UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN
Faculty of Medicine

Course sylabus – part A
Integrated and Interdisciplinary Training 2

48SJ-IIT27
ECTS: 1.04
CYCLE: 2022L

SUBJECT MATTER CONTENT

CLASSES

Anatomcal landmarks and clinical and ultrasound anatomy of the head and neck, chest, abdomen and pelvis and upper and lower limbs. Anatomcal basis of internal and surgical examination of the structures and organs of the neck, chest, abdomen and pelvis. Ultrasound (US) terminology: hyperechoic, isoechoic, hypoechoic. Ultrasound machine – how it works, types of ultrousound heads, transducer frequency. Proper selection of the probe for the US examination. Preparation and positioning of the patient for US examination. Application of US examnation in medicine – types and methods of examnations in the neck (thyroid and salivary glands, vessels and lymphatic nodes), abdomen and pelvis (organs and vessels, retroperitoneal spaces) and soft tissue. Clinical classification of the lymph nodes of the neck. Visualization and evaluation of the organs and structures of the neck, abdomen and pelvis during US examnation. Abdominal and pelvic US examination of liver, gallblader, bile ducts, pancreas, spleen, aorta and their branches kidney, urinary bladder, prostate and uterus – visualization and evaluation. Individual work of the student with the patient – assessement of professionalism, social competences and student-patient relationship. Body cavities development, celoma. Embryological development and formation of cardiovascular and respiratory system, digestive and urogenital system. Introduction to medical communication: the theuraputic aspect of communication.

TEACHING OBJECTIVE

The student understands clinical interpretations of anatomy and embryology in terms of health and disease. The student should understand the interrelationships between the structure and function of individual organs of the head and neck as well as the abdominal cavity and pelvis, taking into account the basics of physical and physical examination as well as ultrasound examination. The student should know the basics and principles of ultrasound examination, taking into account the clinical and topographic anatomy of the chest, abdominal and pelvic cavity structures, and the anatomy of superficial structures, and should interpret ultrasound images. The student should know the anatomical basics and principles of internal medicine and surgical examination, taking into account the basic symptoms. The student applies the theoretical foundations of anatomy and embryology to interpret clinical issues and cases. The student can work independently and in a group, uses the available literature. The main aim of the course "Integrated and Interdisciplinary Training - Embryology" is to provide students with knowledge about the proper prenatal development of humans including pre-embryonic, embryonic and fetal periods, and to present the development of individual organs and systems, as well as basic disorders associatedwith their development. The purpose of the course is to discuss the most important causes, types andmechanisms of developmental defects as well as their genetic and environmental conditioning. The basic assumption was that learning about prenatal development, the

Legal acts specifying learning outcomes: 672/2020
Disciplines: medical sciences
Status of the course: Obligatoryjny
Group of courses:B - przedmioty kierunkowe
Code: ISCED 0912
Field of study: Medicine
Scope of education:
Profile of education: General academic
Form of studies: full-time
Level of studies: uniform master's studies
Year/semester: 1/2

Types of classes: Classes
Number of hours in semester: Classes: 24.00
Language of instruction: English
Introductory subject:
Prerequisites: Basic knowledge of human biology, anatomy, and physiology. Knowledge of the anatomy of the central nervous system.

Name of the organisational unit conducting the course: Katedra Radiologii, Katedra Histologii i Embriologii Człowieka
Person responsible for the realization of the course:prof. dr hab. n. med. Zbigniew Kmieć, dr hab. n. med. Anna Żurada, dr hab. n. med. Janusz Godlewski, prof. UWM
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Additional remarks: Base and sequential subject.

mechanisms guiding this development and the molecular aspect of developmental biology is a necessary introduction to teaching other disciplines in further years of study. The basic part of the teaching is the transfer of knowledge about morphological transformations, thanks to which cells are determined to form different parts of the embryo, fetus and newborn. In the part of medical communication, the student learns the importance of the therapeutic dimension of communication.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:	M/NMA_P7S_KO++, M/NMA_P7S_WG+++, M/NMA_P7S_UW+++, M/NM+++, M/NMA_P7S_KR++
Symbols for outcomes related to the field of study:	A.U5.+, D.U16.+, KA7_WG1+, KA7_UW5+, M/NM_B.W8.+, KA7_KR1+, M/NM_K.7.+, K.5.+, M/NM_A.W1.+, KA7_WG3+, M/NM_A.W6.+, D.U5.+, A.U4.+, M/NM_K.6.+, A.U3.+

