DESCRIPTION OF THE COURSE OF STUDY

Course code	0912.7.LEK.D.SCI							
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

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. UJK
1.6. Contact	msadowski@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

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

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	Lecture – 15 h (10 h in the form of e-learning)				
3.2. Place of classes	Teaching rooms of the Faculty				
3.3. Form of assessment	Credit with grade				
	Credit				
3.4. Teaching methods	Lectures (including e-learning): informative lecture with use of				
	audiovisual techniques, live demonstrations of tools used in				
	cardiovascular interventions				
3.5. 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)				

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES

4.1. Course objectives (including form of classes)

Lectures (including e-learning)

C1-W – to broaden knowledge of the cardiovascular system structure in particular in the field of cardiovascular interventions

C2- U – the use of topographic cardiovascular anatomy in diagnostic and therapeutic procedures

4.2. 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

Code	A student, who passed the course	Relation to teaching outcomes						
	within the scope of KNOWLEDGE :							
W01	Human anatomy topographically and functionally, including topographical relations between individual organs along with anatomical, histological and embryological terminology in Polish and English;	A.W1.						
W02	Microarchitecture of tissues, extracellular matrix and organs;	A.W3.						
	within the scope of ABILITIES :							
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.						
	within the scope of SOCIAL COMPETENCE :							
K01	Recognize his/her own limitations and self-evaluate educational deficiencies and needs;	K.S5.						
K02	Use reliable information sources;	K.S7.						
K03	Give opinions concerning various aspects of professional activity;	K.S10.						
K04	Take responsibility for own decisions made during professional activities including own safety and safety of other people;	K.S11.						

4.4. Methods of a								_			asses	sme	nt (+	/-)							
Teaching	Exam oral/written*		Test*		Project*		Effort in class*		Self- study*		Group work*		Others*								
outcomes (code)		orm lasse	•		Form of Form of Form of classes classes classes classes		•	Form of classes		Form of classes											
	L	С		L	С		L	С		L	С		L	С		L	С		L	С	
W01				+																	
W02				+																	
U01				+																	
U02				+																	
K01-04																			+		

Form of classes	Grade	Criterion of assessment
e-	3	61%-68% Mastering course content at the primary level, chaotic answers, guiding questions necessary.
luding g)	3,5	69%-76% Mastering course content at the primary level, response systematized, requires teacher's support
lecture (L)(including learning)	4	77%-84% Mastering course content at the primary level, response systematized, independent. Solving problems in typical situations.
t ure (J	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.
lect	5	93%-100%The scope of presented knowledge goes beyond the primary level based on independently gained scientific sources of information.

^{*}delete as appropriate

5. BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT

	Student's workload
Category	Full-time
	studies
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE	15
TEACHER /CONTACT HOURS/	
Participation in lectures*	5
Participation in classes, seminars, laboratories*	
Participation in the exam/final test*	
Others* (including e-learning)	10
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

Accepted for execution	(date and signatures	of the teachers run	ning the course in th	ie given academic year,

¹ e-learning