitalia – inflammation, sexually transmitted diseases, precanceroses, neoplasm, breast, endometrial dysfunctions, pathology of pregnancy, trophoblast disease, nerve system – trauma, circulation disorders, inflammation, degenerative disorders, tumors, pathology of newborn.

Recommended literature:
Harsh Mohan: Textbook of Pathology, Jaypee Brothers Medical Publishers, 2018, 1028 s.
ROBINs and COTRANs Pathologic basis of disease, 10th edition, SAUNDERS, 2020, 1464s.
Damjanov Ivan: Atlas of Histopathology, Jaypee Brothers Medical Publishers, 2012, 399.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 803

A	B	C	D	E	FX
31,88	23,54	16,06	9,22	15,32	3,99

Lecturers: prof. MUDr. Ľudovít Danihel, CSc., prof. MUDr. Pavel Babál, CSc., doc. MUDr. Zuzana Čierna, PhD., doc. MUDr. Pavol Janega, PhD., MUDr. Andrea Janegová, PhD., MUDr. Lucia Krivošíková, PhD., MUDr. Kristína Mikuš Kuracinová, PhD., MUDr. Kristína Mosná, PhD., MUDr. Hedviga Mrázová, PhD., MUDr. Michal Palkovič, PhD., MPH, MUDr. Mgr. Vladimír Šišovský, PhD., MUDr. Samuel Horák, MUDr. Katarína Letkovská, PhD.

Last change: 29.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚPF/L-S-VLa-056/18	**Course title:** Pathological Physiology 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	
Number of credits: 5	
Recommended semester: 5.	
Educational level: I.II.	
Prerequisites: LF.FyÚ/L-S-VLa-014/17 - Physiology 2LF.ÚLChB/L-S-VLa-042/17 - Medical Biochemistry 2	
Course requirements: - a maximum of one absence is allowed for seminars and practicals. - two written tests (minimum 60% of correct answers) - the overall rating is determined from the average of the ratings obtained - grading scale: A: 91 - 100%, B: 81 – 90%, C: 73 – 80%, D: 66 – 72%, E: 60 – 65%, Fx: 59 - 0%	
Learning outcomes: Knowledge: - The student will acquire a summary of basic knowledge about the etiopathogenetic mechanisms of the origin and course of diseases and conditions, the basics of general pathophysiology and the pathophysiology of individual systems, - the student will be able to analyse the relationship between diseases and pathological conditions and their clinical manifestations, - Based on the understanding of causal relationships, the student will be able to explain the principles of therapeutic interventions. Skills: - The student is able to actively interfere with theoretical and practical models of the function of basic disease states and modify them by applying changed conditions as a result of therapeutic intervention, - the student is able to process the algorithm of the development and progression of basic diseases, - the student is able to integrate knowledge from all completed theoretical disciplines into a complex picture of the origin and development of basic diseases, - completing pathophysiology develops the student's cognitive skills towards the use of logical and creative thinking, - practical exercises develop the student's practical skills in using instruments for measuring basic clinical parameters, - the student is able to search for and assess the reliability of various sources of scientific and clinical research results.	
Class syllabus:	

Syllabus of the subject Pathological Physiology 1 and 2:
General principles and manifestations of diseases: Inflammation. Fever. Pain. Genetically determined alterations. Monogenic pathological states. Carcinogenesis. Immune disorders: immunodeficiencies, allergies, autoimmune disorders. Disorders of the internal environment: hydration, ions, acid-base balance. General adaptation syndrome - stress: benefit, pathology, civilization diseases. Bacteremia, sepsis. Pathophysiology of the respiratory system: Types of hypoxia. Ventilation, diffusion, perfusion disorders. Pneumonia. Bronchitis. Pulmonary emphysema. Bronchial asthma. Bronchiectasis. Cystic fibrosis. Interstitial lung diseases. Respiratory failure. Adult Respiratory Distress Syndrome (ARDS). Lung and bronchial tumors. Pleural diseases. Pneumothorax. Pathophysiology of blood and hematopoietic tissue: Anemia in general. Posthemorrhagic, hemolytic, sideropenic, megaloblastic anemias. Anemia in severe diseases. Platelet and hemocoagulation disorders. Leukocyte disorders - infectious and malignant diseases. Pathophysiology of the cardiovascular system: Contractile function of the myocardium and pumping function of the heart. Cardiac revolution. Metabolism of the heart muscle cell. Left and right heart failure. Pathogenesis of heart failure therapy. Cardiac hypertrophy - concentric, eccentric, physiological, remodeling. Congenital heart defects - non-cyanotic, with possible cyanosis, cyanotic. Valve defects of the aorta, mitral valve, right heart. Cardiomyopathies - primary, secondary. Infectious and bacterial endocarditis. Blood pressure and regulatory mechanisms. Systemic arterial hypertension - primary and secondary hypertension. Pathogenesis of hypertension therapy. Hypotension. Collapse. Shock - hypovolemic, cardiogenic, distributive, obstructive, septic. Coma - pathogenesis of differential diagnosis. Atherogenesis. Stable, unstable atherosclerotic plaque. Ischemic heart disease. Stable and unstable angina pectoris. Myocardial infarction. Pathophysiology of reperfusion injury to the heart - oxygen and calcium paradox. Sudden cardiac death, sudden non-cardiac death. Pathophysiology of pulmonary circulation. Pulmonary edema and its types. Pulmonary hypertension. Pulmonary embolism. Regulation of cerebral circulation, cerebral ischemia. Intracerebral and subarachnoid hemorrhage. Cardiac arrhythmias - supraventricular and ventricular, fibrillation and flutter of atria and ventricles, atrioventricular blocks. Rheumatic fever. Varicose veins. Phlebothrombosis. Chronic venous insufficiency. Pathophysiology of the uropoetic system: Physiological principles of kidney function. Changes in glomerular membrane permeability. Nephritic and nephrotic syndrome. Acute and chronic kidney failure. Glomerulopathies. Tubulointerstitial diseases. Vascular diseases of the kidneys. Urinary tract infections. Urolithiasis. Tumors of the urinary tract. Pathophysiology of the gastrointestinal system: Esophageal diseases. Gastritis. Peptic ulcer of the stomach and duodenum. Pancreatitis - acute and chronic. Cystic fibrosis of the pancreas. Maldigestion. Malabsorption. Diarrhea. Constipation. Irritable bowel syndrome. Intestinal obstruction - ileus. Ulcerative colitis. Crohn's disease. Ischemic colitis. Carcinoma of the esophagus, stomach, colon, liver and pancreas. Gastrointestinal bleeding. Abdominal pain. Pathophysiology of the hepatobiliary system: Hepatitis. Liver failure - acute and chronic. Liver cirrhosis. Portal hypertension. Ascites. Jaundice. Intrahepatic cholestasis. Cholelithiasis. Cholecystitis. Pathophysiology of the endocrine system: Mechanisms of hormone action on target cells and their disorders. Hypothalamic neuroendocrine disorders. Thyroid disorders - hyperthyroidism, hypothyroidism. Parathyroid disorders. Adrenal disorders - Cushing's syndrome, Addison's disease, Conn's syndrome, pheochromocytoma. Gonadal disorders. Diabetes mellitus - type 1 and 2, complications. Metabolic syndrome. Obesity. Gastrointestinal hormones, insulinoma. Pathophysiology of the nervous system: Neuronal damage. Cerebral edema. Intracranial hypertension. Demyelinating diseases. Degenerative diseases of the central nervous system. Epilepsy. Stroke - ischemia, hemorrhage. Encephalitis, meningitis. Myasthenia gravis. Dopaminergic system. Pathophysiology of the autonomic nervous system. Pathogenesis of mental disorders, neuroses. Pathophysiology of the sensory system: Hearing

disorders. Visual disorders. Pathophysiology of the skeletal system: Regulation of calcium metabolism, osteoporosis. Rheumatoid arthritis. Alterations in hyperuricemia.
Lectures of the subject Pathological Physiology 1:
Haemodynamics of the circulation, valvular disorders. Risk factors of cardiovascular system and their modification. Blood pressure regulation. Cardiac rhythm disorders, sudden cardiac death. Collapse. Shock. Disorders of microcirculation. Heart failure, pathogenesis of therapy. Pulmonary embolism, pulmonary hypertension. Cor pulmonale. Right-sided heart failure. Metabolic syndrome. Obesity and its modification. Obstructive and restrictive pulmonary diseases. Pneumonia. Respiratory insufficiency. Carcinogenesis. Pathophysiology of tumors. Adaptation, general adaptation syndrome-stress. Molecular medicine. Intracellular signalizations.
Seminars and practicals of the subject Pathological Physiology 1:
Pathophysiology as a pre-clinical subject. Pathogenesis of inflammation, fever, pain. Disorders of water, Na+, and K+ metabolism. Disorders of acid-base balance. Blood pressure regulation. Hypertension. Heart electrical activity. Dysrhythmias. Collapse, shock, and disorders of microcirculation. Endothelial dysfunction. Atherosclerosis. Stable and unstable plaque. Complications of AS. Coronary heart disease, myocardial infarction. Acquired valvular heart disease. Congenital heart defects. General adaptation syndrome – stress. Anemic syndrome and white blood cell disorders. Pulmonary embolism. Pulmonary hypertension. Cor pulmonale.

Recommended literature:
- McPhee, S.J. et al.: Pathophysiology of Disease: Introduction to Clinical Medicine (McGraw-Hill/LANGE; 2019, 8th edition).
- Norris, T.L.: Porth's Pathophysiology: Concepts of Altered Health States. 10th ed. Wolters Kluwer 2019; ISBN 978-1-4963-7755-5.
- Silbernagel, S., Lang, F.: Color Atlas of Pathophysiology. New York: Thieme Verl., 2000, 406 p. ISBN 80-7169-968-3.
- Hulín, I. et al.: Pathophysiology, Bratislava: SAP, 1997, 696 s. ISBN 80-88908-07-8.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 797

A	B	C	D	E	FX
32,5	56,21	10,04	1,25	0,0	0,0

Lecturers: prof. MUDr. Fedor Šimko, CSc., prof. MUDr. Marián Bernadič, CSc., prof. MUDr. Beáta Mladosievičová, CSc., doc. MUDr. Ing. Peter Celec, DrSc., prof. MUDr. Barbara Ukropcová, PhD., MUDr. RNDr. Ľudovít Paulis, PhD., doc. MUDr. Tomáš Baka, PhD.

Last change: 04.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚPF/L-S-VLa-057/18	**Course title:** Pathological Physiology 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 36s / 36s **Form of the course:** on-site learning	
Number of credits: 8	
Recommended semester: 6.	
Educational level: I.II.	
Prerequisites: LF.ÚPF/L-S-VLa-056/18 - Pathological Physiology 1	
Course requirements: - a maximum of one absence is allowed for seminars and practicals. - two written tests (minimum 60% of correct answers) - grading scale: A: 91 - 100%, B: 81 – 90%, C: 73 – 80%, D: 66 – 72%, E: 60 – 65%, Fx: 59 - 0% Final exam: - meeting all the subject requirements - final exam: 3 questions (general pathophysiology, pathophysiology of the cardiovascular system, pathophysiology of other systems). The question on pathophysiology of the cardiovascular system is answered in writing; questions on general pathophysiology and pathophysiology of other systems are answered orally.	
Learning outcomes: Knowledge: - The student will acquire a summary of basic knowledge about the etiopathogenetic mechanisms of the origin and course of diseases and conditions, the basics of general pathophysiology and the pathophysiology of individual systems, - the student will be able to analyse the relationship between diseases and pathological conditions and their clinical manifestations, - Based on the understanding of causal relationships, the student will be able to explain the principles of therapeutic interventions. Skills: - The student is able to actively interfere with theoretical and practical models of the function of basic disease states and modify them by applying changed conditions as a result of therapeutic intervention, - the student is able to process the algorithm of the development and progression of basic diseases, - the student is able to integrate knowledge from all completed theoretical disciplines into a complex picture of the origin and development of basic diseases, - completing pathophysiology develops the student's cognitive skills towards the use of logical and creative thinking,	

- practical exercises develop the student's practical skills in using instruments for measuring basic clinical parameters,
- the student is able to search for and assess the reliability of various sources of scientific and clinical research results.

Class syllabus:

Syllabus of the subject Pathological Physiology 1 and 2:

General principles and manifestations of diseases: Inflammation. Fever. Pain. Genetically determined alterations. Monogenic pathological states. Carcinogenesis. Immune disorders: immunodeficiencies, allergies, autoimmune disorders. Disorders of the internal environment: hydration, ions, acid-base balance. General adaptation syndrome - stress: benefit, pathology, civilization diseases. Bacteremia, sepsis. Pathophysiology of the respiratory system: Types of hypoxia. Ventilation, diffusion, perfusion disorders. Pneumonia. Bronchitis. Pulmonary emphysema. Bronchial asthma. Bronchiectasis. Cystic fibrosis. Interstitial lung diseases. Respiratory failure. Adult Respiratory Distress Syndrome (ARDS). Lung and bronchial tumors. Pleural diseases. Pneumothorax. Pathophysiology of blood and hematopoietic tissue: Anemia in general. Posthemorrhagic, hemolytic, sideropenic, megaloblastic anemias. Anemia in severe diseases. Platelet and hemocoagulation disorders. Leukocyte disorders - infectious and malignant diseases. Pathophysiology of the cardiovascular system: Contractile function of the myocardium and pumping function of the heart. Cardiac revolution. Metabolism of the heart muscle cell. Left and right heart failure. Pathogenesis of heart failure therapy. Cardiac hypertrophy - concentric, eccentric, physiological, remodeling. Congenital heart defects - non-cyanotic, with possible cyanosis, cyanotic. Valve defects of the aorta, mitral valve, right heart. Cardiomyopathies - primary, secondary. Infectious and bacterial endocarditis. Blood pressure and regulatory mechanisms. Systemic arterial hypertension - primary and secondary hypertension. Pathogenesis of hypertension therapy. Hypotension. Collapse. Shock - hypovolemic, cardiogenic, distributive, obstructive, septic. Coma - pathogenesis of differential diagnosis. Atherogenesis. Stable, unstable atherosclerotic plaque. Ischemic heart disease. Stable and unstable angina pectoris. Myocardial infarction. Pathophysiology of reperfusion injury to the heart - oxygen and calcium paradox. Sudden cardiac death, sudden non-cardiac death. Pathophysiology of pulmonary circulation. Pulmonary edema and its types. Pulmonary hypertension. Pulmonary embolism. Regulation of cerebral circulation, cerebral ischemia. Intracerebral and subarachnoid hemorrhage. Cardiac arrhythmias - supraventricular and ventricular, fibrillation and flutter of atria and ventricles, atrioventricular blocks. Rheumatic fever. Varicose veins. Phlebothrombosis. Chronic venous insufficiency. Pathophysiology of the uropoetic system: Physiological principles of kidney function. Changes in glomerular membrane permeability. Nephritic and nephrotic syndrome. Acute and chronic kidney failure. Glomerulopathies. Tubulointerstitial diseases. Vascular diseases of the kidneys. Urinary tract infections. Urolithiasis. Tumors of the urinary tract. Pathophysiology of the gastrointestinal system: Esophageal diseases. Gastritis. Peptic ulcer of the stomach and duodenum. Pancreatitis - acute and chronic. Cystic fibrosis of the pancreas. Maldigestion. Malabsorption. Diarrhea. Constipation. Irritable bowel syndrome. Intestinal obstruction - ileus. Ulcerative colitis. Crohn's disease. Ischemic colitis. Carcinoma of the esophagus, stomach, colon, liver and pancreas. Gastrointestinal bleeding. Abdominal pain. Pathophysiology of the hepatobiliary system: Hepatitis. Liver failure - acute and chronic. Liver cirrhosis. Portal hypertension. Ascites. Jaundice. Intrahepatic cholestasis. Cholelithiasis. Cholecystitis. Pathophysiology of the endocrine system: Mechanisms of hormone action on target cells and their disorders. Hypothalamic neuroendocrine disorders. Thyroid disorders - hyperthyroidism, hypothyroidism. Parathyroid disorders. Adrenal disorders - Cushing's syndrome, Addison's disease, Conn's syndrome, pheochromocytoma. Gonadal disorders. Diabetes mellitus - type 1 and 2, complications. Metabolic syndrome. Obesity. Gastrointestinal hormones, insulinoma. Pathophysiology of the nervous system: Neuronal damage.

