**DESCRIPTION OF THE COURSE OF STUDY**

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| **Course code** |  |
| **Name of the course in**  | Polish | " Rozwój kompetencji w zakresie technik mikrochirurgicznych w medycynie " |
| English | Development of competences in the field of microsurgical techniques in medicine |

1. **LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES**

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| * 1. **Field of study**
 | medicine |
| * 1. **Mode of study**
 | Full-time |
| * 1. **Level of study**
 | Uniform Master’s studies |
| * 1. **Profile of study\***
 | Practical |
| * 1. **Person preparing the course description**
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| * 1. **Contact**
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1. **GENERAL CHARACTERISTICS OF THE COURSE OF STUDY**

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| * 1. **Language of instruction**
 | English |
| * 1. **Prerequisites\***
 | Anatomy. Physiology, Surgery |

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

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| * 1. **Form of classes**
 | **LECTURE: 10 (including 5h of e-learning) , ĆLASSES -15 (including 5h of e-learning)** |
| * 1. **Place of classes**
 | Lecture, classes - classes in the teaching rooms of JKU |
| * 1. **Form of assessment**
 | **LECTURE– Credit with grade, ĆLASSES - Credit with grade** |
| * 1. **Teaching methods**
 | Lectures, video-presentations , discussion,  |
| * 1. **Bibliography**
 |  **Required reading** | 1.Basic Surgical Techniques - R. M. Kirk, Churchill Livingstone2.Handbook of NeurosurgeryMark S. Greenberg [Georg Thieme](https://www.medbook.com.pl/ksiazka/wydawnictwo/id/778/wydawnictwo/georg-thieme)2019,9.3.Neurosurgery Fundamentals Nitin Agarwal, Thieme Medical Publishers Inc, 2018 |
| **Further****reading** | 1.Seven Aneurysms: Tenets and Techniques for Clipping 1st Edition by Michael T. Lawton2.Seven Bypasses: Tenets and Techniques for Revascularization by Michael T. Lawton |

1. **OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES**

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| **4.1. Course objectives (including form of classes)**1.Basic neurosurgical techniques, microsurgery. Positioning of the patient before the operation. History of microscope. Microsurgical tools. 2.Complications after SAH from aneurysm. Microsurgical and endovascular techniques. Complications after treatment. 3.Neurosurgical approaches to orbit. Transcranial, via craniotomy. Trauma of orbit, optic canal, and optic nerve. Indication for treatment. 4.Brain and spine endoscopy - minimally invasive approaches – endoscopy assisted, endoscopic surgery. 5.Minimally invasive spine endoscopy – video-presentations. 6.Minimally invasive brain endoscopy – video-presentations. 7.Intraoperative monitoring (MEP, SEP, cranial nerves monitoring, peripheral nerves monitoring.8.Peripheral nerves surgery – entrapment syndroms: carpal tunnel syndrome, tarsal tunnel syndrome -possible endoscopy applications. 9.Trigeminal neuralgia etiology, MVD – treatment. Endoscopy assisted microsurgery. 10.Minimally invasive approaches to cervical spine.  |

**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** : |
| W01 | knows and understand the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases of the nervous system, including:a) headaches: migraine, tension headaches and bands headaches and trigeminal neuralgia of nerve V; b) vascular diseases of the brain, in particular the stroke;c) epilepsy;d) infection of the nervous system, in particular meningitis, Lyme disease, HSV encephalitis, neurotransmitter disorders;e) dementia, in particular in Alzheimer's disease, frontotemporal dementia, vascular dementia, and other types of dementia; f) diseases of the basal ganglia, in particular Parkinson's disease; g) demyelinating diseases, in particular multiple sclerosis; h) diseases of the neuromuscular system, in particular amyotrophic lateral sclerosis and sciatica; i) cranio-cerebral trauma, in particular concussion; | E.W14. |
| within the scope of **ABILITIES**: |
| U01 | assesses patient’s general condition, consciousness and awarenes; | E.U7. |
| U02 | performs differential diagnosis of the most common diseases in adults and children; | E.U12. |
| U03 | assesses and describes the somatic and mental state of patients; | E.U13. |
| U04 | recognizes states of a direct threat to life; | E.U14. |
| U05 | plans diagnostic, therapeutic and preventive procedures; | E.U16. |
| U06 | qualifies the patient for home treatment and hospitalization; | E.U20. |
| U7 | defines states in which functional status of the patient's or his/her preferences restrict the treatment in accordance with specific guidelines for the disease; | E.U21. |
| U8 | interprets laboratory tests/results and identifies the reasons for deviations; | E.U24. |
| U9 | plans specialist consultations; | E.U32. |
| U10 | complies with the aseptic and antiseptic rules; | F.U3. |

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| **4.4. Methods of assessment of the intended learning outcomes** |
| **Teaching** **outcomes****(code)** |  **Method of assessment (+/-)** |
| **Oral/ written assesment\*** | **Test\*** |
| ***Form of classes*** | ***Form of classes*** |
| *L* | *L* | *L* | *W* | *C* |  |
| W01 | ***+*** |  |  |  |  |  |
| U01 |  |  |  |  | ***+*** |  |
| U02 |  |  |  |  | ***+*** |  |
| U03 |  |  |  |  | ***+*** |  |
| U04 |  |  |  |  | ***+*** |  |
| U05 |  |  |  |  | ***+*** |  |
| U06 |  |  |  |  | ***+*** |  |
| U07 |  |  |  |  | ***+*** |  |
| U08 |  |  |  |  | ***+*** |  |
| U09 |  |  |  |  | ***+*** |  |
| U10 |  |  |  |  | ***+*** |  |

***\*delete unnecessary***

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| **4.5. Criteria of assessment of the intended learning outcomes** |
| **Form of classes** | **Grade** | **Criterion of assessment** |
| **Lecture (L)** | **3** | Test results 61-68% |
| **3,5** | Test results 69-76% |
| **4** | Test results 77-84% |
| **4,5** | Test results 85-92% |
| **5** | Test results 93-100% |
| **Classes (C)\*** | **3** | Mastering the content of the curriculum at the basic level, chaotic answers, necessary leading questions. |
| **3,5** | Mastering the content of the curriculum at the basic level, systematized answers, requires teacher’ assistance. |
| **4** | Mastering the content of the curriculum at the basic level, systematic and independent answers. Solving problems in typical situations. |
| **4,5** | The scope of the presented knowledge goes beyond the basic level based on the supplementary literature provided. Problem solving in new and complex situations. |
| **5** | The scope of the presented knowledge goes beyond the basic level based on self-acquired scientific sources of information. |

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/*** | **25** |
| *Participation in lectures\** | 10 |
| *Participation in classes, seminars, laboratories\** | 15 |
| ***INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/*** | **25** |
| *Preparation for the exam/test\** |  |
| ***TOTAL NUMBER OF HOURS*** | ***50*** |
| ***ECTS credits for the course of study*** | **2** |

***\*delete unnecessary***

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

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