

Radiology



1. IMPRINT

Academic Year	2026/2027
Department	Faculty of Medicine and Dentistry
Field of study	English Dentistry Division
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full-time program
Type of module / course	Obligatory
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	I-st Department of Clinical Radiology 02-004 Warsaw, 5 Chałubińskiego Str.; tel. 22 502-10-73, radiologia@wum.edu.pl; www.radiologia1.wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Doc.dr hab.n.med. i n. o zdr. Tomasz Lorenc MD, PhD
Course coordinator	Doc. dr hab.n.med. i n. o zdr. Tomasz Lorenc MD, PhD; tomasz.lorenc@wum.edu.pl; 22 502-10-73
Person responsible for syllabus	Dorota Piotrowska-Kownacka MD, PhD; dorota.piotrowska-kownacka@wum.edu.pl ; 22 502-10-73
Teachers	Damian Wójcik M.Sc.Eng.; damian.wojcik@wum.edu.pl Tomasz Lorenc MD PhD; tomasz.lorenc@wum.edu.pl Katarzyna Sułkowska MD PhD; katarzyna.sulkowska@wum.edu.pl Marcin Błaż MD PhD; marcin.blaz@wum.edu.pl Dorota Piotrowska-Kownacka MD PhD; dorota.piotrowska-kownacka@wum.edu.pl Lek. med. Małgorzata Wiśniewska MD; malgorzata.wisniewska@wum.edu.pl

2. BASIC INFORMATION

Study year and semester	III year , VI semester	Number of ECTS credits	1
FORM OF ACTIVITY		Number of hours	ECTS credits calculation

Contact hours with academic teacher		
Lectures (L)		
Seminars (S)	5	0,2
Exercises (E)	10	0,3
e-learning (e-L)		
Practical classes (P c)		
professional practice (P P)		
Student's preparation		
preparation for a class and credits	10	0,5

3. LEARNING OBJECTIVES	
C1	Physics of various types of radiation.
C2	Anatomy and pathophysiology of human body
C3	Clinical pathophysiology

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING	
Code and number of effect of learning in accordance with standards of learning	Effects in time
Knowledge – Graduate knows and understands	
B.W9.	methods of imaging tissues and organs and the principles of operation of diagnostic devices used for this purpose;
B.W10.	principles of operation of ultrasonic devices;
F.W18	principles of radiological diagnosis;
F.W25.	Principles of dental radiographic diagnostics, including the acquisition of intraoral images and the interpretation of X-ray images;
Skills – skills can:	
A.U1.	interpret anatomical relations illustrated with the basic methods of diagnostic tests in the field of radiology (overview and contrast media radiographs);
E.U5.	identify normal and pathological structures and organs in additional imaging examinations (X-ray, ultrasound, computed tomography –CT) ;
E.U6.	interpret the results of additional tests and consultations ;

F.U31.	Interpret the results of radiological examination used in dental diagnostics
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5. ADDITIONAL EFFECTS OF LEARNING	
Learning effect number	Effects in terms of
Knowledge – Graduate* knows and understands:	
W.1.	
Skills – Graduate can:	
S1	-
Social competence – Graduate is ready to:	
K1	-

6. CLASSES		
Form of activity	Subject topics and educational contents	Learning outcomes
Seminars	S1 – Physics of ionizing radiation. Theoretical basis of multimodal imaging. Physics, technics and methodology of each visualization methods. Digital radiography. Teleradiology.	A.U1., B.W9., B.W10., E.U5., E.U6., F.U31., F.W18., F.W25
	S2 –Radiobiology and radiological protection. Role and Value of the Clinical Radiologist: Recognising the Value and Responding to the Challenges. Radiological anatomy of human body (Radiography, US, CT, MRI, Angiography). Screening in radiology.	A.U1., B.W9., B.W10., E.U5., E.U6., F.U31., F.W18., F.W25
	S3 –Abdominal Radiology. Imaging methods and abdominal organs estimation (parenchymal organs, gastrointestinal tract, retroperitoneal space).	A.U1., B.W9., B.W10., E.U5., E.U6., F.U31., F.W18., F.W25
	S4 –Facial pathology imaging - technics, methodology, interpretation.	A.U1., B.W9., B.W10., E.U5., E.U6., F.U31., F.W18., F.W25
	S5 –Chest Imaging. Imaging methods. Pathological basis of chest diseases. Lung and cardiovascular pathologies.	A.U1., B.W9., B.W10., E.U5., E.U6., F.U31., F.W18., F.W25.,

7. LITERATURE
Obligatory literature:
1. Brant and Helms' Fundamentals of Diagnostic Radiology , Authors: Klein, Jeffrey, MD, FACR. Emily N.; Brant, William E.; Helms, Clyde A., wyd. Lippincott Williams and Wilkins, 2018
Supplementary literature:
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8. METHODS OF VERIFICATION OF LEARNING OUTCOMES		
Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
	To pass the course an active participation in all seminars is required. At the end of the course, students are required to take a single-choice question test (15 min.). The test consists of 12 questions.	2.0 (failed) 0-13 points all seminars and final test. 3.0 (satisfactory) 14-15 3.5 (rather good) 16-17 4.0 (good) 18,19,20

	In case of absence, students are responsible for notifying faculty or the Radiology Department's office and arranging to make up missed class/take the test Course Completion: An unexcused absence constitutes grounds for recording a failing result for the course on that assessment date. If the student fails to complete the course successfully by the final scheduled assessment date in a given academic year, the student will not receive credit for the course. If a student receives a failing grade in a course completed through a graded assessment, the student is entitled to two resit attempts.	4.5 (more than good)21,22 5.0 (very good) 23,24
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9. ADDITIONAL INFORMATION
Dorota Piotrowska-Kownacka, responsible for teaching; mailto:dorota.piotrowska-kownacka@wum.edu.pl

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ATTENTION

The final 10 minutes of the last class in the block/semester/year should be allocated to students' Survey of Evaluation of Classes and Academic Teachers