**description of the course of study**

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| **Course code** | **0912-7LEK-C3.5-P** |
| **Name of the course in** | Polish | **Patologia** |
| English | **Pathology** |

1. **LOCATION OF THE course OF STUDY within the system of studies**

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| **1.1. Field of study** | Medicine |
| **1.2. Mode of study** | Full-time |
| **1.3. Level of study** | Uniform Master’s studies |
| **1.4. Profile of study\*** | General academic  |
| **1.5. Person preparing the course description** | Piotr Lewitowicz MD, PhD |
| **1.6. Contact** | plewitowicz@ujk,edu.pl |

1. **General characteristicS of the course of study**

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| **2.1. Language of instruction** | English |
| **2.2. Prerequisites\*** | Anatomy, histology, physiology, pathophysiology |

1. **DETAILED CHARACTERISTICS OF THE COURSE OF STUDY**

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| * 1. **Form of classes**
 | Lectures: 40 (including 10 hours e-learning), classes: 90(including 5 hours e-learning) |
| * 1. **Place of classes**
 | Lecture Halls at UJKDidactic rooms at UJKAutopsy room |
| * 1. **Form of assessment**
 | Partial theoretical and practical tests ( web based PathXL test)Final theoretical and practical exam (web based PathXL test) |
| * 1. **Teaching methods**
 | Lecture – lecture with multimedia presentationClass - discussion about current topic, working with digital pictures – macroscopic and microscopic pictures and slides. Discuss about predicting and prognostic factors. e-learningAutopsy – active participation in the autopsy , discussion about a case |
| * 1. **Bibliography**
 | **Required reading** | 1. V. Kumar, A. K. Abbas, J. C. Aster. Robbins and Cotran Pathologic Basis of Disease. IXth Edition, 2015, Elsevier. 2. V. Kumar, A. K. Abbas, J. C. Aster. Robbins Basic Pathology. IX Edition, 2013, Elsevier. |
|  **Further reading** | 1. E. C. Klatt. Robbins and Cotran Atlas of Pathology, 3th Edition, 2015, Elsevier.  |

1. **Objectives, syllabus CONTENT and intended LEARNING outcomes**

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| * 1. **Course objectives *(including form of classes)***

**Lecture**C1- The aim of the subject is to present the issues of general human pathology with particular regard to adaptation processes, inflammations, circulatory disorders, tumors.C2 - The aim is to know the pathogenesis of non-cancerous diseases and cancers.C3- The goal is to get familiar with pathological methods as well knowing their limitations.C4 - The role of strict cooperation clinicians with pathologists.C5 - The goal is to know the relationship between the patient, the clinician and the pathomorphologist.ClassesC1 - The aim of the exercises is to continue the issues presented during the lectures with a special emphasis on understanding the cause-effect sequence of organ diseasesC2 – The goal is to get to know the detailed pathology of the organsC3 – The goal is to know the morphology of organsC4 – The aim is to know the morphological exponent of non-cancerous diseases and cancers |
| * 1. **Detailed syllabus *(including form of classes)***

***Lectures,Classes -*** The table of content**Lectures**Winter semesterW1 – Welcoming lecture 1hW2 – cel degeneration necrosis, apoptosis, tissae adaptation 3h W3 – Inflammation and wound healing – 3h and 2h e-learning.W4 – neoplasia 4hW5 – genetic disorders 3hW6 –enviromental and eating disorders – e-learning 3h W7 - test 1hSummer semesterW8 – GI pathology – 3h W9 – Liver and biliary tract pathology– 3hW10 – Female genital tract and breast pathology – 3h W11 – Endocrine glands pathology – e-learning 3hW12 – Soft tissue and bone pathology 2h and 2h e-learningW13 – Neuropathology - 2hW14 - test – 1h**Classses** Winter semester C 1:: Blood vessels 4h C 2: The heart 4hC 3: Respiratory tract 4hC 4: Skin 4hC 5: test 1 2hC 6: Upper GI 4hC 7: Lower GI 4hC 8: Endocrine disorders 4h C 9: Liver 4hC 10: Lymphoid organs 4h C 11: Red blood cells pathology (e-learning 5h) C 12: test 2 2h and a retake test 1Summer semesterC 13: Urinary tract - non neoplastic 4h C 14: Urinary pathology – tumors 4hC15: Male genital tract 4h C 16: Breast 4hC 17: Female genital tract – cervix, uterus, trophoblastic disease 4hC 18: Test 3 2h C19: Female genital tract – ovary 4hC20: Childhood pathology. Skeletal muscles and peripheral nerves - 4h C 21: practical skills - autopsy. 4hC22: semester review 5hC23: practical skills, autopsy, biopsy 4hC 24: Test 4 and a retake of the test 3 2h |