Cerebral edema. Intracranial hypertension. Demyelinating diseases. Degenerative diseases of the central nervous system. Epilepsy. Stroke - ischemia, hemorrhage. Encephalitis, meningitis. Myasthenia gravis. Dopaminergic system. Pathophysiology of the autonomic nervous system. Pathogenesis of mental disorders, neuroses. Pathophysiology of the sensory system: Hearing disorders. Visual disorders. Pathophysiology of the skeletal system: Regulation of calcium metabolism, osteoporosis. Rheumatoid arthritis. Alterations in hyperuricemia.
Lectures of the subject Pathological Physiology 2:
Ischemic heart disease. Myocardial infarction. Reperfusion syndrome of the heart. Calcium and oxygen paradox. Duodenal and gastric ulcer. Pancreatitis. Ileus. Liver cirrhosis. Liver failure. Proteinuria. Hematuria. Nephrotic and nephritic syndrome. Acute and chronic renal failure. Anemic syndrome. Anemias. Diseases of suprarenal gland, hypothalamus, and hypophysis. Diseases of thyroid gland, parathyroid glands. Calcium regulation. Insulin resistance. Diabetes mellitus and its complications. Diseases of leukocytes and thrombocytes. Disorders of coagulation. Stroke. Intracranial hypertension and edema.
Seminars and practicals of the subject Pathological Physiology 2:
Heart failure. Principles of therapy. Stroke. Intracranial hypertension and cerebral edema. Restrictive and obstructive respiratory disorders. Pneumonia. Respiratory insufficiency. Gastric and duodenal ulcer. Pancreatitis. Ileus. Cirrhosis. Hepatic failure. Proteinuria, hematuria, nephritic and nephrotic syndrome, urine investigation. Acute and chronic renal failure. Hyper- and hypothyroidism. Disorders of parathyroid glands. Metabolic syndrome, obesity. Diabetes mellitus, insulin resistance. Pathophysiology of malignant tumors. Carcinogenesis. Hemostasis and bleeding disorders.

Recommended literature:

- McPhee, S.J. et al.: Pathophysiology of Disease: Introduction to Clinical Medicine (McGraw-Hill/LANGE; 2019, 8th edition).
- Norris, T.L.: Porth's Pathophysiology: Concepts of Altered Health States. 10th ed. Wolters Kluwer 2019; ISBN 978-1-4963-7755-5.
- Silbernagel, S., Lang, F.: Color Atlas of Pathophysiology. New York: Thieme Verl., 2000, 406 p. ISBN 80-7169-968-3.
- Hulín, I. et al.: Pathophysiology, Bratislava: SAP, 1997, 696 s. ISBN 80-88908-07-8.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 788

A	B	C	D	E	FX
15,1	17,01	21,32	13,2	21,19	12,18

Lecturers: prof. MUDr. Fedor Šimko, CSc., prof. MUDr. Marián Bernadič, CSc., prof. MUDr. Beáta Mladosievičová, CSc., doc. MUDr. Ing. Peter Celec, DrSc., prof. MUDr. Barbara Ukropcová, PhD., MUDr. RNDr. Ľudovít Paulis, PhD., doc. MUDr. Tomáš Baka, PhD., doc. MUDr. RNDr. Roman Gardlík, PhD., MUDr. Kristína Repová, PhD., doc. RNDr. Oľga Pecháňová, DrSc., MUDr. Peter Stanko, PhD.

Last change: 04.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚFKF/L-S-VLa-011/18	**Course title:** Pharmacology 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 36s / 24s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 6.	
Educational level: I.II.	
Prerequisites: LF.ÚPF/L-S-VLa-056/18 - Pathological Physiology 1	
Course requirements: - 100% attendance at the practicals, - 2 written test (minimum 60% of correct answers), - elaboration and presentation of the seminar essay. 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: Knowledge: To acquire general knowledge on: - basic mechanisms of drug action, - fate of the drug in the body, - risks of pharmacotherapy, - preclinical and clinical evaluation of drugs. To acquire knowledge about drugs of selected pharmacodynamic classes with emphasis on: mechanisms of drug action, characteristic pharmacokinetic properties, typical adverse drug reactions, indications, contraindications and clinically significant interactions. Skills: Ability to use and apply the knowledge from general pharmacology in subsequent study of special pharmacology.	
Class syllabus: Medicines and society. Drug information sources. Nomenclature. Principles of drug prescription. How drugs act. Mechanisms of drug action on molecular level. Receptors. Basic principles of the movement of substances in the body. Basic pharmacokinetic concepts. Pharmacogenetics. Pharmacoepidemiology. Pharmacoeconomics. Pharmacovigilance. Adverse drug reactions. Clinical and preclinical drug evaluation. Good Laboratory Practice. Good Clinical Practice. Risks of pharmacotherapy in pregnancy and during lactation. Risks of pharmacotherapy in elderly. Pharmacology of the autonomic nervous system. Sympathetic nervous system. Parasympathetic nervous system. Pain and its pharmacotherapeutic approach. Inflammation	

and its pharmacotherapeutic approach. NSAIDs. Opioid analgesics. Antirheumatics. Biologic drugs. Cytostatics. X-ray contrast media. Immunosuppressives and immunostimulants. Drugs influencing the smooth muscles, motor activities and secretion in the airways. Antiasthmatic drugs. Medicaments used in the therapy of allergic diseases. Drugs affecting digestion, food intake. Drugs used in the treatment of peptic and duodenal ulcer. Drugs used in disorders of the pancreas, liver and bile ducts. Drugs used in functional gastrointestinal disorders and other intestinal diseases, intestinal adsorbents. Intoxications and antidotes.

Recommended literature:

Stevens, C.W. Brenner and Stevens' Pharmacology, 6th ed. Elsevier, 2022. 624 p.
Ritter, J.M., Flower, R.J., Henderson, G., Loke, Y.K., MacEwan, D., Robinson, E., Fullerton, J. Rang and Dale's Pharmacology. 10th ed. Elsevier, Churchill Livingstone, 2023. 872 p.
Wecker, L., Taylor, D.A., Theobald, R.J.Jr. Brody's Human Pharmacology. Mechanism-Based Therapeutics. 6th ed. Philadelphia: Elsevier Mosby, 2018. 728 p.
Brown, M., Sharma, P., Mir, F., Bennett, P.N. Clinical Pharmacology 12th ed. Edinburgh: Elsevier Ltd., 2019, 720 p.
Katzung, B.G. Basic and Clinical Pharmacology. 14th ed. New York: McGraw-Hill, 2018, 1191 p.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 787

A	B	C	D	E	FX
45,11	40,15	13,21	1,4	0,13	0,0

Lecturers: prof. MUDr. Viera Kristová, CSc., prof. MUDr. Milan Kriška, DrSc., prof. MUDr. Martin Wawruch, PhD., doc. PharmDr. Andrea Gažová, PhD., MUDr. Kristína Hudecová, PhD., MUDr. Miriam Petrová, PhD., MUDr. Vasil Hricák, MUDr. Monika Laššánová, PhD., MUDr. Andrea Raganová, PhD., MUDr. Jana Tisoňová, PhD., MUDr. Róbert Vojtko, PhD.

Last change: 31.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚFKF/L-S-VLa-012/19	**Course title:** Pharmacology 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 36s / 24s **Form of the course:** on-site learning	
Number of credits: 7	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites: LF.ÚFKF/L-S-VLa-011/18 - Pharmacology 1 and LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2	
Course requirements: - 100% attendance at the practicals, - 2 written test (minimum 60% of correct answers), - elaboration and presentation of the seminar essay. Final exam: - written part of exam (minimum 60% of correct answers), - oral part of exam: 3 questions (basic pharmacology, special pharmacology, selected drugs). 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: Knowledge: To acquire knowledge on drugs of particular pharmacodynamic classes with emphasis on: - mechanisms of drug action, - pharmacokinetics, - clinical application, - adverse effects, - drug interactions. Skills: Ability to apply the knowledge of pharmacology in clinical disciplines. Ability to judge the risk/benefit ratio of drugs in an individual patient.	
Class syllabus: Drugs used in the therapy of cardiovascular disorders. Antihypertensives. Vasodilator drugs. Drugs used in the therapy of heart failure. Cardiotonics. Antidysrhythmics. Drugs used in the therapy of ischemic heart disease. Antianginal drugs. Hypolipidemics. Antithrombotics. CNS drugs. Antidepressants. Antipsychotics. Hypnotics. Anxiolytics. Antiepileptics. Antiparkinson agents. Cognitive enhancers. Drugs influencing the hormonal system. Antidiabetics. Pituitary and adrenal hormones. Thyroid hormones. Glucocorticoids. Corticosteroid selection and treatment strategy.	

Drugs used in the treatment of osteoporosis. Female and male hormones. Contraceptives. Hormone replacement therapy. Antimicrobials. Drugs influencing the urogenital system. Characteristics of beta-lactams, macrolides, tetracyclines, quinolones and aminoglycosides. Antituberculotics. Antivirals. Antifungals. Antiparasitics. Antimicrobial treatment strategy and principles. Vitamins in therapy. Principles of pharmacotherapeutic evaluation in individualized therapy. Drug interactions and their clinical significance.

Recommended literature:

Stevens, C.W. Brenner and Stevens' Pharmacology, 6th ed. Elsevier, 2022. 624 p.
Ritter, J.M., Flower, R.J., Henderson, G., Loke, Y.K., MacEwan, D., Robinson, E., Fullerton, J. Rang and Dale's Pharmacology. 10th ed. Elsevier, Churchill Livingstone, 2023. 872 p.
Wecker, L., Taylor D.A., Theobald, R.J.Jr. Brody's Human Pharmacology. Mechanism-Based Therapeutics. 6th ed. Philadelphia: Elsevier Mosby, 2018. 728 p.
Brown, M., Sharma, P., Mir, F., Bennett, P.N. Clinical Pharmacology 12th ed. Edinburgh: Elsevier Ltd., 2019, 720 p.
Katzung, B.G. Basic and Clinical Pharmacology. 14th ed. New York: McGraw-Hill, 2018, 1191 p.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 606

A	B	C	D	E	FX
43,73	27,23	16,34	8,58	2,97	1,16

Lecturers: prof. MUDr. Viera Kristová, CSc., prof. MUDr. Milan Kriška, DrSc., prof. MUDr. Martin Wawruch, PhD., doc. PharmDr. Andrea Gažová, PhD., MUDr. Miriam Petrová, PhD., MUDr. Jana Tisoňová, PhD., MUDr. Kristína Hudecová, PhD., MUDr. Róbert Vojtko, PhD.

