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| **Syllabus 2020/2021****training cycle: …………2019/2024…………………………………….** |
| **Description of the course** |
| **Module/Course** | **Histology with Embryology** |
| **Faculty** | Dentistry |
| **Major**  | Dentistry |
| **Specialties** | - |
| **Level of studies** | Uniform magister studies **X**\*1st degree studies 2nd degree studies 3rd degree studies postgraduate studies  |
| **Form of studies** |  full-time **X** part-time |
| **Year of studies**  | I | **Semester** |  Winter**X** Summer |
| **Type of course** | **X** obligatory limited choice free choice / elective  |
| **Course** | **X** major basic |
| **Language of instruction** |  Polish **X** English other |
| \* mark with an **X** |
| **Number of hours** |
| Form of education |
| Unit teaching the course | Lectures (L) | Seminars (SE) | Auditorium classes (AC) | Major Classes – not clinical (MC) | Clinical Classes (CC) | Laboratory Classes (LC) | Classes in Simulated Conditions (CSC) | Practical Classes with Patient (PCP) | Specialist Classes – magister studies (SCM) | Foreign language Course (FLC) | Physical Education obligatory (PE) | Vocational Practice (VP) | Self-Study (Student's own work) | E-learning (EL) |
| **Winter Semester** |
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| **Summer Semester** |
| **Histology and Embriology Division** | 5 | 10 |  | 35 |  |  |  |  |  |  |  |  |  |  |
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| **TOTAL per year:** |
|  | 5 | 10 |  | 35 |  |  |  |  |  |  |  |  |  |  |
| **Educational objectives** (max. 6 items)**C1.** During the course of histology studentsshould become acquaint:* the principles of the basic techniques used in the morphological studies,
* the organization of the cell model with cell organelles, their structure and functions,
* structure and function of selected, important specialized cells,
* classification, characteristics, origin, histological organization and role of the tissues,
* histological organization of organs and systems and their role and the basic mechanisms that regulate their functions.

**C2.** During the course of embryology studentsshould become acquaint:* with prenatal part of the human development (including all stages of human pre-embrionic, embryonic and fetal development)
* with development of pharyngeal apparatus and birth defects associated with the development of head and neck
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| **Education result matrix for module/course in relation to verification methods of the intended education result and the type of class** |
| Number of course education result  | Number of major education result  | Student who completes the module/course knows/is able to | Methods of verification of intended education results (forming and summarising) | Form of didactic class*\*\*enter the abbreviation* |
| **W 01** | **AW1** | demonstrates the knowledge of human organism’s structures: cells, tissues, organs and systems, especially stomatognathic system | Oral response, written examination | L, MC |
| **W 02** | **AW4** | describes the organs’ and the whole organism’s development, especially the masticatory complex development | Oral responseWritten responseFinal test | L, MC |
| **W 03** | **AW5** | describes concisely the functional significance of the particular organs and systems | Participation in the discussion of problem | L, MC |
| **U 01** | **A. U2** | The student recognizes in images from optical or electron microscope histological structures corresponding to the organs, tissues, cells and cellular structures, shall describe and interpret their structure and the relationship between structure and function | Oral response, written examination, proper drawing preparation, practical examination |  MC |
| **K 01** | **K. S5** | Identifies and recognizes its own limitations, self-assess deficits and educational needs. | direct observation of student attitudes | L, MC, SE |
| **K02** | **K. S7**  | Uses objective sources of information.  | direct observation of student attitudes | L, MC, SE |
| **K03** | **K. S.8** | Deduces conclusions from own measurements and observations. | direct observation of student attitudes | L, MC |
| \*\* L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .  |
| Knowledge: 5Skills: 4Social competences: 3 |
| **Student's amount of work (balance of ECTS points)** |
| **Student's workload** (class participation, activity, preparation, etc.) | **Student Workload (h)** |
| 1. Contact hours: | 50 |
| 2. Student's own work (self-study): | 100 |
| Total student's workload | 150 |
| **ECTS points for module/course** | 5 |
| Comments  |  |
| **Content of classes**  |
| **Lectures** :1. Introduction to the cell. Epithelial tissue: epithelia and glands, specializations of cells surface, intercellular connections (1h).
2. Connective tissue: supporting cells family, extracellular matrix (1h)
3. Cartilage and bone, and their development (1h)
4. Muscles – skeletal, cardiac, smooth (1h)
5. Digestive tract – oral cavity, lip, tongue, tooth, tooth development (1h)

**Seminars - Embriology:**1. Gametogenesis: meiosis, oogenesis, spermatogenesis (2h)
2. The 1st week of development: ovulation to implantation (2h)
3. The 2nd - 3rd week: germ disc and germ layers (2h)
4. The 3rd – 8th week: organogenesis, embryonic period, fetal period (2h)
5. Head and neck development (pharyngeal apparatus) (2h)
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| Practical classesHistology:1. Histological techniques, microscopic structure and function of cells (2h).
2. Epithelial tissue: epithelia and glands, specialized surface of cells, intercellular connections (3h).
3. Connective tissue: supporting cells family, extracellular matrix, cartilage, bone, and their development (9h).
4. Muscular tissue: contractile cells, their function (2h).
5. Blood: blood cells, hemopoiesis (2h).
6. Cardiovascular system (the heart and blood vessels) (2h).
7. Immune system: immune cells, structure and function of the immune system (3h).
8. The alimentary tract: oral cavity and its contents, transport and digestive part (7h).
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| **Other** |
| **Basic literature** 1. Basic Histology. L. Carlos Junqueira, Jose Carneiro, Robert O. Kelly2. Human Histology. Alan Stevens, James Lowe3. Langman's Medical Embriology. T.W. Sadler; Lippincott Williams & Wilkins**Additional literature and other materials** 1. Histology and Cell Biology: An Introduction to Pathology. Abraham Kierszenbaum2. Histology: a text and atlas. Michael H. Ross, Gordon I. Kaye, Wojciech Pawlina3. Exercise notebook for medicine and dentistry student (ed. Maciej Zabel). ElsevierUrban & Partner, Wrocław 2010 |
| **Didactic resources requirements** Exercise room, optical microscopes, optical microscope with camera and monitor, laptop, multimedia projector, boards, histological preparations |
| **Preliminary conditions** Basic knowledge of the structure and function of cells, tissues and organs. |
| **Conditions to receive credit for the course** **Conditions to receive credit for the course:**1. Oral or written credit from each class (allowed: no credit - 3 exercises)2. Test from the general histology: written, 10 open questions. To complete 60% correct answers is required. 3. Embriology – multiple choice test, 30 questions, 16 correct answers is required to pass |
| **Grade:** | **Criteria** (only for courses/modules ending with an examination) |
| Very Good(5.0) |  |
| Good Plus (4.5) |  |
| Good(4.0) |  |
| Satisfactory Plus (3.5) |  |
| Satisfactory (3.0) |  |
| **Name and address of module/course teaching unit, contact: telephone and e-mail address**Division of Histology and Embryology Wroclaw Medical Universityul. Chalubinskiego 6a, 50-368 Wroclawtel.: (71) 784-13-54(55), fax: (71) 784-00-82e-mail: justyna.kosek@umed.wroc.pl**Coordinator / Person responsible for module/course, contact: telephone and e-mail address** Marzenna Podhorska-Okolow MD, PhD, Prof.e-mail: marzenna.podhorska-okolow@umed.wroc.pl tel. 71 784 16 70**List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes.**1. Urszula Ciesielska PhD (adiunct) – lectures, classes2. Christopher Kobierzycki MD, PhD (adiunct)– lectures, classes3. Sylwia Borska PhD (adiunct) - seminars |
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| **Date of Syllabus development**  | **Syllabus developed by**  |
| ……25. 06. 2020…………………………………….. | ……........Urszula Ciesielska................................... |
| **Signature of Head of teaching unit** |
| …………………………………………………… |

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