**4.3 Intended learning outcomes**

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| **Code** | **A student, who passed the course** | **Relation to learning outcomes** |
| within the scope of **knowledge** the graduate knows and understands**:** |
| W01 | the terminology used in anatomic pathology; | C.W26. |
| W02 | basic mechanisms of tissue and cell damage | C.W27. |
| W03 | the clinical course specific and non-specific inflammations and the regeneration processes of tissues and organs; | C.W28. |
| W04 | the definition and pathophysiology of shock, with particular emphasis on the differentiation of shock and multiple organ failure’s causes; | C.W29. |
| W05 | the etiology of hemodynamic disturbances, retrogressive and progressive changes; | C.W30. |
| W06 | the problems concerning specific organ pathology, macroscopic and microscopic images and the clinical course of pathological changes in various organs; | C.W31. |
| W07 | the consequences of developing pathological changes for topographically adjacent organs; | C.W32. |
| W08 | internal and external pathogens, both modifiable and non-modifiable; | C.W33. |
| W09 | clinical forms of most common diseases of various systems and organs, metabolic diseases and disorders of water-electrolyte balance and acid-base balance; | C.W34. |
| within the scope of **ABILITIES** the graduate knows how to**:** |
| U01 | operate the optical microscope, also making use of immersion; | A.U1. |
| U02 | recognize histological structures of organs, tissues, cells and cellular structures on the optical or histological microscope images, describe and interpret the structure and relations between the structure and the function; | A.U2. |
| U03 | make connection between images of tissue and organ damage and clinical symptoms of the disease, medical history and the results of laboratory determinations; | C.U11. |

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| within the scope of **SOCIAL COMPETENCE**, the graduate is able to: |
| K01 | recognize his/her own limitations and self-evaluate educational deficiencies and needs; | H.S5 |
| K02 | use reliable information sources; | H.S7 |
| K03 | conclude on the basis of own surveys and observations; | H.S8 |
| K04 | introduce rules of social conduct and teamwork to the group of specialists, including specialists form other medical professions also in the multicultural and multinational environment; | H.S9 |
| K05 | give opinions concerning various aspects of professional activity; | H.S10 |
| K06 | take responsibility for own decisions made during professional activities including own safety and safety of other people; | H.S11 |

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| * 1. **Methods of assessment of the intended learning outcomes**
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| **Teaching** **outcomes*****(code)*** | **Method of assessment (+/-)** |
| **Exam oral/written\*** | **Test\*** | **Project\*** | **Effort** **in class\*** | **Self-study\*** | **Group work\*** | **Others\*** |
| ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** |
| *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* |
| W01 | ***+*** |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  | ***+*** | ***+*** |  |  |  |  |
| W02 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** | ***+*** |  |  |  |  |
| W03 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  | ***+*** | ***+*** |  |  |  |  |
| W04 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W05 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W06 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W07 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W08 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| W09 | ***+*** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  |  |  |
| U01 |  |  |  |  | ***+*** |  |  |  |  | ***+*** |  |  |  |  |  |  | ***+*** |  |  | ***+*** |  |
| U02 |  |  |  |  | ***+*** |  |  |  |  | ***+*** |  |  |  |  |  |  | ***+*** |  |  | ***+*** |  |
| U03 |  |  |  |  | ***+*** |  |  |  |  |  |  |  |  |  |  |  | ***+*** |  |  | ***+*** |  |
| K01-K06 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ***+*** | ***+*** |  |

***\*delete as appropriate***

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| * 1. **Criteria of assessment of the intended learning outcomes**
 |
| **Form of classes** | **Grade** | **Criterion of assessment** |
|  **lecture (L)** | **3** | 61-68% The result of the practical and theoretical tests  |
| **3,5** | 69%-76% The result of the practical and theoretical tests |
| **4** | 77%-84% The result of the practical and theoretical tests |
| **4,5** | 85%-92% The result of the practical and theoretical tests |
| **5** | 93%-100% The result of the practical and theoretical tests |
| **classes (C)\*** | **3** | 61-68% The result of the practical and theoretical tests  |
| **3,5** | 69%-76% The result of the practical and theoretical tests |
| **4** | 77%-84% The result of the practical and theoretical tests |
| **4,5** | 85%-92% The result of the practical and theoretical tests |
| **5** | 93%-100% The result of the practical and theoretical tests |

1. **BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT**

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| **Category** | **Student's workload** |
| **Full-time****studies** |
| *NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/* | **130** |
| *Participation in lectures\** | **30** |
| *Participation in classes, seminars, laboratories\** | **85** |
| *Preparation in the exam/ final test\** |  |
| *Others\** | **15**1 |
| *INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/* | **145** |
| *Preparation for the lecture\** | **85** |
| *Preparation for the classes, seminars, laboratories\** | **60** |
| *Preparation for the exam/test\** |  |
| *Gathering materials for the project/Internet query\** |  |
| *Preparation of multimedia presentation* |  |
| *Others (please specify e.g. e-learning)\** |  |
| *TOTAL NUMBER OF HOURS* | **275** |
| ECTS credits for the course of study | **11** |

***\*delete as appropriate***

***Accepted for execution*** *(date and legible signatures of the teachers running the course in the given academic year)*

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1 e-learning (without participation of the lecturer)