INFORMATION ABOUT THE COURSE

Radiological Anatomy

1. Basic information

Field of studies field of medical and health sciences, discipline: medical sciences **Unit responsible for the field of studies** Faculty of Medicine Bydgoszcz University of Science and Technology **Level of studies** Uniform master's studies **Profile of studies** General academic **Form of studies** Full-time	**Studies cycle** …….. **Course code** …… **Language** English **Obligatory** Yes

Prerequisites	Students should have basic knowledge of human anatomy.
Introductory courses	Anatomy
Coordinator	Mateusz Badura, PhD

Study period	**Form of assessment** **Form and hours of classes**	**ECTS credits**
Winter/ summer semester	Pass with a grade Lecture: 10 Exercises: 15	2 ECTS

2. Learning outcomes

Code	**Description of learning outcomes**	**Learning outcomes reference**
Knowledge (student knows and understands):		
K1	The graduate knows and understands the structure of the human body in a radiological approach, including the topographical relationships between individual organs, along with anatomical, and radiological terminology	A.W1.
K2	Graduates know and understand the development, structure, and functions of the human body in normal and pathological conditions	O.W1.
Abilities (student can do/perform):		
A1	The graduate explains the anatomical basis of radiological examination	A.U3.
A2	The graduate draws conclusions about the relationships between anatomical structures	A.U4.
Social skills (the student is ready to):		

S1	Graduates are ready to draw conclusions from their own measurements or observations	O.K8.

3. Programme contents

No.	Programme contents	Form of studies	Learning outcomes covered by the programme content
1	Conventional radiography; terminology conventions: contrast material (contrast agent), horizontal versus vertical x-ray beams, the five basic densities	Lecture	K1, K2
2	Recognizing normal chest anatomy and a technically adequate chest radiograph Recognizing the normal abdomen. Positioning for view of the abdomen. Normal bowel gas pattern. Normal fluid levels.	Lecture	K1, K2
3	Ultrasound theory, types of transducer. Imaging planes, screen orientation manipulating the transducer. Image terminology, appearance of tissues	Lecture	K1, K2
4	A basic guide to the interpretation of a standard chest radiograph. Common terms applied to the chest radiograph. Pulmonary hypertension.	Exercise	K1, K2, A1, A2, S1
5	Radiographic anatomy of the skeletal system: radiological anatomy of the scull and spine	Exercise	K1, K2, A1, A2, S1
6	Ultrasound examination: useful transducer movements are, short-axis and long-axis views. Anterior muscles of the thorax and lungs, heart	Exercise	K1, K2, A1, A2, S1
7	Ultrasound examination: anterior abdominal musculature, liver, biliary system - normal ultrasound anatomy, gallstones and acute cholecystitis, sludge in the gallbladder	Exercise	K1, K2, A1, A2, S1
8	Fundamentals of cross-sectional anatomy of the brain and spinal cord in CT and MRI.	Exercise	K1, K2, A1, A2, S1

4. Methods of verifying and assessing the learning outcomes achieved by the student

Form of studies	
	Methods of studies form:

Lecture	Lecture	
	Methods of verification:	**Involvement:**
	Written test	100%
	Conditions for passing the course:	
	The subject of radiological anatomy ends with an exam. The theoretical exam consists of a closed 30-question test in English – the maximum number of points is 30. The pass threshold is 60%, i.e. 18 points. The time allotted for the test is 30 minutes. It is not possible to extend the test exam time. In the event of a justified absence from the exam, the student may take it with the examiner at a time agreed by the parties.	
Exercise	**Methods of studies form:**	
	Exercises in medical simulation center	
	Methods of verification:	**Involvement:**
	Written test	80%
	Observation	10%
	Entrance test	10%
	Conditions for passing the course:	
	The practical exam consists of the student recognizing 20 anatomical structures on radiographs. The side should always be given when recognizing bone details and when the side is a component of the name of a given structure - e.g. right coronary artery. The maximum number of points that can be obtained for the practical part is 20. The pass threshold is 60%, i.e. 12 points. The time allocated for recognizing one anatomical structure is 60 seconds. In the practical exam, the correct anatomical name of each structure should be given in English.	

Learning outcomes	**Methods of verification**				
	Written test	Entrance test	Observation	Written exam	Practical exam
K1	X	X		X	X
K2	X	X		X	X
A1		X			X
A2		X			X
S1			X		

5. Literature

The list of required and recommended literature will be provided by the lecturer at the first meeting.

6. Student workload – balance of hours and ECTS credits

Students activity	**Student workload**

		Number of hours
Classes conducted with the direct participation of an academic teacher or other persons conducting classes	Lecture	10
	Exercise	15
Student's own work	Preparing for classes	8
	Studying literature	5
	Preparing for a test	5
	Preparing for an exam	7
Total student workload	50	2

One (teaching) hour is 45 minutes.