Last change: 31.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-VLa-075/16	**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 % trainings attendance	
Learning outcomes: Universal development of upcoming physician. Interdisciplinary connection between physical education, utilizing of physical education and sports in physical practice as one of the main resources to prevent illness and adopting importance of physical activity for personal development.	
Class syllabus: Teaching theory, methodology, and practical application of the following sports: basketball, volleyball, football/soccer, interior football/soccer, floorball, tennis, table tennis, badminton, swimming, aerobics, Zumba, hiking (fitness, recreational, water, cycling), and winter sports based on students' interests (skiing, snowboarding, skialp). Basics and theory of weightlifting. In team sports, training and understanding of basics game requirements for the individual and basic combinations of game possibilities. Basics of rules, strategies, and tactics for the chosen sport. The best performing students have the opportunity to participate in representing faculty in the University League in volleyball, indoor football/soccer, floorball, basketball, and swimming. Exercises for the physically disabled or injured – weight room, gym, swimming pool. Optional winter training camp.	
Recommended literature: - 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. Studies in Physical Culture and Tourism, 15, (1):9-18. - Chandler T., Cronin M., Vamplew W. (2007). Sport and Physical Education. The key concepts. Routledge. London.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 1603
ABS0
100,0
Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Michal Korman, Mgr. Barbora Kociánová, PhD., Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD.
Last change: 30.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-VLa-076/16	**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: Universal development of upcoming physician. Interdisciplinary connection between physical education, utilizing of physical education and sports in physical practice as one of the main resources to prevent illness and adopting importance of physical activity for personal development.	
Class syllabus: Teaching theory, methodology, and practical application of the following sports: basketball, volleyball, football/soccer, interior football/soccer, floorball, tennis, table tennis, badminton, swimming, aerobics, Zumba, hiking (fitness, recreational, water, cycling), and winter sports based on students' interests (skiing, snowboarding, skialp). Basics and theory of weightlifting. In team sports, training and understanding of basics game requirements for the individual and basic combinations of game possibilities. Basics of rules, strategies, and tactics for the chosen sport. The best performing students have the opportunity to participate in representing faculty in the University League in volleyball, indoor football/soccer, floorball, basketball, and swimming. Exercises for the physically disabled or injured – weight room, gym, swimming pool. Optional winter training camp.	
Recommended literature: - 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. Studies in Physical Culture and Tourism, 15, (1):9-18. - Chandler T., Cronin M., Vamplew W. (2007). Sport and Physical Education. The key concepts. Routledge. London.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 1525
ABS0
100,0
Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Michal Korman, Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD.
Last change: 30.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-VLa-073/17	**Course title:** Physical Training 3
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: 3.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% participation in seminars	
Learning outcomes: Universal development of upcoming physician. Interdisciplinary connection between physical education, utilizing of physical education and sports in physical practice as one of the main resources to prevent illness and adopting importance of physical activity for personal development.	
Class syllabus: Teaching theory, methodology, and practical application of the following sports: basketball, volleyball, football/soccer, interior football/soccer, floorball, tennis, table tennis, badminton, swimming, aerobics, Zumba, hiking (fitness, recreational, water, cycling), and winter sports based on students' interests (skiing, snowboarding, skialp). Basics and theory of weightlifting. In team sports, training and understanding of basics game requirements for the individual and basic combinations of game possibilities. Basics of rules, strategies, and tactics for the chosen sport. The best performing students have the opportunity to participate in representing faculty in the University League in volleyball, indoor football/soccer, floorball, basketball, and swimming. Exercises for the physically disabled or injured – weight room, gym, swimming pool. Optional winter training camp.	
Recommended literature: - 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. Studies in Physical Culture and Tourism, 15, (1):9-18. - Chandler T., Cronin M., Vamplew W. (2007). Sport and Physical Education. The key concepts. Routledge. London.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 1149
ABS0
100,0
Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Michal Korman, Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD.
Last change: 30.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-VLa-074/17	**Course title:** Physical Training 4
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: 4.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% participation in seminars	
Learning outcomes: Universal development of upcoming physician. Interdisciplinary connection between physical education, utilizing of physical education and sports in physical practice as one of the main resources to prevent illness and adopting importance of physical activity for personal development.	
Class syllabus: Teaching theory, methodology, and practical application of the following sports: basketball, volleyball, football/soccer, interior football/soccer, floorball, tennis, table tennis, badminton, swimming, aerobics, Zumba, hiking (fitness, recreational, water, cycling), and winter sports based on students' interests (skiing, snowboarding, skialp). Basics and theory of weightlifting. In team sports, training and understanding of basics game requirements for the individual and basic combinations of game possibilities. Basics of rules, strategies, and tactics for the chosen sport. The best performing students have the opportunity to participate in representing faculty in the University League in volleyball, indoor football/soccer, floorball, basketball, and swimming. Exercises for the physically disabled or injured – weight room, gym, swimming pool. Optional winter training camp.	
Recommended literature: - 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. Studies in Physical Culture and Tourism, 15, (1):9-18. - Chandler T., Cronin M., Vamplew W. (2007). Sport and Physical Education. The key concepts. Routledge. London.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 1127
ABS0
100,0
Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Michal Korman, Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD.
Last change: 30.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-VLa-079/18	**Course title:** Physical Training 5
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: 5.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% participation in seminars	
Learning outcomes: Universal development of upcoming physician. Interdisciplinary connection between physical education, utilizing of physical education and sports in physical practice as one of the main resources to prevent illness and adopting importance of physical activity for personal development.	
Class syllabus: Teaching theory, methodology, and practical application of the following sports: basketball, volleyball, football/soccer, interior football/soccer, floorball, tennis, table tennis, badminton, swimming, aerobics, Zumba, hiking (fitness, recreational, water, cycling), and winter sports based on students' interests (skiing, snowboarding, skialp). Basics and theory of weightlifting. In team sports, training and understanding of basics game requirements for the individual and basic combinations of game possibilities. Basics of rules, strategies, and tactics for the chosen sport. The best performing students have the opportunity to participate in representing faculty in the University League in volleyball, indoor football/soccer, floorball, basketball, and swimming. Exercises for the physically disabled or injured – weight room, gym, swimming pool. Optional winter training camp.	
Recommended literature: - 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. Studies in Physical Culture and Tourism, 15, (1):9-18. - Chandler T., Cronin M., Vamplew W. (2007). Sport and Physical Education. The key concepts. Routledge. London.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 776
ABS0
100,0
Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Michal Korman, Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD.
Last change: 30.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚTVŠ/L-S-VLa-080/18	**Course title:** Physical Training 6
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: 6.	
Educational level: I.II.	
Prerequisites:	
Course requirements: 100% participation in seminars	
Learning outcomes: Universal development of upcoming physician. Interdisciplinary connection between physical education, utilizing of physical education and sports in physical practice as one of the main resources to prevent illness and adopting importance of physical activity for personal development.	
Class syllabus: Teaching theory, methodology, and practical application of the following sports: basketball, volleyball, football/soccer, interior football/soccer, floorball, tennis, table tennis, badminton, swimming, aerobics, Zumba, hiking (fitness, recreational, water, cycling), and winter sports based on students' interests (skiing, snowboarding, skialp). Basics and theory of weightlifting. In team sports, training and understanding of basics game requirements for the individual and basic combinations of game possibilities. Basics of rules, strategies, and tactics for the chosen sport. The best performing students have the opportunity to participate in representing faculty in the University League in volleyball, indoor football/soccer, floorball, basketball, and swimming. Exercises for the physically disabled or injured – weight room, gym, swimming pool. Optional winter training camp.	
Recommended literature: - 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. Studies in Physical Culture and Tourism, 15, (1):9-18. - Chandler T., Cronin M., Vamplew W. (2007). Sport and Physical Education. The key concepts. Routledge. London.	
Languages necessary to complete the course: English	
Notes:	

Past grade distribution Total number of evaluated students: 760
ABS0
100,0
Lecturers: PaedDr. Róbert Važan, PhD., Mgr. Barbora Kociánová, PhD., Mgr. Michal Korman, Mgr. Henrich Krč, PhD., Mgr. Veronika Lovásová, PhD.
Last change: 30.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.FyÚ/L-S-VLa-013/17	**Course title:** Physiology 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 60s / 60s **Form of the course:** on-site learning	
Number of credits: 8	
Recommended semester: 3.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals/seminars/TBL - to complete all written assignments and presentations - to pass successfully 4 written tests after completing a unit/organ system (in order to pass, it is requested to obtain in each test minimum 70 % of the maximum 40 points) Evaluation: A: 95 - 100 %, B: 89 – 94 %, C: 83 – 88 %, D: 77 – 82 %, E: 70 – 76 %, Fx: 69 % or less The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: Knowledge of facts from the topics: physiology of blood, excitable tissues, respiration, digestive system, nutrition and metabolism. Understanding the physiological processes taking place in the organ systems, their interrelationships and regulations. Ability to apply physiological principles in the interpretation of clinical manifestations, as well as in the field of healthy lifestyle and disease prevention. Skills: Ability to perform selected analyses of blood, examinations of respiratory system, excitable tissues, metabolism, nutrition and to evaluate their results. Basic skills in clinical examinations and measurements (cross match test, determination of metabolic rate, evaluation of nutritional status, measurement of muscle strength, spirometry, oximetry, etc.) and understanding of their physiological principles. Ability to apply knowledge of physiology in solving simulated clinical problems and cases. Basic skills in understanding and interpreting graphic outputs from examination methods using instrumental technologies.	
Class syllabus: Lectures: Blood physiology: Functions, composition and properties of blood, hematrocrit and erythrocyte sedimentation rate. Blood plasma – composition and functions, osmotic and oncotic pressure. Erythrocytes – characteristics and functions, haemoglobin. Leukocytes – characteristics and functions, immunization. Haemostasis. Blood groups - ABO system, transfusion and compatibility, cross matching test. Blood groups - Rh factor, transfusion and compatibility, cross matching test. Haemopoiesis	

General physiology and neurophysiology, physiology of the muscle: Basic principles of physiological regulations: feedback mechanism, homeostasis. Resting transmembrane potential. Receptor (generator) potential, coding of the stimulus strength on the receptive and conductive membrane. Function of the receptors, classification, sensory modalities, adaptation of the receptors. Action potential, factors determining generation of the action potential, the „all or nothing“ law, refractory periods. Peripheral nerve – its structure and regeneration, types of nerve fibres, conduction of the action potential on a nerve fibre, axon action potential and compound action potential. Classification of neurons and synapses, excitatory and inhibitory postsynaptic potentials, ionotropic and metabolotropic receptors, function of ion channels. Neuromuscular transmission - function of the motor end-plate, excitation-contraction coupling in the skeletal muscle. Motor unit, regulation of the strength of muscle contraction, muscle fatigue. Classification of the skeletal muscles, types of muscle fibres and muscle contractions. Classification, excitation and contraction of the smooth muscle. Reflex, reflex arc, classification of reflexes

Physiology of the respiratory system: Functions of the respiratory passageways, regulation of the smooth muscles in the respiratory passageways, ciliary activity and mucus in the respiratory passageways, cough and sneezing.

Mechanism of inspiration and expiration. Intrapleural and intrapulmonary pressures and their changes during respiratory cycle. Lung volumes and capacities. Lung ventilation and its changes. Dead space, alveolar ventilation. Surface tension of the alveoli, surfactant, lung compliance. Concentrations of O2 a CO2 in the atmosphere and in alveolar air, partial pressures of gases. Exchange of respiratory gasses. Transport of O2 in blood, oxygen- haemoglobin association-dissociation curve. Transport of CO2 in blood, haemoglobin - CO2 association-dissociation curve. Function of the respiratory centre and control of breathing. Receptors participating in regulation of respiration. Specifics of respiration under water. Specifics of respiration in high altitudes.

Physiology of gastrointestinal system and the liver: Mastication, swallowing and the function of oesophagus. Motor functions of the stomach, vomiting. Motility in the small and large intestine, defaecation. Secretion, composition and functions of saliva. Secretion, composition and functions of the gastric juice, pancreatic juice and bile. Secretion in the small and large intestine. Regulation of the function of gastrointestinal system. Function of the liver and gallbladder. Gastrointestinal microbiota, gasses in the digestive system, composition of faeces. Absorption in the gastrointestinal system and its mechanisms.

Metabolism an nutrition: Basal metabolic rate. The total daily energy expenditure and types of energy balance, energy value of nutrients. Metabolism in physical activity, oxygen debt and efficiency of the physical work. Methods of determination of the metabolic rate, energy equivalent, respiratory quotient.

Carbohydrates, fats and proteins – functions, classification, food sources, digestion, absorption, main metabolic pathways. Vitamins and minerals - characteristics, functions, food sources. Regulation of metabolism and main metabolic pathways in fed state and fasting state (starvation). Healthy nutrition guidelines and recommendations, current dietary pattern and its health risks. Vegetarian nutrition and other types of alternative nutrition, their positive and negative health effects. Regulation of the food intake.

Practicals

Blood physiology: Methods of blood collections in humans. Venous blood collection (simulator). Capillary blood collection. Determination of haematocrit value. The count of erythrocytes. Determination of haemoglobin content. Calculation of derived haematological values. Determination of erythrocyte osmotic resistance. Measurement of erythrocyte sedimentation rate. Haemolysis. Determination of blood groups: ABO system, Rh factor. Cross-matching test. Determination of bleeding time by Duke. Determination of activated partial thromboplastin time. Determination of prothrombin time by Quick.

Physiology of nerve and muscle: PC simulation of the neurophysiology of nerve impulses (software SimNerve). Determination of skeletal muscle strength in a human. Determination of work and fatigue in a human. PC simulation of the skeletal muscle physiology (software SimMuscle). Physiology of the smooth muscle.
Physiology of respiration: Hering´s model of respiratory system. Parallelogram – a model of the function of intercostal muscles. Measurement of vital capacity. Functional lung examination – Spirometry. Auscultation of respiratory sounds in humans and using a simulator. Pulse oximetry. Measurement of peak expiratory flow with a peak flow meter. Analysis of the respiratory gases in exhaled air – theoretically. Calculation of minute lung ventilation and alveolar ventilation. Voluntary apnea. Influence of increasing CO2 concentration and decreasing O2 concentration.
Physiology of the digestive system and nutrition: Observation of the effect of salivary alpha-amylase. Transport of food through the oesophagus. Determination of glycaemia by glucometer. Calculation and evaluation of daily energy and nutrient intake. Basic anthropometric measurements.
Metabolism: Measurement of the basal metabolic rate. Measurement of metabolic rate during physical activity. Calculation of the daily energy expenditure using tables.
Clinical cases -topics: Blood physiology, nerve and muscle physiology, respiratory physiology, gastrointestinal physiology, metabolism and nutrition. Simulated clinical cases: Blood physiology, respiratory physiology.
Seminars: Introduction to blood physiology, physiology of the nerve and muscle, respiratory physiology, gastrointestinal physiology, nutrition and metabolism.

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. Laboratory Guide to Medical Physiology. Bratislava: Comenius University, 2018. 210 p. ISBN 978-80-223-4499-9.
Koeppen, B.M. and Stanton, B.A., eds. Berne & Levy Physiology. 8th ed. Philadelphia: Elsevier, 2024. 864 p. ISBN 978-0323847902.
Silverthorn, D.U. Human Physiology: An Integrated Approach. 8th ed. University of Texas Austin: Pearson, 2018. Global Edition. 984 p. ISBN 978-1292259543.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1211

A	B	C	D	E	FX
20,56	29,98	23,78	17,75	6,11	1,82

Lecturers: prof. MUDr. Daniela Ostatníková, PhD., prof. MUDr. Boris Mravec, PhD., doc. MUDr. Katarína Babinská, PhD., prof. MUDr. Jana Radošinská, PhD., doc. MUDr. Mgr. Július Hodosy, PhD., MUDr. Rastislav Važan, PhD., MUDr. Silvia Hnilicová, PhD., MUDr. Mgr. Rudolf Drábek, doc. Dr. Aleksandra Sashova Tomova, PhD., doc. RNDr. Ján Bakoš, PhD., MUDr. Ivan Szadvári, PhD., Mgr. Gabriela Repiská, PhD., RNDr. Jaroslava Babková, PhD., RNDr. Klaudia Kyselicová, PhD., RNDr. Silvia Lakatošová, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.FyÚ/L-S-VLa-014/17	**Course title:** Physiology 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 60s / 60s **Form of the course:** on-site learning	
Number of credits: 10	
Recommended semester: 4.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-VLa-003/17 - Anatomy 3 and LF.FyÚ/L-S-VLa-013/17 - Physiology 1	
Course requirements: - 100% attendance at the practicals/seminars/TBL - to complete all written assignments and presentations - to pass 4 written tests always after completing a unit/organ system (for passing the tests, it is requested to obtain in each test at least 70 % of the maximum 40 points) Final examination: - complex written test: 10 questions (for passing the test, it is requested to obtain at least 70 % of the maximum 40 points) - oral part: 2 questions on medical physiology Evaluation: A: 95 - 100 %, B: 89 – 94 %, C: 83 – 88 %, D: 77 – 82 %, E: 70 – 76 %, Fx: 69 % or less The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: Knowledge of facts from the topics: physiology of blood, excitable tissues, respiration, digestive system, nutrition and metabolism. Understanding the physiological processes taking place in the organ systems, their interrelationships and regulations. Ability to apply physiological principles in the interpretation of clinical manifestations, as well as in the field of healthy lifestyle and disease prevention. Skills: Ability to perform selected analyses of blood, examinations of respiratory system, excitable tissues, metabolism, nutrition and to evaluate their results. Basic skills in clinical examinations and measurements (cross match test, determination of metabolic rate, evaluation of nutritional status, measurement of muscle strength, spirometry, oximetry, etc.) and understanding of their physiological principles. Ability to apply knowledge of physiology in solving simulated clinical problems and cases. Basic skills in understanding and interpreting graphic outputs from examination methods using instrumental technologies.	
Class syllabus: Lectures Cardiovascular physiology: Physiological properties of the cardiac muscle: automacy and rhythmicity, conductivity, excitability, contractility. The cardiac cycle and blood pressures in the	

cardiac atria and ventricles. Cardiac output and factors that determine it. Volumes – enddiastolic, systolic, endsystolic and ejection fraction of the heart. Preload, afterload and factors that influence them. Heart sounds and phonocardiography. Electrocardiogram rrecordig, ECG curve a and its evaluation. Frank-Starling autoregulation mechanism of the heart, metabolism of the cardiac muscle. Haemodynamics. Arterial and venous haemodynamics. Haemodynamics in capillaries and transcapillary exchange of water and substances. Blood pressure, factors that determine and influence the blood pressure. Blood pressure and its measurement. Arterial pulse and its measurement. Structure and functions of the lymphatic system and the spleen. Lymph. Nervous and humoral regulation of the cardiovascular system. Specifics of the coronary and the pulmonary circulation. Specifics of the cerebral, renal and hepatic circulation and the circulation in the skeletal muscle and the skin.