LEARNING OUTCOMES:

Knowledge:

W1 – The Graduate knows and understands stages of the human embryo development, structure and function of the fetal membranes and placenta, stages of individual organs development and the influence of harmful factors on the development of the embryo and fetus (teratogenic);

W2 – The Graduate knows and understands anatomical, histological and embryological terminology in Polish and English

W3 – The Graduate knows and understands principles of ultrasound examination (USG) and the basic principles of fine- and coarse-needle biopsy

W4 – The Graduate knows and understands physical foundations of non-invasive imaging methods

W5 – The Graduate knows and understands human body structure based on vital diagnostic tests, in particular x-rays, ultrasound images, computed tomography and magnetic resonance imaging

Skills:

U1 – The Graduate is able to use anatomical, histological and embryological names in speech and writing

U2 – The Graduate is able to explain the anatomical grounds of physical examination

U3 – The Graduate is able to formulate conclusions as to the relation between anatomical structures based on intravital diagnostic tests, especially of the radiological type (plain film, tests with contrasts agents, computer tomography, and nuclear magnetic resonance)

U4 – The Graduate is able to talk to the adult patient , the child, and the fannily employing the technique of active listening and expressing empathy, and discuss his/her life situation with the patient

U5 – The Graduate is able to take responsibility for furthering own qualifications and sharing knowledge with others

U6 – The Graduate is able to assist during an ultrasound examination, visualize selected structures and interpret the obtained images as well as conclude about the presence of pathological changes

Social competence:

K1 – The Graduate is prepared to perceive and recognizing one's own limitations and self-assessing educational deficits and needs

K2 – The Graduate is prepared to the use of objective sources of

information
K3 – The graduate is ready to follow and apply the principles of academic and professional ethics as well as professional image, academic and social professionalism
K4 – The graduate is ready to promote healthy behaviors

TEACHING FORMS AND METHODS:

Classes(W1;W2;W3;W4;W5;U1;U2;U3;U4;U5;U6;K1;K2;K3;K4;):Multimedia presentations (Power Point). The teaching process is supported by remote learning systems based on MS Teams (communication), Moodle (teaching materials, tests). Practical exercises, where the student practices the basics of physical examination and ultrasound, and assesses and finds structures in the field of surface anatomy and palpation

FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Classes: Colloquium test - "Embryology" part: a written test consisting of 20 single-choice test questions. Results are evaluated according to the percentage system of correct answers (0-100%). To credit "Embryology" part of the subject student's score must be at least 50% of correct answers. Head of deprtment will set the additional test (20 single-choice test questions) for students, who do not fullfill the criteria to credit the "Embryology" part of the course. To pass the additional written test and credit the "Embryology" part of the course student must answer correctly for at least 50% of questions. Semestral grades for the students who credit the semester are evaluated basing on the percentage of correct answers. The grading scale is as follows: 50-68% - grade 3.0, 69-75% - grade 3.5, 76-83% - grade 4.0, 84-89% - grade 4.5, 90-100% - grade 5.0. After passing the retake test, regardless of the number of points obtained, the student receives a grade not higher than 3.0. Part of the ultrasound: OSPE-type practical pass - the pass condition is obtaining more than 60% correct answers and a true / false test- the pass threshold is 60%. The condition for passing the course is to pass both parts of the course, and the final grade is the average of 2 grades (1 = grade from the embryological part, 2=grade from the ultrasound part and physical examination) (W1;W2;W3;W4;W5;U1;U2;U3;U4;U5;U6;K1;K2;K3;K4;);

BASIC LITERATURE:

1. T. W. Sadler, *Langman's Medical Embryology 13th ed.*, Wyd. Lippincott Williams Wilkins, R. 2014
2. Berthold Block, *Color Atlas of ultrasound anatomy*, Wyd. Thieme, R. 2011

SUPPLEMENTARY LITERATURE:

Detailed description of ECTS credits awarded - part B

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The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Classes	24.0 h
- consultation	2.0
	Total: 26.0 h.

2. Independent work of a student:

Total: 0 h

contact hours + independent work of a student Total: 26.0 h

1 ECTS credit = 25-30 h of an average student’s work, number of ECTS credit = 26.0 h : 25.0 h/ECTS = 1.04 ECTS on average: 1.0 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher: 0,00 ECTS points,

- including the number of ECTS credits for hours of independent work of a student: