

Course description

Part 1

General information about the course		
1. Major of study: medicine		2. Study level: unified MSc
		3. Form of study: intramural
4. Year: IV		5. Semester: VII
6. Course name: EMBRYOLOGY		
7. Course status: required		
8. Course contents and assigned learning outcomes		
Prefertilization and fertilization events		
Formation of human embryo and development of tissues and organs.		
Placenta and fetal membranes.Twins.		
Fetal period. Birth defects , prenatal diagnosis.		
Organogenesis. Development of individual systems and their interrelation.		
Learning outcomes / reference to learning outcomes indicated in the standards		
For knowledge – student knows and understands:		
Knows embryological nomenclature.		A.W1
Knows topographical relations between organs during development.		A.W3
Knows developmental stages of human embryo, organization of placenta and fetal membranes, development of individual systems and organs and possible teratogenic effects of different environmental and toxic substances.		A.W6
For skills student can do:		
Has ability to use embryological nomenclature both in written and spoken form.		A.U5
For social competencies student is ready to:		
Has ability for constant self education		
9. Number of hours for the course		30
10. Number of ECTS points for the course		2
11. Methods of verification and evaluation of learning outcomes		
Learning outcomes	Methods of verification	Methods of evaluation*
Knowledge	Grade credit – MCQ	*
Skills	Report Observation	*
Competencies	Observation	*

* The following evaluation system has been assumed:

Very good (5,0) – the assumed learning outcomes have been achieved and significantly exceed the required level

Better than good (4,5) – the assumed learning outcomes have been achieved and slightly exceed the required level

Good (4,0) – the assumed learning outcomes have been achieved at the required level

Better than satisfactory (3,5) – the assumed learning outcomes have been achieved at the average required level

Satisfactory (3,0) – the assumed learning outcomes have been achieved at the minimum required level

Unsatisfactory (2,0) – the assumed learning outcomes have not been achieved

Course description

Part 2

Other useful information about the course		
12. Name of Department, mailing address, e-mail: Department of Histology and Embryology; histologia@sum.edu.pl		
13. Name of the course coordinator: Ryszard Wiaderkiewicz		
14. Prerequisites for knowledge, skills and other competencies: knowledge of human histology and anatomy		
15. Number of students in groups	In accordance with the Senate Resolution	
16. Study materials	Major readings	
	T.W. Sadler, Langman’s Medical Embryology, 13 th ed.	
	Supplemental readings	
	K.L.Moore, T.V.N.Persaud, M.G.Torchia, The developing Human, Clinically Oriented Embryology, 11 th ed.	
17. Location of classes	Department of Histology and Embryology	
18. Location and time for contact hours	Department of Histology and Embryology; Mon.- Fri. (9am-2pm)	
19. Learning outcomes		
Number of the course learning outcome	Course learning outcomes	Reference to learning outcomes indicated in the standards
P_W01 / C_K01	Knows embryological nomenclature	A.W1
P_W02 / C_K02	Knows topographical relations between organs during development.	A.W3
P_W03 / C_K03	Knows developmental stages of human embryo, organization of placenta and fetal membranes, development of individual systems and organs and possible teratogenic effects of different environmental and toxic substances.	A.W6
P_U01 / C_S01	Has ability to use embryological nomenclature both in written and spoken form.	A.U5
20. Forms and topics of classes		Number of hours
22.2. Seminars		
Introduction to embryology.		1
Prefertilization and fertilization events, weeks 1-2.		1
Formation of human embryo (week3) and development of tissues and organs.		3
Placenta and fetal membranes.Twins.		1
Fetal period. Birth defects , prenatal diagnosis.		2
Development of body cavities.		2

Development of digestive system and associated organs	3
Branchial apparatus - formation and derivatives.	3
Development of respiratory system.	1
Development of urinary system.	2
Development of male and female reproductive systems.	2
Cardiovascular system development.	3
Development of skeletal and muscular system.	2
Development of integumentary system.	1
Development of nervous system and sensory organs.	3
Σ	30
24. Readings	
Major readings	
T.W. Sadler, Langman's Medical Embryology, 13 th ed.	
Supplemental readings	
K.L.Moore, T.V.N.Persaud, M.G.Torchia, The developing Human, Clinically Oriented Embryology, 11 th ed.	
25. Detail evaluation criteria	
In accordance with the recommendations of the inspection bodies Completion of the course – student has achieved the assumed learning outcomes Detail criteria for completion and evaluation of the course are specified in the course regulations	