Body fluids, renal physiology and acid-base balance: Body fluids- classification, function, composition, daily water balance, osmosis. Glomerular filtration. Function of the proximal tubule, loop of Henle, distal tubule and collecting duct. Regulation of the volume and osmolarity of urine. Function of the urinary tract, micturition, urine – volume and composition. Assessment of the renal functions. Regulation of the acid-base balance.

Physiology of special senses: Smell and taste. Somatovisceral sensory system. Pain – mechanisms, classification, phantom pain, referred pain, influencing the pain perception. Vision – optical system of the eye, accomodation, ammetropias, function of the retina, colour vision, central and peripheral vision, binocular vision and three-dimensional visual perception, visual field and scotomas; visual pathway. Hearing. Sense of balance.

Physiology of the central nervous system: Function of glia, function of cerebrospinal fluid, blood-brain barrier, circumventricular organs. Development of the CNS. Neurotransmitters and neuromodulators. Function of the sensory division of the CNS. Reticular activation system, its function in maintaining attention and sleep introduction. Sleep. Electric activity of the brain, electroencephalogram, evoked potentials. Functions of motor division of the CNS, classification of muscle movements from the aspect of their regulation. Functions of the spinal cord, basal ganglia and cerebellum in regulation of the body posture and body movements. Reflex and voluntary regulation of the movements of the skeletal muscles. Function of the muscle spindle, alpha-gamma co-activation. Hierarchical organization of the CNS, association areas of the brain cortex and their functions. Speech – brain centres and speech disorders. Functional specialization of the cerebral hemispheres. Memory and its classification, brain structures associated with memory. Association and non-association learning. Emotions and their functions, function of the limbic system. Function of the autonomic nervous system.

Physiology of the endocrine system and reproduction: General principles of endocrine regulations, classification of hormones and mechanisms of their action. Endocrine function of hypothalamus and the hypothalamo-hypophyseal system. Function of adenohypophysis. Function of neurohypophysis and epiphysis. Function of the thyroid gland. Function of the parathyroid glands, endocrine regulation of calcium and phosphate metabolism. Endocrine function of the pancreas. Function of the adrenal cortex and the adrenal medulla. Function of the male and female reproductive organs. Fertilization, hormonal changes in pregnancy, function of placenta, birth and breastfeeding. Response of the human organism to stress. Neuro-immuno-endocrine interactions.

Thermoregulation: Heat balance in the body, mechanisms of heat production and heat loss, normal body temperature and its biorhythms, fever. Reaction of the body to heat and cold, nervous and humoral mechanisms of thermoregulation.

Practicals:

Physiology of special senses: Otoscopy - simulator and human. Audiometry. Ear tests with tuning forks. Examination of nystagmus in a human. Perimetry. Examination of central visual acuity. Ophthalmoscopy (simulator and human). Examination of the colour vision by using

pseudoisochromatic charts. Stereoscopic vision. Additive mixing of colours. Detection of olfactory sensations. Detection of taste sensations. Accuracy of tactile localization. Adaptation of skin mechanoreceptors. Examination of cutaneous sensitivity (tactile) – esthesiometry, Weber experiment.
Physiology of the central nervous system: Examination of reflexes in humans.
Examination of the cerebellum. Reaction of pupils to a light and accommodation stimulus. Reaction time, Stroop test. Assessment of motor handedness. Testing of the short-term memory. Specific cognitive functions - testing of spatial abilities. Test of cognitive functions.
Physiology of the cardiovascular system: Electrocardiography (ECG). Auscultation of the heart sounds (simulator and humans). Examination of the arterial pulse. Measurement of the arterial blood pressure in humans. Reactive hyperaemia. Rumpel-Leede test. Ruffier test - effect of exercise on the heart rate. Orthostatic test. The effect of standard physical activity on the blood pressure.
Renal physiology: Examination of urine by diagnostic strips. Tests of renal functions.
The endocrine system: PC program - Endo Lab / PhysioEx
Clinical cases - topics: sensory physiology, physiology of the central nervous system, endocrine systm and cardiovasular system, renal physiology. Simulated clinical cases: physiology of the cardiovascular system, hypovolemic shock.
Seminars: Introduction to the cardiovascular, renal, sensory and endocrine physiology, physiology of the central nervous system.

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. Laboratory Guide to Medical Physiology. Bratislava: Comenius University, 2018. 210 p. ISBN 978-80-223-4499-9.
Koeppen, B.M. and Stanton, B.A., eds. Berne & Levy Physiology. 8th ed. Philadelphia: Elsevier, 2024. 864 p. ISBN 978-0323847902.
Silverthorn, D.U. Human Physiology: An Integrated Approach. 8th ed. University of Texas Austin: Pearson, 2018. Global Edition. 984 p. ISBN 978-1292259543.

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 1042

A	B	C	D	E	FX
17,66	18,81	20,63	14,3	13,72	14,88

Lecturers: prof. MUDr. Daniela Ostatníková, PhD., prof. MUDr. Boris Mravec, PhD., prof. MUDr. Jana Radošinská, PhD., doc. MUDr. Katarína Babinská, PhD., doc. MUDr. Mgr. Július Hodosy, PhD., MUDr. Rastislav Važan, PhD., MUDr. Silvia Hnilicová, PhD., doc. RNDr. Monika Barteková, PhD., MUDr. Ivan Szadvári, PhD., doc. Dr. Aleksandra Sashova Tomova, PhD., RNDr. Jaroslava Babková, PhD., RNDr. Silvia Lakatošová, PhD., MUDr. Mgr. Rudolf Drábek, doc. RNDr. Ján Bakoš, PhD., Mgr. Gabriela Repiská, PhD., doc. MUDr. Richard Imrich, DrSc.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFBIT/L-S-VLa-151/19	**Course title:** Principles of E-Health
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Continuously: - Active participation in lectures Final exam: - Semestral project submission Test rating: A: 91 % – 100 %, B: 81 % – 90 %, C: 73 % – 80 %, D: 66 % – 72 %, E: 60 % – 65 %, Fx: 59 % and less.	
Learning outcomes: Knowledge: after successful complete of the course student should understand the concept of e-health, basic terms, principles, content, the tendency to build one medical system , the courses in e-health in medicine Skills: to manage the simple telemedicine devices, to understand their functions, connection with others devices	
Class syllabus: Definition of e-health, e-prescription, e-medical systems, artificial inteligence, in medicine, aspects of law, medical databases, nanomedicine, virtual reality in medicine and its application, pros and cons of e-health in medicine	
Recommended literature: A. Venot, A. Burgun, C. Quantin. Medical Informatics, e-Health, Fundamentals and Applications. Springer-Verlag France 2014, Springer, Paris, 978-2-8178-0477-4 Other innovated printed and internet sources available.	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 84					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Martin Kopáni, PhD., doc. RNDr. Pavol Vitovič, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLFBIT/L-S-VLa-151-5/22	**Course title:** Principles of E-Health
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Continuously: - Active participation in lectures Final exam: - Semestral project submission Test rating: A: 91 % – 100 %, B: 81 % – 90 %, C: 73 % – 80 %, D: 66 % – 72 %, E: 60 % – 65 %, Fx: 59 % and less.	
Learning outcomes: Knowledge: after successful complete of the course student should understand the concept of e-health, basic terms, principles, content, the tendency to build one medical system , the courses in e-health in medicine Skills: to manage the simple telemedicine devices, to understand their functions, connection with others devices	
Class syllabus: Definition of e-health, e-prescription, e-medical systems, artificial inteligence, in medicine, aspects of law, medical databases, nanomedicine, virtual reality in medicine and its application, pros and cons of e-health in medicine	
Recommended literature: A. Venot, A. Burgun, C. Quantin. Medical Informatics, e-Health, Fundamentals and Applications. Springer-Verlag France 2014, Springer, Paris, 978-2-8178-0477-4 Other innovated printed and internet sources available.	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 21					
A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0
Lecturers: doc. RNDr. Martin Kopáni, PhD., doc. RNDr. Pavol Vitovič, PhD.					
Last change: 01.12.2022					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚMVS/L-S-VLa-173-4/22	**Course title:** Principles of Medical Education 1
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% active participation in lectures Final exam: - Practical part - writing an essay on a given topic - theoretical part - oral exam 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: Knowledge: Knowledge: After completing the subject, the student acquires knowledge about the specifics of adult education with a focus on Medical Education in an active way of learning during the lessons. Students will learn deeper using critical thinking, and clinical reasoning using clinical cases and learn with use of reflection and personal feedback. Students will be familiar with basic principles of using Simulations in medical Education, especially High-Fidelity simulators, standardized patients and use of e-learning and virtual patients. They will be familiar with current forms of Medical Education, as well as with new methods in MedEd, active learning (eg Team-based learning, problem-based learning, peer-to-peer, near-peer learning) and their effective use during the classes. Students gain knowledge about the specifics of the bedside teaching, structured consultation models, and communication skills needed. They are also will be familiar with basics of Medical Education Research. Skills: The student will acquire the skills in a hands-on way to use effective strategies needed to educate students at medical faculties as an educator in preclinical as well as clinical education after graduation and prepare for the role of a physician-educator for the students as well for future patients. They will participate in a project focused on Medical Education Research.	
Class syllabus: 1. Adult learning, role of motivation in teaching and learning, integration of medical disciplines in clinical case teaching 2. New methods of teaching and learning (hands-on)	

3. Clinical reasoning in Medical Education, the role of reflection and feedback in learning. 4. Simulation teaching – High-fidelity simulators in teaching
5. Active forms of education in medicine (active lectures, group-based learning, team-based learning, project-based learning, problem-based learning, case-based learning)
6. Bedside teaching, structured consultation models, and communication skills
7. Peer-to-peer, near-peer teaching, teaching in groups
8. Assessment in medical education, standardized patients, OSCEs (Objective Structured Clinical Exam)
9. Research in Medical Education, Inovative Curriculum development, Integrated curriculum
10. Project in Medical Education

Recommended literature:
Dent JA, Harden RM. A Practical Guide for Medical Teachers. 6th ed. Churchill Livingstone Elsevier, 2021. 496 s.
Harden RM, Laidlaw JM. Essential Skills for a medical teacher. An introduction to teaching and learning medicine. Churchill Livingstone Elsevier. 2020. 334 s.
AMEE and BEME Educational Guides

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 13

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

Lecturers: MUDr. Silvia Hnilicová, PhD., doc. MUDr. Tomáš Dallos, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚMVS/L-S-VLa-173-5/22	**Course title:** Principles of Medical Education 1
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% active participation in lectures Final exam: - Practical part - writing an essay on a given topic - theoretical part - oral exam 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: Knowledge: Knowledge: After completing the subject, the student acquires knowledge about the specifics of adult education with a focus on Medical Education in an active way of learning during the lessons. Students will learn deeper using critical thinking, and clinical reasoning using clinical cases and learn with use of reflection and personal feedback. Students will be familiar with basic principles of using Simulations in medical Education, especially High-Fidelity simulators, standardized patients and use of e-learning and virtual patients. They will be familiar with current forms of Medical Education, as well as with new methods in MedEd, active learning (eg Team-based learning, problem-based learning, peer-to-peer, near-peer learning) and their effective use during the classes. Students gain knowledge about the specifics of the bedside teaching, structured consultation models, and communication skills needed. They are also will be familiar with basics of Medical Education Research. Skills: The student will acquire the skills in a hands-on way to use effective strategies needed to educate students at medical faculties as an educator in preclinical as well as clinical education after graduation and prepare for the role of a physician-educator for the students as well for future patients. They will participate in a project focused on Medical Education Research.	
Class syllabus: 1. Adult learning, role of motivation in teaching and learning, integration of medical disciplines in clinical case teaching 2. New methods of teaching and learning (hands-on)	

3. Clinical reasoning in Medical Education, the role of reflection and feedback in learning. 4. Simulation teaching – High-fidelity simulators in teaching
5. Active forms of education in medicine (active lectures, group-based learning, team-based learning, project-based learning, problem-based learning, case-based learning)
6. Bedside teaching, structured consultation models, and communication skills
7. Peer-to-peer, near-peer teaching, teaching in groups
8. Assessment in medical education, standardized patients, OSCEs (Objective Structured Clinical Exam)
9. Research in Medical Education, Inovative Curriculum development, Integrated curriculum
10. Project in Medical Education

Recommended literature:
Dent JA, Harden RM. A Practical Guide for Medical Teachers. 6th ed. Churchill Livingstone Elsevier, 2021. 496 s.
Harden RM, Laidlaw JM. Essential Skills for a medical teacher. An introduction to teaching and learning medicine. Churchill Livingstone Elsevier. 2020. 334 s.
AMEE and BEME Educational Guides

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 3

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

Lecturers: MUDr. Silvia Hnilicová, PhD., doc. MUDr. Tomáš Dallos, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚMVS/L-S-VLa-174-4/22	**Course title:** Principles of Medical Education 2
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% active participation in lectures Final exam: - Practical part - writing an essay on a given topic - theoretical part - oral exam 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: Knowledge, skills, attitudes: Clinical reasoning concepts Demonstrate an understanding of Clinical reasoning theories (e.g. script, dual process), How clinical reasoning ability develops, The role of clinical reasoning in safe and effective care for patients, Cognitive errors, Other factors that may impair the clinical reasoning process/outcome History and physical examination Demonstrate the ability to use: Effective communication skills and purposeful interviewing, History taking from all available sources when relevant, Hypothesis-driven enquiry, Knowledge of epidemiology, probability of the presence of signs and symptoms in specific diseases, and likelihood ratios to estimate clinical probability Choosing and interpreting diagnostic tests Demonstrate a practical understanding of and ability to use the following: Pre-test (clinical) probability and post-test probability. Sensitivity and specificity, Predictive values, Factors other than disease that influence test results, Important characteristics of commonly used tests relevant to local context, Evidence-based guidelines Problem identification and management Demonstrate an ability to produce: An accurate problem representation or problem list, Use of semantic qualifiers and precise medical terms, Prioritised differential diagnosis, including relevant 'must not miss' diagnoses, Safe actions when a diagnosis is not possible, Management plans taking patient's preferences, co-morbidities, resources, cost-effectiveness and local policies in to account, Metacognition and critical thinking in decision making	

Shared decision making Demonstrate the ability to make decisions with: Patients and carers, Clinical teams, Guidelines, scores and decision aids, Evidence-based medicine applied to the patient's circumstances, Professional values and behaviours that support decision making
Medical Ethical Reasoning: Ethical knowledge is composed of knowledge of ethical principles, ethical theory, professional codes and legal regulations. Cognitive reasoning skill is composed of problem identification and information gathering, decision making, planning and action. The domain of attitudes refers to the values or beliefs governing the justification. The justification is related to logic-based decision which can be concluded by considering the different perspectives of all the parties involved, minimizing potential conflicts among stakeholders and between competing principles and evaluating consequences.

