

## Course description

General information about the course																	
1. <b>Major of study:</b> medicine	2. <b>Study level:</b> unified MSc 3. <b>Form of study:</b> intramural																
4. <b>Year:</b> III	5. <b>Semester:</b> V, VI																
6. <b>Course name:</b> Histology I + II																	
7. <b>Course status:</b> required																	
<b>8. Course contents and assigned learning outcomes</b>																	
Introduction to histology																	
Ultrastructure of the cell - functional specializations																	
Connective tissue - cells, intercellular matrix, bone formation																	
Muscle tissue - mechanism of contraction																	
Lymphatic system																	
Nervous system. Neurogenesis																	
Sensory organs - eye																	
Transmitters, synapses, receptors																	
Cardiovascular system																	
Vasculogenesis and angiogenesis																	
Digestive system - liver, pancreas																	
Endocrine system - organs and DNES																	
Urinary system																	
Respiratory system																	
Male reproductive system																	
Female reproductive system																	
Structure and function of fetal membranes and placenta																	
<p><b>Learning outcomes / reference to learning outcomes indicated in the standards</b></p> <p><b>For knowledge – student knows and understands:</b></p> <table border="1"> <tbody> <tr> <td>Knows histological and embryological nomenclature</td> <td style="text-align: right;">A.W1</td> </tr> <tr> <td>knows cellular structures and their functional specializations</td> <td style="text-align: right;">A.W4</td> </tr> <tr> <td>knows microarchitecture of tissues, extracellular matrix and organs</td> <td style="text-align: right;">A.W5</td> </tr> <tr> <td>knows developmental stages of human embryo, organization of placenta and fetal membranes and development of individual organs.</td> <td style="text-align: right;">A.W6</td> </tr> <tr> <td>knows the ways of communication between cells, cell and extracellular matrix and pathways intracellular signal transduction.</td> <td style="text-align: right;">B.W21</td> </tr> </tbody> </table> <p><b>For skills student can do:</b></p> <table border="1"> <tbody> <tr> <td>Can operate optical microscope</td> <td style="text-align: right;">A.U1</td> </tr> <tr> <td>Using optical microscope can differentiate structures characteristic for particular organs, tissues and cells. Can interpret their organization and relations between their structure and function</td> <td style="text-align: right;">A.U2</td> </tr> <tr> <td>Has ability to use histological nomenclature both in written and spoken form.</td> <td style="text-align: right;">A.U5</td> </tr> </tbody> </table>		Knows histological and embryological nomenclature	A.W1	knows cellular structures and their functional specializations	A.W4	knows microarchitecture of tissues, extracellular matrix and organs	A.W5	knows developmental stages of human embryo, organization of placenta and fetal membranes and development of individual organs.	A.W6	knows the ways of communication between cells, cell and extracellular matrix and pathways intracellular signal transduction.	B.W21	Can operate optical microscope	A.U1	Using optical microscope can differentiate structures characteristic for particular organs, tissues and cells. Can interpret their organization and relations between their structure and function	A.U2	Has ability to use histological nomenclature both in written and spoken form.	A.U5
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For social competencies student is ready to:  
Has ability for constant self education

<b>9. Number of hours for the course</b>		<b>90</b>
<b>10. Number of ECTS points for the course</b>		<b>7</b>
<b>11. Methods of verification and evaluation of learning outcomes</b>		
Learning outcomes	Methods of verification	Methods of evaluation*
Knowledge	Grade credit – MCQ	*
Skills	Report Observation Practical exam	*
Competencies	Observation	*

\* The following evaluation system has been assumed:

**Very good (5,0)** – the assumed learning outcomes have been achieved and significantly exceed the required level

**Better than good (4,5)** – the assumed learning outcomes have been achieved and slightly exceed the required level

**Good (4,0)** – the assumed learning outcomes have been achieved at the required level

**Better than satisfactory (3,5)** – the assumed learning outcomes have been achieved at the average required level

**Satisfactory (3,0)** – the assumed learning outcomes have been achieved at the minimum required level

**Unsatisfactory (2,0)** – the assumed learning outcomes have not been achieved