Załącznik nr 5 do zarządzenia nr 189/2025

COURSE SPECIFICATION

Course code: 0912.7.LEK.B.E

Course title in Polish: Embriologia
Course title in English: Embriology

1. Placement of the course within the study programme

1.1. Field of study	medicine
1.2. Mode of study	full-time
1.3. Level of study	uniform Master's study
1.4. Profile of study	General academic
1.5. Course specification author	Dr Agnieszka Radowicz-Chil
1.6. Contact	agnieszka.radowicz-chil@ujk.edu.pl

2. Generał characteristics of the course

2.1. Language of instruction	English
2.2. Entry requirements	

3. Detailed characteristics of the course

3.1. Type of classes	Lectures (L): 10 h, Practical classes (PC): 10 h
3.2. Place of course delivery	Courses in the teaching rooms of JKU
3.3. Form of assessment	Exam, credit with grade:
3.4. Teaching methods	Lecture Classes: Presentation and explanation of histological preparations Practical classes Laboratories: Microscopy of human tissues and organs
3.5.a. Basic reading list	Langman's Medical Embryology 2024
3.5.b. Supplementary reading list	

4. Objectives, content and learning outcomes

4.1. Course objectives (taking into account the form of classes)

Lectures

- **CO1.** To provide students with a comprehensive understanding of the basic concepts of human embryology, in cluding the stages of development from fertilization to birth.
- **CO2.** To explain the molecular, genetic, and cellular mechanisms underlying normal embryonic development.
- **CO3.** To describe the formation and differentiation of germ layers, tissues, and organ systems during prenatal de velopment.
- **CO4.** To discuss the causes and mechanisms of congenital malformations and their clinical significance.

Practical classes

- **CO1.** To enable students to identify and describe the key stages of human embryonic and fetal development using microscopic and macroscopic specimens.
- **CO2.** To develop practical skills in the recognition of developmental structures and their derivatives in histological slides and models.

4.2. Course content (taking into count the form of classes)

Lectures

1. Introduction to Embryology
2. Gametogenesis and Fertilization
3. Development of the Body Plan and Folding of the Embryo
4. Development of Organ Systems (Organogenesis)

Practical classes

1. Laboratory Safety and Introduction to Embryological Materials

Principles of laboratory safety and microscope use.

Overview of materials: microscopic slides, 3D models, and digital resources.

Orientation to early embryonic structures.

2. Fetal Development and Growth

Comparison of embryos and fetuses at different developmental stages.

Recognition of morphological changes and proportional growth.

4.3. Course learning outcomes

Course learning outcomes (code)	Upon completion of the course, the student	Alignment with programme learning outcomes
	in the area of knowledge knows and understands:	
W01	the stages of development of human embryo, structure and function of fetal membranes and placenta as well as the stages of development of individual organs and the influence of harmful agents on human embryo and fetus (teratogenic agents)	A.W4.
	in the area of skills knows how to:	
U01	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.
	in the area of social competences is able to:	
K01	recognize his/her own limitations and self-evaluate educational deficiencies and needs	K.S5.
K02	promote healthy lifestyle;	K.S6.
K03	use reliable information sources	K.S7.
K04	conclude on the basis of own surveys and observations	K.S8.

4.4. Assessment methods for learning outcomes

Assessment method (+/-)

Course learning outcomes (code)	Oral/written/ practical examinaion /other (specify)*	Test*	Project*	In-class activity*	Independent study*	Group work*	Other (Observation)*

Type of classes

1: / 2:	L	PC	...	L	PC	...	L	PC	...	L	PC	...	L	PC	...	L	PC	...	L	PC	...
W01	+				+																

U01					+																
K01-K04														+					+	+	

Annotation. 1: form of classes; 2: learning outcomes

4.5. Assessment criteria for learning outcomes

Type of classes:

LECTURE (L) (including classes conducted with the use of distance learning methods and techniques)

Grade	Assessment criteria
3,0	Exam result: 60-68%
3,5	Exam result: 69-76%
4,0	Exam result: 77-84%
4,5	Exam result: 85-92%
5,0	Exam result: 93-100%

Type of classes:

PRACTICAL CLASSES (PC) (including classes conducted with the use of distance learning methods and techniques)

Grade	Assessment criteria
3,0	Practical test: 60-68%
3,5	Practical test: 69-76%
4,0	Practical test: 77-84%
4,5	Practical test: 85-92%
5,0	Practical test: 93-100%

5. ECTS credit allocation – student workload

Category	Student workload (full-time mode)	Student workload (part-time mode)
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER (CONTACT HOURS)	**20**	
Participation in lectures*	10	
Participation in seminars/laboratories*	10	
Other (specify) e.g. classes conducted with the use of distance learning methods and techniques*		
INDEPENDENT STUDY (NON-CONTACT HOURS)	**40**	
Preparation for lectures*	20	
Preparation for seminars/laboratories*	20	
Preparation for examination/test*		
Gathering materials for project, online research*		
Preparation of a multimedia presentation*		
Other (specify)*		
TOTAL HOURS	**60**	
ECTS CREDITS for the course	**3**	

*** delete as appropriate**

Approved for implementation (date and legible signatures of course instructors in the given academic year):

……