Class syllabus:

Clinical reasoning concepts, Clinical reasoning theories (e.g. script, dual process), The role of clinical reasoning in safe and effective care for patients, Cognitive errors, Other factors that may impair the clinical reasoning process/outcome
Specifics of History taking and physical examination: Effective communication skills and purposeful interviewing, History taking from all available sources, Hypothesis-driven enquiry, Knowledge of epidemiology, probability of the presence of signs and symptoms in specific diseases, and likelihood ratios to estimate clinical probability
Specifics of choosing and interpreting diagnostic tests: Pre-test (clinical) probability and post-test probability. Sensitivity and specificity, Predictive values, Factors other than disease that influence test results, Important characteristics of commonly used tests relevant to local context, Evidence-based guidelines
Problem identification and management: An accurate problem representation or problem list, Use of semantic qualifiers and precise medical terms, Prioritized differential diagnosis, including relevant 'must not miss' diagnoses, Safe actions when a diagnosis is not possible, Management plans taking patient's preferences, co-morbidities, resources, cost-effectiveness and local policies, Metacognition and critical thinking in decision making
Shared decision making with patients and caregivers, Clinical teams, Guidelines, scores and decision aids, Evidence-based medicine applied to the patient's circumstances, Professional values and behaviors that support decision making, Strategies that build understanding, strategies that employ structured , clinical cases and corrective feedback, strategies that structure knowledge around problem-specific concepts, strategies that employ retrieval, strategies that differ according to stage of learning
Medical Ethical Reasoning: Ethical knowledge is composed of knowledge of ethical principles, ethical theory, professional codes and legal regulations. Cognitive reasoning skill is composed of problem identification and information gathering, decision making, planning and action. The domain of attitudes refers to the values or beliefs governing the justification. The justification is related to logic-based decision which can be concluded by considering the different perspectives of all the parties involved, minimizing potential conflicts among stakeholders and between competing principles and evaluating consequences.
Clinical Ethical Reasoning and its contribution to medical education: Ethical knowledge is composed of knowledge of ethical principles, ethical theory, professional codes and legal regulations. Cognitive reasoning skill is composed of problem identification and information gathering, decision making, planning and action. The domain of attitudes refers to the values or beliefs governing the justification.

Recommended literature:

Kassirer, Wong, Kopelman: Learning clinical reasoning, 2010, ISBN 978-0781795159
Irfan: The Hands-on Guide to Clinical Reasoning in Medicine, 2019, ISBN 978-1119244035

Frain, Cooper: ABC of Clinical Reasoning, 2016, ISBN-13¶:ᵖ978-1119059080
Jonsen, A.R., Siegler, M., Winslade, W.J. Clinical Ethics. A practical Approach to Ethical in Clinical Medicine. McGraw Hill / Medical, 2015.

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 6

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

Lecturers: doc. MUDr. Tomáš Dallos, PhD., MUDr. Silvia Hnilicová, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚMVS/L-S-VLa-174-5/22	**Course title:** Principles of Medical Education 2
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% active participation in lectures Final exam: - Practical part - writing an essay on a given topic - theoretical part - oral exam 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: Knowledge, skills, attitudes: Clinical reasoning concepts Demonstrate an understanding of Clinical reasoning theories (e.g. script, dual process), How clinical reasoning ability develops, The role of clinical reasoning in safe and effective care for patients, Cognitive errors, Other factors that may impair the clinical reasoning process/outcome History and physical examination Demonstrate the ability to use: Effective communication skills and purposeful interviewing, History taking from all available sources when relevant, Hypothesis-driven enquiry, Knowledge of epidemiology, probability of the presence of signs and symptoms in specific diseases, and likelihood ratios to estimate clinical probability Choosing and interpreting diagnostic tests Demonstrate a practical understanding of and ability to use the following: Pre-test (clinical) probability and post-test probability. Sensitivity and specificity, Predictive values, Factors other than disease that influence test results, Important characteristics of commonly used tests relevant to local context, Evidence-based guidelines Problem identification and management Demonstrate an ability to produce: An accurate problem representation or problem list, Use of semantic qualifiers and precise medical terms, Prioritised differential diagnosis, including relevant 'must not miss' diagnoses, Safe actions when a diagnosis is not possible, Management plans taking patient's preferences, co-morbidities, resources, cost-effectiveness and local policies in to account, Metacognition and critical thinking in decision making	

Shared decision making Demonstrate the ability to make decisions with: Patients and carers, Clinical teams, Guidelines, scores and decision aids, Evidence-based medicine applied to the patient's circumstances, Professional values and behaviours that support decision making
Medical Ethical Reasoning: Ethical knowledge is composed of knowledge of ethical principles, ethical theory, professional codes and legal regulations. Cognitive reasoning skill is composed of problem identification and information gathering, decision making, planning and action. The domain of attitudes refers to the values or beliefs governing the justification. The justification is related to logic-based decision which can be concluded by considering the different perspectives of all the parties involved, minimizing potential conflicts among stakeholders and between competing principles and evaluating consequences.

Class syllabus:

Clinical reasoning concepts, Clinical reasoning theories (e.g. script, dual process), The role of clinical reasoning in safe and effective care for patients, Cognitive errors, Other factors that may impair the clinical reasoning process/outcome
Specifics of History taking and physical examination: Effective communication skills and purposeful interviewing, History taking from all available sources, Hypothesis-driven enquiry, Knowledge of epidemiology, probability of the presence of signs and symptoms in specific diseases, and likelihood ratios to estimate clinical probability
Specifics of choosing and interpreting diagnostic tests: Pre-test (clinical) probability and post-test probability. Sensitivity and specificity, Predictive values, Factors other than disease that influence test results, Important characteristics of commonly used tests relevant to local context, Evidence-based guidelines
Problem identification and management: An accurate problem representation or problem list, Use of semantic qualifiers and precise medical terms, Prioritized differential diagnosis, including relevant 'must not miss' diagnoses, Safe actions when a diagnosis is not possible, Management plans taking patient's preferences, co-morbidities, resources, cost-effectiveness and local policies, Metacognition and critical thinking in decision making
Shared decision making with patients and caregivers, Clinical teams, Guidelines, scores and decision aids, Evidence-based medicine applied to the patient's circumstances, Professional values and behaviors that support decision making, Strategies that build understanding, strategies that employ structured , clinical cases and corrective feedback, strategies that structure knowledge around problem-specific concepts, strategies that employ retrieval, strategies that differ according to stage of learning
Medical Ethical Reasoning: Ethical knowledge is composed of knowledge of ethical principles, ethical theory, professional codes and legal regulations. Cognitive reasoning skill is composed of problem identification and information gathering, decision making, planning and action. The domain of attitudes refers to the values or beliefs governing the justification. The justification is related to logic-based decision which can be concluded by considering the different perspectives of all the parties involved, minimizing potential conflicts among stakeholders and between competing principles and evaluating consequences.
Clinical Ethical Reasoning and its contribution to medical education: Ethical knowledge is composed of knowledge of ethical principles, ethical theory, professional codes and legal regulations. Cognitive reasoning skill is composed of problem identification and information gathering, decision making, planning and action. The domain of attitudes refers to the values or beliefs governing the justification.

Recommended literature:

Kassirer, Wong, Kopelman: Learning clinical reasoning, 2010, ISBN 978-0781795159
Irfan: The Hands-on Guide to Clinical Reasoning in Medicine, 2019, ISBN 978-1119244035

Frain, Cooper: ABC of Clinical Reasoning, 2016, ISBN-13↰:↱978-1119059080
Jonsen, A.R., Siegler, M., Winslade, W.J. Clinical Ethics. A practical Approach to Ethical in Clinical Medicine. McGraw Hill / Medical, 2015.

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., doc. MUDr. Tomáš Dallos, PhD.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.PK/L-S-VLa-062/19	**Course title:** Psychiatry 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 25s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: Written test (60 % at least). Written test evaluation: A: 91 - 100 %, B: 81 – 90 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less	
Learning outcomes: Knowledge: - Understanding the etiology, pathogenesis, epidemiology, clinical manifestations of mental disorders. - Learning the investigational procedures, principles of biological and non-biological treatment and psychosocial rehabilitation in psychiatry - Understanding the legal status and assessment of persons with mental disorders in childhood and adulthood. - Understanding the causes, clinical, diagnostic and therapeutic procedures of emergency conditions in psychiatry. - Understanding the psychopathological symptoms and syndromes. Skills: - Mastering the general principles of communication with patients suffering mental disorder in childhood and adulthood. - Ability to identify psychopathological symptoms within clinical psychiatric examination of persons with psychiatric disorders in childhood and adulthood. - Ability to investigate the psychological functions (clinically, screening scales) specifically. - Identification of relevant data from medical history and assessing their potential relationship to psychopathological symptoms, using the diagnostic workup procedures.	
Class syllabus: Course syllabus summary: Causes, mechanisms and epidemiology of mental disorders. Psychopathology, classification, diagnostics, differential diagnosis, treatment, rehabilitation, assessment of psychiatric disorders in children and adults. First aid in psychiatry. Practicing of clinical examination, identification of symptoms, diagnostic conclusion and differential diagnosis,	

preparation of draft plan of further investigations and treatment of mental disorders. Training the use of screening and assessment scales.

Recommended literature:

Kolibáš, E. a kol.: Introduction to clinical psychiatry. Bratislava: Asklepios, 1996. 107 pp. ISBN 8096761005 (available online in PDF format)

Semple, D. – Smyth, R.: Oxford Handbook of Psychiatry, 2nd Edition. Oxford University Press, 2009. 977 pp. ISBN 9780199239467 (or newer edition)

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

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 623

A	B	C	D	E	FX
8,67	44,46	31,94	11,88	3,05	0,0

Lecturers: prof. MUDr. Ján Pečeňák, CSc., doc. MUDr. Jana Trebatická, PhD., doc. MUDr. Ľubomíra Izáková, PhD., MUDr. Dana Krajčovičová, PhD., doc. MUDr. Mária Králová, CSc.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.PK/L-S-VLa-063/19	**Course title:** Psychiatry 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 25s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.PK/L-S-VLa-062/19 - Psychiatry 1	
Course requirements: 100 % participation at practical trainings Exam: 1) Written test (minimally for 60 %). Evaluation of the test: A: 91 – 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less 2) Oral exam: 2 questions (1 from general and 1 from special psychiatry). Overall evaluation will be assigned according to the average of obtained partial evaluations.	
Learning outcomes: Knowledge: - Understanding the classification of mental disorders according to ICD-10 and ICD-11. - Learning the etiology, pathogenesis, epidemiology, clinical presentations, diagnostics, differential diagnostics, treatment, rehabilitation and appraisal of the main groups of mental disorders in children and adults. Skills: - To handle clinical psychiatric examination of persons with mental disorder, to elaborate the data from documentation, to work-out the psychiatric findings. - To demonstrate the ability for examination of cognitive functions in adults by means of standardized assessment scale. - To propose correct therapeutic procedures from psychopharmacology, biological and non-biological therapeutic methods.	
Class syllabus: The causes and the mechanisms of creation and epidemiology of individual mental disorders. Diagnostic criteria and differential diagnostics. Treatment, rehabilitation and appraisal of mental disorders in childhood, adolescence and adulthood. Clinical examination, identification of signs and symptoms, differentially diagnostic elaboration and diagnostic conclusions. Formation of examination plan and proposal for treatment in selected groups of mental disorders in childhood and adulthood.	
Recommended literature:	

Jarema, M. (Ed) et al: Practical aspects of Psychiatry. Amepra, Praha, 2009, 408 pp. ISBN 9788086694085
Kolibáš, E. a kol.: Introduction to clinical psychiatry. Bratislava: Asklepios, 1996. 107 pp. ISBN 8096761005 (available online in PDF format)
Semple, D. – Smyth, R.: Oxford Handbook of Psychiatry, 2nd Edition. Oxford University Press, 2009. 977 pp. ISBN 9780199239467 (or newer edition)
Sadock, B. J. – Sadock, V. A.: Kaplan and Sadock's Synopsis of Psychiatry, 10th Edition. Lippincott Williams & Wilkins, 2010. 1470 pp. ISBN 9780781773270 (or newer edition)

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 480

A	B	C	D	E	FX
17,5	32,08	29,17	12,29	8,54	0,42

Lecturers: prof. MUDr. Ján Pečeňák, CSc., doc. MUDr. Jana Trebatická, PhD., doc. MUDr. Ľubomíra Izáková, PhD., doc. MUDr. Mária Králová, CSc., MUDr. Viktor Segeda, PhD., MUDr. Michal Turček, PhD., PhDr. Zuzana Hradečná, MUDr. Zuzana Matzová, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.RK/L-S-VLa-095/22	**Course title:** Radiology and Nuclear Medicine
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 24s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites: LF.ÚPA/L-S-VLa-055/18 - Pathological Anatomy 2 and LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2	
Course requirements: 100% participation at seminars and interactive learning of case studies, after each seminar verification of knowledge by a written test with a success rate of at least 60% An exam: - 1x written test Test rating: A: 91-100%, B: 81-99%, C: 73-80%, D: 66-72%, E: 60-65%, Fx: 59% and less - practical part - evaluation of images from individual imaging modalities - theoretical part - 2 questions (according to the syllabus) The overall rating is determined from the average of the ratings obtained.	
Learning outcomes: Knowledge: The theory and basic practical principles and indications of radiological imaging methods, functional imaging and non-imaging methods of nuclear medicine and therapeutic methods of nuclear medicine. To get acquainted with the diagnostic parameters of individual examination methods (sensitivity, specificity, diagnostic accuracy, positive and negative predictive value of the test result). Skills: Radiology - ability to determine radiological modalities - know the basic indications of individual imaging methods - knowledge of axial anatomy and topo-anatomical relationships - principles of interpretation of radiological examination methods Nuclear medicine - ability to identify functional imaging and non-imaging tests - know the principles and indications of functional imaging and non-imaging examination methods - know the principles and indications of treatment with open emitters	
Class syllabus:	

Radiology: History of radiology in the world and in the Slovak Republic. X-ray, principle of radiation, properties of X-rays, radiation protection. Principles of classical radiology, ultrasonography, CT and MR and interventional radiology.
Examination methods in imaging of the respiratory system - principles, indications, normal findings and pathological conditions. Examination methods in imaging the cardiovascular system - principles, indications, normal findings and pathological conditions.
Examination methods in imaging the gastrointestinal system - principles, indications, normal findings and pathological conditions. Examination methods in imaging the uropoietic and reproductive system - principles, indications, normal findings and pathological conditions.
Examination methods in imaging the nervous system - principles, indications, normal findings and pathological conditions. Examination methods in imaging the musculoskeletal system - principles, indications, normal findings and pathological conditions. Basic principles of mamodiagnostics - mammography, mamosonography, MR-mammography and interventional procedures in mamodiagnostics. Intervention methods in radiology - vascular and nonvascular interventions - technique, methodology, indications. Fundamentals of scientific work in radiology.
Nuclear medicine: Principles of functional imaging and treatment in nuclear medicine.
Principles of non-imaging examination methods in nuclear medicine. Physical principles of diagnostic and therapeutic methods of nuclear medicine. Instrumentation and radiopharmaceuticals in nuclear medicine. Functional imaging methods in endocrinology, nephrology, pneumology, cardiology, neurology, rheumatology and oncology in children and adults. Therapeutic methods of nuclear medicine in children and adults. Fundamentals of scientific work in nuclear medicine.

