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| Higher education institution: <i>Slovak Medical University in Bratislava</i> | |
| Faculty: <i>Faculty of Medicine</i> | |
| Course code: <i>GM 006A</i> | Course title: <i>Histology (1)</i> |
| Type, extent and method of educational activity: <i>Number of hours per semester: Lectures: 28/2 hours per week Practices: 42/3 hours per week</i> | |
| Number of credits: <i>6 credits</i> | |
| Recommended semester/trimester study: <i>2nd</i> | |
| Level of higher education study: <i>1. + 2. level</i> | |
| Prerequisite courses: | |
| Requirements for completion of the course: <i>Method of assessment and completion of the course: active attending of lectures and practical exercises. Credit (written test, oral exam) Final test: minimum threshold of success: 60%. Evaluation: A:95% -100%, B: 88% - 94% C: 77% -87%, D: 66% -76%, E:60% -65% Student workload is 80 hours</i> | |
| Learning outcomes: <i>Histology is the branch of science that centers on the microscopic morphology (structure) of cells, tissues and organs within the organism. The study of histology allows medical students to acquire knowledge of the microscopic structure of cells, tissues and organs of normal human body. Knowledge forms the bases for the study of Physiology and Pathology. Goals of Histology: observation and study of tissue structures at levels not visible with naked eye; study of the relationship between tissue structure and function; establishing a basis for understanding histo-pathology; providing a basis for treating diseased and injured tissue.</i> | |
| Brief content of the course (syllabus): <i>Overview of methods used in histology. Light and electron microscopy. Preparation of histological sections for light microscopy. Common stains used for light microscopy. Histochemistry and immunohistochemistry. The functional structure of the different components of the cell. Cell cycle. Epithelial tissue (characteristics, classifications, types and the common sites of each type). The structure of the cell junctions and the basement membrane. Connective tissue proper. Fixed and free cells of connective tissue proper. Extracellular matrix: fibers and ground substance. The types of connective tissues. Functional morphology and clinical significance of blood elements (red blood cells, white blood cells, platelets). Bone marrow and hemopoiesis. Cartilage and Bone. Intramembranous and endochondral ossification. Growth of bone. Repair of bone after fracture. Microscopic structure of synovial joints. Muscle tissue. Functional histology of skeletal, smooth and cardiac muscles. Ultrastructure of skeletal muscle fibers. Impulse conductive system of the heart. Nervous tissue. Neurons and neuroglia. Functional ultrastructure of neurons and supporting glial cells. Synapses. Microscopic structure of the gray and white matter.</i> | |
| Recommended literature: <i>Pawlina W. Histology. A Text and Atlas with Correlated Cell and Molecular Biology. 7th Edition. Philadelphia: Wolter Kluwer Health, 2016, 984 pp. Kierszenbaum AL, Tres LL. Histology and Cell Biology. An Introduction to Pathology. Fourth Edition. Philadelphia: Elsevier Saunders, 2016. 734 pp. Adamkov M. (Ed). Introduction to Functional Histology. Textbook. Second Revised and Updated Edition. Martin: P+M Turany 2013, 425 pp. Gartner LP, Hiatt JL. Color Atlas and Text of Histology. Philadelphia: Wolters Kluwer Lippincott Williams a Wilkins 2014, 525 pp. Mescher AL. Junqueira's Basic Histology. Text and Atlas. 14th Edition. New York, McGraw-Hill Education 2016, 560 pp. Eroschenko VP. diFiore's Atlas of Histology with Functional Correlations. Twelfth Edition. Philadelphia: Lippincott Williams a Wilkins 2013, 603 pp. Federative Committee on Anatomical Terminology. Terminologia Histologica: International Terms for Human Cytology and Histology. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins, 2008. 213 pp.</i> | |

Language requirements:-**Notes:**

The course runs in Slovak and English language.

Course assessment

Assessed students in total: 0

| A | B | C | D | E | FX |
|----|----|----|----|----|----|
| 0% | 0% | 0% | 0% | 0% | 0% |

Lecturers:

doc. RNDr. Ivan Varga, PhD., PhD., mim. prof.

MUDr. Mgr. Michal Miko, PhD.

MUDr. Renáta Mikušová, PhD.

Date of last modification: 01.09.2014

Supervised by: *prof. MUDr. Peter Šimko, CSc.*

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|--|---|
| Higher education institution: <i>Slovak Medical University in Bratislava</i> | |
| Faculty: <i>Faculty of Medicine</i> | |
| Course code: <i>GM 006B</i> | Course title: <i>Histology (2)</i> |
| Type, extent and method of educational activity: <i>Number of hours per semester: Lectures: 28/2hours per week Practices: 42/3 hours per week</i> | |
| Number of credits: <i>7 credits</i> | |
| Recommended semester/trimester study: <i>3.th</i> | |
| Level of higher education study: <i>1. + 2. level</i> | |
| Prerequisite courses: <i>GM 006A Histology (1)</i> | |
| Podmienky na absolvovanie predmetu: Requirements for completion of the course: <i>Method of assessment and completion of the course: active attending of lectures and practical exercises. Credit (written test, practical part of examination, oral exam) A, B, C, D, E, FX Student workload is 105 hours</i> | |
| Learning outcomes: <i>Histology is the branch of science that centers on the microscopic morphology (structure) of cells, tissues and organs within the organism. The study of histology allows medical students to acquire knowledge of the microscopic structure of cells, tissues and organs of normal human body. Knowledge forms the bases for the study of Physiology and Pathology. Goals of Histology: observation and study of tissue structures at levels not visible with naked eye; study of the relationship between tissue structure and function; establishing a basis for understanding histo-pathology; providing a basis for treating diseased and injured tissue.</i> | |
| Brief content of the course (syllabus): <i>Functional histology of the cardiovascular system: heart, arteries, capillaries, veins. Lymphatic vessels. Functional histology of the lymphatic system: cells of immune system, lymphoid tissue (diffuse lymphoid tissue and lymph nodules), lymphoid organs (lymph nodes, thymus, spleen). Functional histology of the digestive system - mouth, teeth, salivary glands, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, pancreas. Functional histology of the respiratory system - nasal cavity, pharynx, larynx, trachea, bronchi, bronchioles, alveoli. Functional histology of the endocrine glands, neuroendocrine hypothalamic-pituitary system, adrenal glands, thyroid gland, parathyroid glands, pineal gland. Microscopic structure and function of the kidney, urinary tract and urinary bladder. Microscopic structure and function of the male reproductive system. Microscopic structure and function of the female reproductive system. Microscopic structure and function of skin and adnexa. Microscopic structure and function of eye. Microscopic structure and function of ear.</i> | |
| Recommended literature: <i>Pawlina W. Histology. A Text and Atlas with Correlated Cell and Molecular Biology. 7th Edition. Philadelphia: Wolter Kluwer Health, 2016, 984 pp. Kierszenbaum AL, Tres LL. Histology and Cell Biology. An Introduction to Pathology. Fourth Edition. Philadelphia: Elsevier Saunders, 2016. 734 pp. Adamkov M. (Ed). Introduction to Functional Histology. Textbook. Second Revised and Updated Edition. Martin: P+M Turany 2013, 425 pp. Gartner LP, Hiatt JL. Color Atlas and Text of Histology. Philadelphia: Wolters Kluwer Lippincott Williams a Wilkins 2014, 525 pp. Mescher AL. Junqueira's Basic Histology. Text and Atlas. 14th Edition. New York, McGraw-Hill Education 2016, 560 pp. Eroschenko VP. diFiore's Atlas of Histology with Functional Correlations. Twelfth Edition. Philadelphia: Lippincott Williams a Wilkins 2013, 603 pp. Federative Committee on Anatomical Terminology. Terminologia Histologica: International Terms for Human Cytology and Histology. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins, 2008. 213 pp.</i> | |

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| A | B | C | D | E | FX |
|----|----|----|----|----|----|
| 0% | 0% | 0% | 0% | 0% | 0% |

Lecturers:

doc. RNDr. Ivan Varga, PhD., PhD., mim. prof.

MUDr. Mgr. Michal Miko, PhD.

MUDr. Renáta Mikušová, PhD.

Date of last modification: 01.09.2014

Supervised by: *prof. MUDr. Peter Šimko, CSc.*