**description of the course of study**

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| **Course code** | **0912-7LEK-F-4-SB** |
| **Name of the course in**  | Polish | **Strukturalne podstawy interwencji sercowo-naczyniowych** |
| English | **Structural basics of cardiovascular interventions** |

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** | dr hab. n. med. Marcin Sadowski, prof. nadzw |
| **1.6. Contact** | emsad@o2.pl |

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

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| **2.1. Language of instruction** | English |
| **2.2. Prerequisites\*** | basic knowledge of cadiovascular anatomy according to the mandatory course |

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

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| * 1. **Form of classes**
 | Lecture – 15 h (including 5 hours of e-learning) |
| * 1. **Place of classes**
 | Teaching rooms of the Faculty |
| * 1. **Form of assessment**
 | credit with grade |
| * 1. **Teaching methods**
 | Lecture – informative lecture with use of audiovisual techniques, live demonstrations of tools used in cardiovascular interventions |
| * 1. **Bibliography**
 | **Required reading** | 1. Drake RL (ed.). Gray’s Anatomy for Students. The anatomical basis of clinical practice. Churchill Livingstone, 2014.2. Frank H. Netter. Atlas of Human Anatomy. Saunders, 2014 |
|  **Further reading** | Dangas GD. Interventional cardiology: principles and practice. Wiley-Blackwell, 2017. (several chapters) |

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

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

C1-W – to broaden knowledge of the cardiovascular system structure in particular in the field of cardiovascular interventionsC2- U – the use of topographic cardiovascular anatomy in diagnostic and therapeutic procedures |
| * 1. **Detailed syllabus *(including form of classes)***

The lecture – 7x2h + final test 1 h = 15 h.1. The development of the heart and great thoracic vessels, anatomical variants, the definition of structural heart disease, congenital heart diseases.2. The anatomy of coronary vessels, great thoracic vessels, peripheral arteries and veins in terms of cardiovascular interventions. The anatomy of cardiac conducting system. The anatomical characteristics of atherosclerosis, plaque types, the idea of revascularization.3. An integrative approach to the descriptive and topographic anatomy and cardiovascular imaging of the heart and the great thoracic vessels.4. Interventional treatment of the coronary artery disease – coronary angiography, coronary angioplasty, coronary artery by-pass grafting. Vascular access. The demonstration of tools and devices used in the interventional cardiology and cardiosurgery. Vascular access site management. Complications and their treatment.5. Electrotherapy of the heart diseases – cardiac pacemakers and cardioverter-defibrillators implantation. Cardiac resynchronization therapy. Vascular access. Minimal invasive surgery. The demonstration of tools and devices used in the treatment of brady- and tachyarrhythmias.6. Electrotherapy of the heart diseases – electrophysiological study, ablation. Vascular access and navigation inside the heart. The demonstration of tools and devices used in electrophysiology. The anatomy of intracardiac procedures complications.7. Interventional and surgical treatment of the most common congenital and acquired structural heart diseases. The demonstration of tools and devices used in the interventional cardiology and cardiosurgery.8. FINAL TEST. |

**4.3 Intended learning outcomes**

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| **Code** | **A student, who passed the course** | **Relation to teaching****outcomes** |
| within the scope of **knowledge**, the graduate knows and understands: |
| W01 | anatomical, histological and embryological terminology in English and Latin; | A.W1. |
| W02 | human anatomy topographically (upper and lower limb, chest, abdomen, pelvis, back, neck and head) and functionally (respiratory system, digestive system, urogenital system, nervous system and sense organs, integumentary system); | A.W2. |
| within the scope of **ABILITIES**, the graduate knows how to: |
| U01 | explain the anatomical basis for clinical examination; | A.U3. |
| U02 | make conclusions as to the relationship between anatomical structures on the basis of intravital diagnostic tests, in particular in the field of radiology (plain images, tests using contrast agents, CT scans and magnetic resonance imaging); | A.U4. |
| U03 | use anatomical, histological and embryological terminology both in written and oral communication; | A.U5. |
|  | 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 | give opinions concerning various aspects of professional activity; | H.S10 |
| K04 | 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 (+/-)** |
| **Others\*** |
| ***WRITTEN TEST with GRADE*** |
| Lecture |
| W01 | **+** |
| W02 | **+** |
| U01 | **+** |
| U02 | **+** |
| U03 | **+** |

***\*delete as appropriate***

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| * 1. **Criteria of assessment of the intended learning outcomes**
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| **Form of classes** | **Grade** | **Criterion of assessment** |
|  **lecture (L)** | **3** | 61%-68% Mastering course content at the primary level, chaotic answers, guiding questions necessary. |
| **3,5** | 69%-76% Mastering course content at the primary level, response systematized, requires teacher’s support |
| **4** | 77%-84% Mastering course content at the primary level, response systematized, independent. Solving problems in typical situations. |
| **4,5** | 85%-92% The scope of presented knowledge goes beyond the primary level based on given complementary literature. Solving problems in knew and complex situation. |
| **5** | 93%-100%The scope of presented knowledge goes beyond the primary level based on independently gained scientific sources of information. |

* [**Thresholds**](https://pl.bab.la/slownik/angielski-polski/thresholds) **are valid from 2018/ 2019 academic year**
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/* | **15** |
| *Participation in lectures\** | **14** |
| *Participation in classes, seminars, laboratories\** |  |
| *Participation in the exam/ final test\** | **1** |
| *Others\** | **5**1 |
| *INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/* | **10** |
| *Preparation for the lecture\** | **10** |
| *Preparation for the classes, seminars, laboratories\** |  |
| *Preparation for the exam/test\** |  |
| *Gathering materials for the project/Internet query\** |  |
| *Preparation of multimedia presentation* |  |
| *Others\** |  |
| *TOTAL NUMBER OF HOURS* | **25** |
| ECTS credits for the course of study | **1** |

***\*delete as appropriate***

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

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1 e-learning