Recommended literature:

Sutton D. Textbook of Radiology and Imaging, ISBN: 9788131220160, Elservier, 2014
Lange Basic Radiology, 2010, Chen MYM, Pope TL, Ott DJ, English, 2010, ISBN: 0071627081
www.radiopaedia.org
• www.swansea-radiology.co.uk
European Nuclear Medicine Guide, The 2020 Edition: https://www.eanm.org/publicpress/european-nuclear-medicine-guide/
Špánik S. et al. Introduction to Clinical Oncology, Chapter: Balogova S. Nuclear Medicine in Oncology p.82-112, 2021, ISBN 978-80-2234988-B

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 300

A	B	C	D	E	FX
6,0	34,67	26,33	21,33	11,67	0,0

Lecturers: prof. MUDr. Viera Lehotská, PhD., prof. MUDr. Soňa Balogová, PhD., doc. MUDr. Jana Poláková Mištinová, PhD., MUDr. Vladimír Javorka, PhD., MUDr. Lucia Vanovčanová, PhD.

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-083/16	**Course title:** Slovak Language 1
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 48s **Form of the course:** on-site learning	
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 (in accordance with the individual semesters).	
Class syllabus: Slovak alphabet and sounds. Greetings in Slovak. Verb “to be”. Countries, nationalities, and languages – where am I from. Occupations and medical professions – nouns and gender. Persons – characteristics, adjective endings in Slovak. Objects and terms – characteristics, adjective endings in Slovak. Activities – verbs in Slovak, daily routine. Activities in the past – past tense in Slovak. Hospital – daily routine of medical personnel, the accusative case in Slovak. Family – basics of the family history taking. At the faculty – the locative case in Slovak. Every unit ends with a set of moodle exercises which contain assignments for independent work and consolidation of knowledge.	
Recommended literature: Bábelová, J., Hromadová, K.: Slovenský jazyk 1. Bratislava: Univerzita Komenského v Bratislave 2023. 144 p. ISBN ISBN 978-80-223-5601-5 Ďurajka, R., Jamrichová, V.: Slovenčina pre študentov medicíny. Bratislava: Univerzita Komenského v Bratislave 2022. 310 p. ISBN 978-80-223-5412-7	

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1590

A	B	C	D	E	FX
38,05	30,5	14,78	8,43	6,04	2,2

Lecturers: Ing. Janka Bábelová, PhD., Mgr. Radoslav Ďurajka, PhD., PhDr. Valéria Jamrichová, Mgr. Marína Kšiňanová, PhD., Mgr. Ľubomír Holík, PhD., Mgr. Katarína Hromadová, PhD., PhDr. Tomáš Hamar, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Melinda Vasiľová, PhD., Mgr. Mária Šibalová, PhD., Mgr. Petra Červeňová, PaedDr. Stanislav Kováč, PhD., Mgr. Zuzana Pekařová, Mgr. Ema Pavľáková, PhD., Mgr. Marek Šibal, PhD.

Last change: 22.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-084/16	**Course title:** Slovak Language 2
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 48s **Form of the course:** on-site learning	
Number of credits: 1	
Recommended semester: 2.	
Educational level: I.II.	
Prerequisites: LF.ÚCJ/L-S-VLa-083/16 - Slovak Language 1	
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 (in accordance with the individual semesters).	
Class syllabus: Revision. Medical terminology – the genitive case. Numbers in medicine – the genitive case II. Preventive medical check-up. Healthy lifestyle – use of modal verbs in Slovak, conditional. Healthy lifestyle. Instructions for patient during basic medical examinations – imperative. Examination and medical history – asking basic questions, showing empathy and interest in patients' problems. I feel sick – the dative case. Morning word round – the instrumental case. My future profession – future tense in Slovak, perfective and imperfective verbs. Every unit ends with a set of moodle exercises which contain assignments for independent work and consolidation of knowledge.	
Recommended literature: Bábelová, J., Hromadová, K.: Slovenský jazyk 2. Bratislava: Univerzita Komenského v Bratislave 2023. 153 p. ISBN ISBN 978-80-223-5673-2 Ďurajka, R., Jamrichová, V.: Slovenčina pre študentov medicíny. Bratislava: Univerzita Komenského v Bratislave 2022. 310 p. ISBN 978-80-223-5412-7	

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1528

A	B	C	D	E	FX
38,48	27,95	16,36	9,95	5,17	2,09

Lecturers: Ing. Janka Bábelová, PhD., Mgr. Radoslav Ďurajka, PhD., PhDr. Valéria Jamrichová, Mgr. Marína Kšiňanová, PhD., Mgr. Ľubomír Holík, PhD., Mgr. Katarína Hromadová, PhD., PhDr. Tomáš Hamar, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Mária Šibalová, PhD., Mgr. Petra Červeňová, Mgr. Melinda Vasiľová, PhD., PaedDr. Stanislav Kováč, PhD., Mgr. Zuzana Pekařová, Mgr. Ema Pavľáková, PhD., Mgr. Marek Šibal, PhD.

Last change: 22.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-088/18	**Course title:** Slovak Language 3
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 48s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 3.	
Educational level: I.II.	
Prerequisites: LF.ÚCJ/L-S-VLa-084/16 - Slovak Language 2	
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 (in accordance with the individual semesters).	
Class syllabus: Revision. Medical drugs and their dosage, side effects of the most used drugs. Organs and their functions. The most common diseases and their signs and symptoms – bronchitis, angina, flu, laryngitis, food poisoning, depression, myocardial infarction, gallbladder attack, fracture, stroke, pneumonia, renal stones – asking questions about the symptoms, writing medical reports. ECG examination – giving instructions during the examination. Vaccinations compulsory in Slovakia. Examination in neurology – giving instructions during the examination and describing patient reactions. Nursing – polite and caring communication with a patient, showing empathy. Postoperative care. First steps to history taking – structure of anamnestic interview. Study department and structure of the faculty – asking for support during the study.	
Recommended literature: Bábelová, J., Hromadová, K.: Slovenský jazyk 3. Bratislava: Univerzita Komenského v Bratislave 2024. 158 p., in print.	

Ďurajka, R., Jamrichová, V.: Slovenčina pre študentov medicíny. Bratislava: Univerzita Komenského v Bratislave 2022. 310 p. ISBN 978-80-223-5412-7

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 1023

A	B	C	D	E	FX
29,33	27,96	21,02	11,73	8,5	1,47

Lecturers: Ing. Janka Bábelová, PhD., Mgr. Radoslav Ďurajka, PhD., PhDr. Valéria Jamrichová, Mgr. Ľubomír Holík, PhD., Mgr. Katarína Hromadová, PhD., PhDr. Tomáš Hamar, PhD., Ing. Mgr. Erika Jurišová, PhD., Mgr. Melinda Vasiľová, PhD., Mgr. Ema Pavľáková, PhD., Mgr. Zuzana Pekařová, Mgr. Petra Červeňová, Mgr. Marek Šibal, PhD., Mgr. Mária Šibalová, PhD., PaedDr. Stanislav Kováč, PhD.

Last change: 06.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚCJ/L-S-VLa-096/22	**Course title:** Slovak Language 4
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 48s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 4.	
Educational level: I.II.	
Prerequisites: LF.ÚCJ/L-S-VLa-088/18 - Slovak Language 3	
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 (in accordance with the individual semesters).	
Class syllabus: Diagnosis and history taking – detailed structure of anamnestic interview, types of the most used questions. Understanding a variety of possible answers, practicing advanced communication skills – forming follow-up questions and expanding patients' answers. Internal medicine, cardiology, pneumology, diabetology, urology and nephrology, endocrinology, gastroenterology, rheumatology, and surgery – the most common diseases and health conditions in the specialty, their symptoms, case studies, anamnestic interview, reporting about patients' problem. Basic types of therapies. Practicing instructions during performing medical examinations.	
Recommended literature: Bábelová, J., Hromadová, K.: Slovenský jazyk 4. Bratislava: Univerzita Komenského v Bratislave 2024. 137 p. ISBN 978-80-223-5640-4. Ďurajka, R., Jamrichová, V.: Slovenčina pre študentov medicíny. Bratislava: Univerzita Komenského v Bratislave 2022. 310 p. ISBN 978-80-223-5412-7	

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 333

A	B	C	D	E	FX
36,64	22,22	15,32	9,61	13,51	2,7

Lecturers: PhDr. Tomáš Hamar, PhD., Ing. Janka Bábelová, PhD., Mgr. Radoslav Ďurajka, PhD., Mgr. Ľubomír Holík, PhD., Mgr. Katarína Hromadová, PhD., PhDr. Valéria Jamrichová, Ing. Mgr. Erika Jurišová, PhD., Mgr. Marína Kšiňanová, PhD., PaedDr. Stanislav Kováč, PhD., Mgr. Mária Šibalová, PhD., Mgr. Marek Šibal, PhD., Mgr. Petra Červeňová, Mgr. Melinda Vasiľová, PhD., Mgr. Zuzana Pekařová, Mgr. Ema Pavľáková, PhD.

Last change: 06.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚLTCJ/L-S-VLa-097/23	**Course title:** Slovak Language 5
Educational activities: **Type of activities:** practicals **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 5.	
Educational level: I.II.	
Prerequisites: LF.ÚCJ/L-S-VLa-096/22 - Slovak Language 4	
Course requirements: 100% attendance at the practicals, 2 written tests: one midterm (50 points, makes 15% of the assessment of the written part of the exam) and one exam test (100 points, makes 85% of the assessment of the written part of the exam). Oral part of the exam – discussion on 3 selected topics. 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 weighted average of the grades obtained in the midterm (15%) and exam (85%) test (together they make 25% of the overall grade) and the result of the oral part of the exam (they make 75% of the overall grade).	
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 (in accordance with the individual semesters).	
Class syllabus: Diagnosis and history taking – detailed structure of anamnestic interview, types of the most used questions. Understanding a variety of possible answers, practicing the advanced communication skills – forming follow-up questions and expanding patients' answers. Neurology, pediatrics, anesthesiology, oncology, psychiatry, gynecology and obstetrics, orthopedics, and hematology – the most common diseases and health conditions in the specialty, their symptoms, case studies, anamnestic interview, reporting about patients' problem. Basic types of therapies. Practicing instructions during performing medical examinations. Every unit ends with a set of moodle exercises which contain assignments for independent work and consolidation of knowledge.	
Recommended literature:	

Bábelová, J., Hromadová, K.: Slovenský jazyk 5. Bratislava: Univerzita Komenského v Bratislave 2023. 78 p. ISBN 978-80-223-5669-5
Ďurajka, R., Jamrichová, V.: Slovenčina pre študentov medicíny. Bratislava: Univerzita Komenského v Bratislave 2022. 310 p. ISBN 978-80-223-5412-7

Languages necessary to complete the course:
Slovak, English

Notes:

Past grade distribution
Total number of evaluated students: 110

A	B	C	D	E	FX
43,64	31,82	9,09	9,09	2,73	3,64

Lecturers: Ing. Janka Bábelová, PhD., Mgr. Radoslav Ďurajka, PhD., Mgr. Ľubomír Holík, PhD., Mgr. Katarína Hromadová, PhD., PhDr. Valéria Jamrichová, PhDr. Tomáš Hamar, PhD., Mgr. Petra Červeňová, Mgr. Mária Šibalová, PhD., PaedDr. Stanislav Kováč, PhD., Ing. Mgr. Erika Jurišová, PhD.

Last change: 22.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ÚSLLE/L-S-VLa-065/19	**Course title:** Social Medicine
Educational activities: **Type of activities:** lecture / seminar **Number of hours:** **per week:** **per level/semester:** 12s / 24s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals Final exam: - written test - oral exam: 2 questions, 15 minutes for preparation 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: Knowledge: After successful completion of the course student will be able to: - Understand the scope, mission, and tasks of social medicine. - Describe the methods of population health assessment. - Describe the models and theories of health and disease, their determinants. - Explain the role of social determinants in shaping the health of population and individuals. - Understand the basic principles of health financing. - Know the basics of medical law and basic legal obligations of physician. - Understand main problems and challenges of global health. - Understand the principles of quality improvement and patient safety in health care. - Understand the obligation to protect human rights in medical practice. - Understand the concept of vulnerability and principles how to address the specific health care needs of vulnerable groups of population. - Describe the main principles and steps in evidence-based medicine - Know the principles of communication and clinical guidelines in provision of healthcare to victims of sexual a domestic violence Skills: After successful completion of the course student will be able to: - Measure and assess the health status of the population. - Analyze the health inequities in relation to social determinants.	

- Compare and analyze different types of health systems.
- Discuss and apply the health legislation and principles of medical law in health care.
- Discuss the role of international organizations in promotion and protection of health.
- Apply the principles of quality improvement and patient safety in medical practice.
- Address the health care needs of vulnerable groups of population.
- Identify and resolve human rights issues in medical practice.
- Search and apply the evidence-based approaches in medical practice.
- Communicate and provide healthcare for the victims of sexual and domestic violence

Class syllabus:

Health and disease: concepts, models, determinants, classification systems. Social determinants and health inequities. Health systems and health financing. Demography and health. Study of population health: sources of information, measures, methods of assessment. International Red Cross: mission, principles, tasks. World Health Organization: structure, mission, tasks, programmes, strategies.. Basics concepts of medical law. Rights of patients. Legal liability and medical malpractice in health care. Quality in health care: definitions, dimensions, quality management models in health care. Safety in healthcare. Health and human rights: concept, international human rights laws and norms, the right to health. Human resources in health care. Evidence-based medicine: definition, principles, steps, PICO. Health of vulnerable groups of population. Gender-based violence: the role of healthcare professionals

Lectures:

Measures of population health.

Healthcare workforce.

World Health Organization. International Red Cross.

Health and Human Rights

Quality in Healthcare.

Practicals/Seminars:

Social determinants of health.

Health and healthcare for vulnerable groups of population.

Right to health: a toolkit for healthcare professionals.

Healthcare financing.

Basic concepts in medical law.

Evidence-based Medicine.

Gender-based violence: the role of healthcare professionals.

Recommended literature:

Kostičová M. (ed.). Social Medicine. Bratislava: Comenius University in Bratislava, 2015.
Kostičová, M., Ozorovský, V., Badalík L., Fabian G. An Introduction to Social Medicine. Bratislava: Asklepios, 2011.

Languages necessary to complete the course:

English

Notes:

Past grade distribution

Total number of evaluated students: 623

A	B	C	D	E	FX
80,26	15,73	2,73	0,8	0,48	0,0

Lecturers: doc. MUDr. Vojtech Ozorovský, CSc., Mgr. et Mgr. Silvia Capíková, PhD., doc. MUDr. Michaela Kostičová, PhD., MPH

Last change: 11.06.2024
Approved by:

STATE EXAM DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ChK/L-VLa-ŠS-2/15	**Course title:** Surgery
Number of credits: 2	
Recommended semester: 11., 12..	
Educational level: I.II.	
State exam syllabus:	
Last change:	
Approved by:	

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ChK1/L-S-VLa-104/19	**Course title:** Surgery - summer practice
Educational activities: **Type of activities:** practice **Number of hours:** **per week:** **per level/semester:** 80s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Course requirements: one-hundred percent participation in internships and seminars	
Learning outcomes: Knowledge: Mastering diagnostics, conservative and surgical treatment in abdominal surgery and traumatology theoretically. Skills: Establish examination procedures, prescribe the required treatment. Scrubbing-in for abdominal surgery, especially in sudden abdominal events. Master the indication criteria for surgical diseases. Diagnostic procedures and laparoscopic dexterity on the simulator. Simulation workplace.	
Class syllabus: Examination of a surgical patient, treatment of injuries. Outpatient department - assistance in small surgical procedures, performing small surgical procedures under supervision, bandages, wound dressings and plastering, diagnostic examinations. Work in the department - examination and diagnosis of sudden abdominal events, indications for surgeries, preoperative preparation of patients, postoperative monitoring, treatment of patients, scrubbing-in to operations. X-ray evaluation, evaluation of ultrasound and CT findings. Perform emergency service once.	
Recommended literature: Cameron, J.: Current Surgical Therapy. 8th ed. London: Churchill Livingstone, 2004, Coran G. Arnold at all.: Pediatric Surgery, Vol. 1, 2, Elsevier 2012, Kirk, R.M.: General Surgical Operations. 5th ed. London: Churchill Livingstone, 2006 Sabiston Textbook of Surgery 20th Edition, Elsevier 2016 Zacharias Zachariou: Pediatric Surgery Digest, Springer 2009	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 526
ABS0
100,0
Lecturers: prof. MUDr. Štefan Durdík, PhD.
Last change: 31.05.2024
Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ChK1/L-S-VLa-021/19	**Course title:** Surgery 1
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 40s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 7.	
Educational level: I.II.	
Prerequisites: LF.ChK1/L-S-VLa-026/18 - Surgical Propedeutics	
Course requirements: 100% attendance at the practicals	
Learning outcomes: Learning outcomes: Knowledge: Theoretical knowledge of benign and malignant diseases of the esophagus and stomach. Hernias in children and adults. Diagnostic and therapeutic features of acute abdomen (classification, symptoms, examination methods, treatment) in adults and children. Surgical diseases of the venous and lymphatic system, peripheral and arterial system. Pancreatitis diagnostics, classification, diagnosis, treatment. Skills: Examination and diagnostics of acute abdomen, therapeutic suggestions, scrubbing-in during surgeries. Diagnostic procedures and laparoscopic skill on the trainer. Simulation workplace.	
Class syllabus: Surgical diseases of esophagus. Gastric tumours. Appendicitis. Acute peritonitis. Ileus. Acute abdomen in childhood. Pancreatitis. Surgical diseases of the venous and lymphatic system. Surgical diseases of the arterial system. Injuries of bones and joints of the upper and lower limbs. Spinal injury. Hernias.	
Recommended literature: Cameron, J.: Current Surgical Therapy. 8th ed. London: Churchill Livingstone, 2004, Coran G. Arnold at all.: Pediatric Surgery, Vol. 1, 2, Elsevier 2012, Kirk, R.M.: General Surgical Operations. 5th ed. London: Churchill Livingstone, 2006 Sabiston Textbook of Surgery 20th Edition, Elsevier 2016 Zacharias Zachariou: Pediatric Surgery Digest, Springer 2009	
Languages necessary to complete the course: english	
Notes:	

Past grade distribution Total number of evaluated students: 668					
A	B	C	D	E	FX
75,15	12,57	8,98	2,4	0,75	0,15

Lecturers: prof. MUDr. Peter Labaš, CSc., doc. MUDr. Milan Schnorrer, CSc., doc. MUDr. Marián Vician, CSc., MUDr. Boris Hrbatý, PhD., MUDr. Milan Oravský, PhD., MUDr. Richard Reis, PhD., prof. MUDr. Štefan Durdík, PhD., prof. MUDr. Mgr. Marian Vidiščák, PhD., MPH

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ChK1/L-S-VLa-022/19	**Course title:** Surgery 2
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 30s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites: LF.ÚPA/L-S-VLa-055/18 - Pathological Anatomy 2 and LF.ÚPF/L-S-VLa-057/18 - Pathological Physiology 2	
Course requirements: - 100% attendance at the practicals	
Learning outcomes: Knowledge: Theoretical knowledge of surgical diseases of the liver and bile tree, tumours of the liver and bile tree, differential diagnosis of these diseases. Benign and malignant surgical diseases of the small intestine, colon and rectum. Surgical diseases of the thyroid gland and parathyroid glands. Cancers of the breast, adrenal glands. Surgical diseases in childhood, including birth defects, their diagnosis and treatment. Surgical diseases of the lungs, bronchi and mediastinum. Theoretical knowledge of heart and large vessels surgery, organ transplantations. Skills: In the treatment of organ diseases of surgical origin, take an indicative point and assistance in these surgical procedures. Laparoscopic simulator. Diagnostic procedures and laparoscopic skill on the trainer. Simulation workplace.	
Class syllabus: Surgical disease of the liver and bile tree. Liver and biliary tract tumours. Pancreatic tumours. Small bowel, large bowel and rectal surgical diseases. Colorectal cancer. Surgical diseases of the thyroid gland and parathyroid glands. Bronchial and lung surgical diseases. Mediastinal diseases. Congenital diseases in childhood. Surgical diseases in childhood. Cardiac and intrathoracic large vessel surgery. Organ transplantation. Urgent surgical procedures.	
Recommended literature: Cameron, J.: Current Surgical Therapy. 8th ed. London: Churchill Livingstone, 2004, Coran G. Arnold at all.: Pediatric Surgery, Vol. 1, 2, Elsevier 2012, Kirk, R.M.: General Surgical Operations. 5th ed. London: Churchill Livingstone, 2006 Sabiston Textbook of Surgery 20th Edition, Elsevier 2016 Zacharias Zachariou: Pediatric Surgery Digest, Springer 2009	
Languages necessary to complete the course: english	

Notes:					
Past grade distribution Total number of evaluated students: 672					
A	B	C	D	E	FX
55,06	14,73	11,16	6,85	11,46	0,74
Lecturers: prof. MUDr. Peter Labaš, CSc., doc. MUDr. Milan Schnorrer, CSc., doc. MUDr. Marián Vician, CSc., MUDr. Boris Hrbatý, PhD., MUDr. Richard Reis, PhD., MUDr. Milan Oravský, PhD., prof. MUDr. Štefan Durdík, PhD., prof. MUDr. Mgr. Marian Vidiščák, PhD., MPH					
Last change: 31.05.2024					
Approved by:					

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KOCh/L-S-VLa-023/20	**Course title:** Surgery 3
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 24s / 25s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 9.	
Educational level: I.II.	
Prerequisites: LF.ChK1/L-S-VLa-022/19 - Surgery 2 and LF.NK1/L-S-VLa-047/19 - Neurology 1	
Course requirements: - 100% attendance at the practicals	
Learning outcomes: Knowledge: After completing the course, the student will gain theoretical knowledge of pathophysiology, diagnosis and treatment of diseases and injuries in orthopedics-traumatology, pediatric surgery and plastic surgery. He will be acquainted with the procedures of surgical procedures in orthopedics-traumatology, pediatric surgery and plastic surgery and with the principles of alternative treatment methods, the basics of assessment and incapacity for work. Skills: He will master the indication criteria for acute surgical diseases and injuries of the brain, spine, spinal cord and peripheral nerves, he will gain practical experience as an assistant in lumbar puncture, he will master the principle of craniotomy, decompression. He will gain skill in catheterization, a permanent catheter in men and women, he will master the indications and basics of epicystostomy and intravenous urography. Diagnostic procedures and laparoscopic skill on the trainer. Simulation workplace.	
Class syllabus: Classification of tumors of the nervous system. Neuroradiodiagnostics of brain tumors (magnetic resonance imaging, extended magnetic resonance imaging, functional magnetic resonance imaging, MR tractography - diffusion tensor imaging, positron emission tomography). Surgical and adjuvant treatment of brain tumors. Open and closed head injuries. Skull base injuries. Posttraumatic intracranial hemorrhage, pathophysiology, clinical manifestations and diagnostics. Indications and technique of surgical procedures for craniocerebral injuries. Pathophysiology, clinical manifestations, diagnosis and treatment of injuries of the spine, spinal cord and spinal nerves. Vascular diseases of the brain, pathophysiology, diagnostics and principles of treatment (cerebral artery aneurysms, arteriovenous malformations of the brain, cavernous malformations. Principles of microsurgical, endovascular and radiosurgical treatment). Diagnosis and treatment of degenerative diseases of the cervical and lumbosacral spine. Surgical treatment of congenital diseases of the nervous system, skull and spine. Hydrocephalus, pathophysiology, clinical manifestations and	

surgical treatment. Inflammatory diseases in neurosurgery. Characteristics of stereotactic surgical technique, and functional stereotaxy (biopsy, abscess evacuation), functional neurosurgery (surgical treatment of pain, movement disorders and epilepsy). Oncology, prostate diseases, male infertility, erectile dysfunction, acute and chronic renal insufficiency, urolithiasis, acute conditions in urology.

Recommended literature:

Cameron, J.: Current Surgical Therapy. 8th ed. London: Churchill Livingstone, 2004,
Coran G. Arnold at all.: Pediatric Surgery, Vol. 1, 2, Elsevier 2012,
Kirk, R.M.: General Surgical Operations. 5th ed. London: Churchill Livingstone, 2006
Sabiston Textbook of Surgery 20th Edition, Elsevier 2016

Languages necessary to complete the course:

english

Notes:

Past grade distribution

Total number of evaluated students: 538

A	B	C	D	E	FX
77,7	22,3	0,0	0,0	0,0	0,0

Lecturers: prof. MUDr. Juraj Šteňo, DrSc., Dr.h.c. prof. MUDr. Ján Breza, DrSc., prof. MUDr. Viktor Matejčík, CSc., doc. MUDr. Ing. Ján Breza, PhD., doc. MUDr. Andrej Šteňo, PhD., MPH, MUDr. Martin Novotný, PhD., MUDr. Andrey Švec, PhD., MPH, prof. MUDr. Štefan Durdík, PhD.

Last change: 31.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.OK/L-S-VLa-096/22	**Course title:** Surgery 4
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 29s / 25s **Form of the course:** on-site learning	
Number of credits: 3	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.KOCh/L-S-VLa-023/20 - Surgery 3	
Course requirements: - 100% attendance at the practicals - theoretical exam: 2 question Exam 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: Knowledge: Basics of plastic surgery and hand surgery. Surgical diseases in childhood. Basic theoretical information about diseases of the musculoskeletal system, orthopedic treatment of congenital and acquired diseases, management of trauma patients in its entirety, basics of systemic and inflammatory diseases of the skeleton in children and adults. Skills: Mastering the examination and medical record of the patient in orthopedics, traumatology and plastic surgery. Mastering the examination of pediatric, orthopedic and trauma patients. Gaining skills in the evaluation of native X-ray and USG examination as well as interpretation of the results of gamma, CT, MRI, PET examinations. Practical mastery of knee joint puncture and control of ankle, shoulder and lumbar joint puncture procedures. Oncoorthopedics, mastering diagnostic procedures in the examination of patients (staging and grading of tumors). Coping with patch and transskeletal extension. Mastering diagnostic procedures in the examination of traumatic and osteoporotic patients. Obtaining procedures for reduction of dislocation of the shoulder, ankle, knee and elbow. Mastering the algorithm of examinations in inflammatory diseases of the skeleton. Diagnostic procedures and laparoscopic skill on the trainer. Simulation workplace.	
Class syllabus: Basics of plastic and reconstructive surgery and hand surgery. Fractures and dislocations of the upper limb, spinal injuries, pelvic fractures, fractures and dislocations of the lower limb, polytraumas, injuries of tendons, blood vessels and nerves of the hand, surgical treatment of lossal injuries, treatment of burns, skin transplants and lobes, patient principles of orthopedic treatment. Musculoskeletal traumatology, rehabilitation. Systemic skeletal diseases and vascular necrosis, bone tumors and tumors of the soft parts of the limbs and spine. Orthopedic problems	

with muscle diseases, arthropathy, inflammatory, bone and joint diseases. Degenerative diseases, pediatric orthopedics. Congenital abdominal events, thoracic and vascular surgery in childhood, hepatoportal surgery in childhood, scoliosis, disease pertes, dressing technique in traumatology and plastic surgery.

Recommended literature:
Grabb and Smiths: Plastic Surgery, 7th edition, Lippincott Williams Wilkins, 2013, 976 s.
Zacharias Zachariou: Pediatric Surgery Digest, Springer 2009

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 260

A	B	C	D	E	FX
69,23	16,54	8,85	3,46	1,15	0,77

Lecturers: prof. MUDr. Milan Kokavec, PhD., MPH, doc. MUDr. Jozef Babala, PhD., doc. MUDr. Jozef Fedeleš, CSc., doc. MUDr. Boris Šteňo, PhD., doc. MUDr. Ján Trnka, CSc., MUDr. Drahomír Palenčár, PhD., MUDr. Ján Paukovic, CSc., MUDr. Andrey Švec, PhD., MPH, prof. MUDr. Štefan Durdík, PhD., doc. MUDr. Martin Sabol, PhD., prof. MUDr. Peter Labaš, CSc., doc. MUDr. Ľudovít Danihel, PhD., doc. MUDr. Marián Vician, CSc., doc. MUDr. Milan Schnorrer, CSc., prof. MUDr. Mgr. Marian Vidiščák, PhD., MPH

Last change: 31.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KOCh/L-S-VLa-025/19	**Course title:** Surgery 5
Educational activities: **Type of activities:** seminar / practicals **Number of hours:** **per week:** **per level/semester:** 48s / 240s **Form of the course:** on-site learning	
Number of credits: 13	
Recommended semester: 11., 12..	
Educational level: I.II.	
Prerequisites: LF.OK/L-S-VLa-096/22 - Surgery 4	
Course requirements: One-hundred percent participation in internships and seminars. Practical exam (examination of a surgical patient, processing of a medical record, 2 questions from surgery). Final test in surgical disciplines. State exam - 3 theoretical questions.	
Learning outcomes: Knowledge: Comprehensive theoretical knowledge of surgical disciplines, mastering the differential diagnosis of surgical diseases. Skills: Comprehensive examination of the patient with differential diagnostics and patient treatment proposal. Ability to perform minor surgery and the ability to assist in surgical procedures. Master the indication criteria for surgical diseases. Diagnostic procedures and laparoscopic skill on the trainer. Simulation workplace.	
Class syllabus: As part of block teaching, work in departments, outpatient clinics and operating theaters of individual surgical clinics in the classification as a junior secondary doctor, participation in visits and seminars of clinics, assistance in operations, performing minor diagnostic and therapeutic procedures. The seminars will be devoted to the following topics: Organ transplants. Extensive liver resections. Intensive treatment in surgery. Surgical diseases of the esophagus, stomach, duodenum, small intestine, colon and rectum. Lung and mediastinal surgical diseases. Chest injuries. Surgical diseases and injuries in childhood. Comprehensive care for burns. Plastic surgery consultations. Ileus and peritonitis. Orthopedics consultations. Current trends in oncosurgery. Surgery of the liver, bile ducts and pancreas. Conservative and surgical treatment of fractures. Neurosurgery consultations. Urology consultations. Vascular surgery consultations. Shock, splitting and treatment. Circulatory and respiratory resuscitation. Principles of treatment of water and electrolyte turnover and acid-base balance in surgery.	
Recommended literature: Cameron, J.: Current Surgical Therapy. 8th ed. London: Churchill Livingstone, 2004, Coran G. Arnold at all.: Pediatric Surgery, Vol. 1, 2, Elsevier 2012,	

Kirk, R.M.: General Surgical Operations. 5th ed. London: Churchill Livingstone, 2006
Sabiston Textbook of Surgery 20th Edition, Elsevier 2016
Zacharias Zachariou: Pediatric Surgery Digest, Springer 2009

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 531

A	B	C	D	E	FX
79,1	13,18	6,21	1,51	0,0	0,0

Lecturers: prof. MUDr. Peter Labaš, CSc., prof. MUDr. Juraj Šteňo, DrSc., Dr.h.c. prof. MUDr. Ján Breza, DrSc., doc. MUDr. Milan Schnorrer, CSc., doc. MUDr. Andrej Šteňo, PhD., MPH, doc. MUDr. Marián Vician, CSc., MUDr. Pavol Mazalán, MUDr. Milan Oravský, PhD., MUDr. Katarína Szabómihályová, MUDr. Ivan Majeský, PhD., doc. MUDr. Peter Bukovčan, PhD., MUDr. Martin Novotný, PhD., MUDr. Andrey Švec, PhD., MPH, MUDr. Martin Dubovský, PhD., MUDr. Boris Hrbatý, PhD., prof. MUDr. Milan Kokavec, PhD., MPH, prof. MUDr. Mgr. Marian Vidiščák, PhD., MPH

Last change: 19.06.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.ChK1/L-S-VLa-026/18	**Course title:** Surgical Propedeutics
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 30s / 40s **Form of the course:** on-site learning	
Number of credits: 4	
Recommended semester: 6.	
Educational level: I.II.	
Prerequisites: LF.AÚ/L-S-VLa-003/17 - Anatomy 3	
Course requirements: - 100% attendance at the practicals - 1 written test (minimum 60% of correct answers) Final exam: - practical exam: patient examination and writing medical report - theoretical exam: 3 question (general examination, special systems, laboratory test) 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: Knowledge: Theoretically master the examination of the surgical patient, master the principles of preoperative preparation and postoperative care of the surgical patient. To control the internal environment, metabolism, principles of parenteral and enteral nutrition of the operated patient. Know infusion solutions, replacement solutions, blood derivatives. Theoretically manage infection in surgery, incidence, causes and basics of treatment. Master the indications of examination methods (instrumental, USG, X-ray, CT, MRI) in vascular surgery, urology, traumatology, pediatric surgery, thoracic surgery, neurotraumatology. Theoretically control shock, hypovolemic, traumatic, septic, burn. To control the division of wounds, the division of fractures, injuries of blood vessels, nerves, injuries of the intra-abdominal, thoracic, retroperitoneal organs, injuries of the skull. Master the basics of transplant surgery, know the differences in the diagnosis and treatment of children and adults. Skills: Examine the surgical patient, determine the diagnosis with the help of examination methods and clinical examination. Prescribe parenteral and enteral nutrition. Give transfusions and blood derivatives, handle small surgical procedures - wound suturing, incision of abscesses, phlegmon, removal of skin lesions. Treat minor traumas - dressing, plastering, splints, orthoses. Master venepuncture and tracheostomy, chest puncture, joint puncture. Manage shock design measures and treatment of shock. Examination of the surgical patient and mastering the diagnostics in surgery.	

Basics of trauma surgery. Diagnostic procedures and laparoscopic skill on the trainer. Simulation workplace

Class syllabus:
Examination of the surgical patient and preparation for surgery. Surgical procedure, technique, indications, urgent procedures in surgery, asepsis and antisepsis, sterilization. Preoperative and postoperative care of the surgical patient. Surgical infections, anaerobic and specific infections, panaritium, nosocomial infections. Antibiotic therapy in surgery. Disruption of the internal environment, parenteral and enteral nutrition, alternative solutions, transfusions. Wound division and treatment. Fracture distribution. Bone injuries, distortions, dislocations, muscle and tendon injuries. Examination methods in vascular surgery and peripheral vascular injuries. Amputations. Injuries to the abdomen and intra-abdominal organs. Examination methods in urology and urinary tract injuries. Preoperative and postoperative care for children. The difference between injuries in children and adults, biological differences, treatment procedures. Bleeding in surgery, examination methods in bleeding, hypovolemic shock, septic shock. Heat injuries, electric burns, frostbite, sunburn, sunburn. Chest injuries, spinal cord and peripheral nerve injuries, head injuries. Basics of transplant surgery.

Recommended literature:
Cameron, J.: Current Surgical Therapy. 8th ed. London: Churchill Livingstone, 2004,
Coran G. Arnold at all.: Pediatric Surgery, Vol. 1, 2, Elsevier 2012,
Kirk, R.M.: General Surgical Operations. 5th ed. London: Churchill Livingstone, 2006
Sabiston Textbook of Surgery 20th Edition, Elsevier 2016
Zacharias Zachariou: Pediatric Surgery Digest, Springer 2009

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 773

A	B	C	D	E	FX
69,21	20,83	6,47	2,46	0,65	0,39

Lecturers: prof. MUDr. Peter Labaš, CSc., doc. MUDr. Marek Čambal, PhD., doc. MUDr. Milan Schnorrer, CSc., doc. MUDr. Marián Vician, CSc., MUDr. Boris Hrbatý, PhD., MUDr. Richard Reis, PhD., prof. MUDr. Štefan Durdík, PhD., doc. MUDr. Martin Sabol, PhD., doc. MUDr. Jozef Babala, PhD., doc. MUDr. Ľudovít Danihel, PhD., prof. MUDr. Mgr. Marian Vidiščák, PhD., MPH

Last change: 30.05.2024

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KAIM2/L-S-VLa-177/22	**Course title:** Topics from Resuscitation
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at the practicals - 1 written test (minimum 60% of correct answers) Final exam: - practical exam: Basic and Immediaete Life Support with AED – teamwork. - theoretical exam: test and essay on a selected topic in resuscitation (LMS Moodle). 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: Knowledge: Upon successful completion of the educational program, the student will gain knowledge and understand it in accordance with the global learning objectives of the course. Basic knowledge (applied physiology) for the treatment of patients with cardiac arrest (CA) - basic and advanced life support, basic principles of post-resuscitation care. CA in a medical facility – specific issues of resuscitation. Prevention of CA - identification and treatment of deteriorating patient condition (early warning system , MET – medical emergency teams), + ABCDE procedure. Technical and non-technical skills in cardiopulmonary resuscitation (CPR) - CPR effectiveness parameters, heart rhythms in CPR, defibrillation (automated external defibrillation - AED, manual defibrillation), CPR algorithms, principles of teamwork and interpersonal communication. Skills: Upon successful completion of this course, students will be able to solve: Early detection of CA risk, early recognition of cardiac arrest, aid activation, early CPR (Airway and ventilation, airway patency management, high quality CPR), early defibrillation, Using AED tips and tgrticks, i.v., i.o. Access, management of CPR pharmacotherapy, teamwork management. Ethical issues of CPR (do not resuscitate – DNR).	
Class syllabus: 1. Cardiac arrest (CA) - ethiology, pathophysiological aspects, recognition, differ. diagnosis	

2. CA in the context of health care - (CA outside the health facility, in the health facility , Basic, Immediate and Advanced life support, Chain of survival).
3. Technical and non-technical skills and quality of resuscitation.
4. Diagnosis of deteriorating patient condition and prevention of CA.
5. Acute coronary syndrome - initial management.
6. Acute stroke syndrome – initialmanagment
7. Emergencies – tension pneumothorax, embolia art. Pulmonalis,
8. Resuscitation in the hospital, ambulance.
9. Heart rhythms in cardiac arrest.
10. Defibrillation. AED , manual defibrillator
11. Airway patency management, high quality CPR.
12. Advance Life Support (ALS) algorithms.
13. Post-resuscitation care.

Recommended literature:
Resuscitation (2021) 1–80: European Resuscitation Council Guidelines for Resuscitation 2021. (www.erc.edu).

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 23

A	B	C	D	E	FX
69,57	26,09	4,35	0,0	0,0	0,0

Lecturers: doc. MUDr. Roman Záhorec, CSc.

Last change: 01.12.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.MÚ/L-S-VLa-157-5/19	**Course title:** Tropical Parasitology
Educational activities: **Type of activities:** lecture **Number of hours:** **per week:** **per level/semester:** 24s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites:	
Course requirements: - 100% attendance at lectures and practicals - written test (minimum 60% of correct answers) Final exam: - theoretical exam: 3 question (general parasitology, protozoa, helminthology) 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: Learning outcomes: - General characteristics of human parasites - epidemiology and geografic distribution of human parasites - treatment of parasitic diseases - diagnosis and diagnostics of causing agents of tropical parasitic diseases - prevention Knowledge: During active participation the course lectures, student will acquire knowledge on tropical parasitology i.e. morphology, geographical distribution, epidemiology, pathogenesis, pathology, treatment, diagnosis, diagnostics and prevention of tropical parasitic infections, including ectoparasites as vectors of viruses, bacteria, viruses and helminths. Skills: Students orientates to geaographcal distribution of tropical diseases, can promptly express and respond to imported diseases, the treatment and prevention. After the attendance of a 4-hour compulsory exercise, they will learn the basics of laboratory diagnostics of tropical parasitic infections, i.e. knowledge of parasite morphology, use of rapid diagnostic methods, serological methods and their interpretation.	
Class syllabus: Introduction to tropical parasitology. Host – parasite interaction, adaptation to parasitic way of life. Biological cycle, clinical symptoms, laboratory diagnostics, epidemiology, treatment, prevention and control. Intestinal tropical protozoal infections. Tropical blood and tissue protozoan infections.	

Tropical intestinal helminthiasis. Tropical blood and tissue helminthiasis. Parasitic arthropods. Antiparasitics used in the treatment of tropical parasites. Possibilities of diagnostics of tropical parasitic infections.

Recommended literature:

xMurray,P.R. et al.: Medical Microbiology. 8th ed. Philadelphia: Elsevier, 2016. 848 pp.
BEECHING. N. and GILL, G. Tropical Medicine. 7th ed. Wiley-Blackwell, 2014. 408 p. ISBN: 978-0-470-65853-6 (selected chapters).
Jeremy Farrar et al. Mansonś Tropical Diseases; 23rd Edition. Saunders Ltd. 2014. 1360pp. ISBN 9780702051012, eBook 9780702057700 (selected chapters)
GOERING R. et al: Mims' Medical Microbiology and Immunology. 6th ed. Elsevier, 2018. 568 p. ISBN-10: 0702071544, ISBN-13: 978-0702071546 (selected chapters)
x Jalili N. Parasitology. In: LIPTÁKOVÁ, A., et. al. Microbiological Diagnostics for Students of Medicine.1st ed. Bratislava: Comenius University, 2018. 246 s. Textbook. ISBN 978-80-223-4287-2.
Sastry Apraba S. Essentials of Medical Parasitology. Jp Medical Ltd. 2018. 357pp. ISBN13 (EAN): 9789352704804

Languages necessary to complete the course:
english

Notes:

Past grade distribution
Total number of evaluated students: 3

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

Lecturers: doc. RNDr. Nasir Ahmad Jalili, CSc., MPH, RNDr. Martina Dubinová, PhD.

Last change: 30.11.2022

Approved by:

COURSE DESCRIPTION

Academic year: 2023/2024	
University: Comenius University Bratislava	
Faculty: Faculty of Medicine	
Course ID: LF.KUVM/L-S-VLa-067/20	**Course title:** Urgent Medicine
Educational activities: **Type of activities:** lecture / practicals **Number of hours:** **per week:** **per level/semester:** 12s / 12s **Form of the course:** on-site learning	
Number of credits: 2	
Recommended semester: 10.	
Educational level: I.II.	
Prerequisites: LF.ÚFKF/L-S-VLa-012/19 - Pharmacology 2	
Course requirements: 100% participation Practical extended CPR Written exam – test with minimum achievement of 60% Test evaluation: A: 91 - 100 %, B: 81 – 99 %, C: 73 – 80 %, D: 66 – 72 %, E: 60 – 65 %, Fx: 59 % and less Final evaluation will be calculated as the average of achieved partial evaluations.	
Learning outcomes: KNOWLEDGE: Urgent medicine shall provide teoretical information on providing health care in life threatening situations in pre-hospital, as well as hospital stage of rescue chain. To define the medicine of disasters, mass accidents, special events. SKILLS: To handle advanced life support, securing access to airways via intubation, laryngeal mask, laryngeal tubus. To handle intraoseal access to blood circulation, fractures stabilization, stopping a massive bleeding. Using of protective equipment against military attacks.	
Class syllabus: Diagnostics and differential diagnostics of the most serious conditions in pre-hospital care, treatment of serious injuries and transport management. Organization and practical realization of professional health care activities within urgent medicine and medicine of disasters. Integrated rescue system. Possible types of injuries and illnesses at disasters and mass accidents. Organization of IRS intervention in mass accidents, triage of patients and organization of transport to medical facilities. Traumatological plan of medical facilities. Terrorism - Individual and collective protection in the event of a terrorist attack. War medicine - the organization of health care during war and the system of providing health care in the event of an attack by weapons of mass destruction.	
Recommended literature: Wyatt, J., Illingworth, Graham, c., Hogg, K. : Oxforf Handbook of Emergency Medicine, Oxford University Press, 2015	

European Resuscitation Council Guidelines 2021
Richard, A.,Hulsewef, b., Niemeyer, B., Sabath, F.: CBRN protection. Willey 2012

Languages necessary to complete the course:
English

Notes:

Past grade distribution
Total number of evaluated students: 480

A	B	C	D	E	FX
1,25	7,5	25,21	40,0	25,62	0,42

Lecturers: prof. MUDr. Oto Masár, CSc., PhDr. Hana Belejová, PhD., PhDr. Dušan Sysel, PhD., MUDr. Teodor Bachleda, PhD., MBA, PhDr. Adrián Fabiny

Last change: 30.05.2024

Approved by: