



Dental Radiology

1. IMPRINT	
Academic Year	2025/2026
Department	Faculty of Dental Medicine
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	Department of Dental and Maxillofacial Radiology Medical University of Warsaw ul. Binieckiego 6, 02-097 Warszawa; tel. 22 116 64 10 e-mail: zrs@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Professor Kazimierz Szopiński MD, PhD
Course coordinator	Professor Kazimierz Szopiński MD, PhD
Person responsible for syllabus	Anna Pantelewicz DMD, PhD, anna.pantelewicz@wum.edu.pl
Teachers	Prof. dr hab. n. med. Kazimierz Szopiński, kazimierz.szopinski@wum.edu.pl Dr hab. n. med. i n. o zdr., inż. Piotr Regulski, piotr.regulski@wum.edu.pl Dr n. med. i n. o zdr. Anna Pogorzelska, anna.pogorzelska@wum.edu.pl Dr n. med. i n. o zdr. Anna Pantelewicz, anna.pantelewicz@wum.edu.pl Dr n. med. Michał Szałwiński, michal.szalwinski@wum.edu.pl Lek. stom. Stanisław Jąkowski, stanislaw.jalowski@wum.edu.pl

	Lek. dent. Oliwia Kałuża, oliwia.kaluza@wum.edu.pl Lek. med. Patrycja Bielska, patrycja.bielska@wum.edu.pl
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2. BASIC INFORMATION				
Year and semester of studies	3 rd year, 6 th semester		Number of ECTS credits	2
FORMS OF CLASSES		Number of hours	ECTS credits calculation	
Contacting hours with academic teacher				
Lecture (L)				
Seminar (S)		8	0.26	
Classes (C)		27	0.9	
e-learning (e-L)		10	0.34	
Practical classes (PC)				
Work placement (WP)				
Unassisted student's work				
Preparation for classes and completions		15	0.5	

3. COURSE OBJECTIVES	
O1	To acquire the ability to write radiological reports and documentation of basic intra- and extraoral examinations
O2	To acquire practical skills in differential diagnosis of the head and neck pathologies.
O3	To acquire knowledge in diagnosis using intraoral x-ray machine

4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning

(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)

Effects in the field of: (

Knowledge – Graduate* knows and understands:

A.K1.	human body structures: cells, tissues, organs and systems with particular emphasis on the dental system
B.K9.	Methods of tissue and organ imaging and the principles of operation of diagnostic equipment for this purpose
E.K20.	Cases in which the patient should be referred to the hospital
F.K18.	Principles of radiological diagnostics
G.K34.	The principles of keeping, storing and providing access to medical records and of personal data protection

Skills– Graduate* is able to:

A.S1.	interpret anatomical relations illustrated by basic diagnostic methods in radiology (plain scans and scans after contrast agent administration)
E.S1.	perform differential diagnosis of the most common diseases
E.S3.	plan the diagnostic and therapeutic treatment of the most common diseases
E.S5.	identify normal and pathological structures and organs in additional imaging (X-ray, ultrasound, computed tomography – CT)
F.S11.	keep current patient records, make referrals for dental and general medical examination or treatment
F.S17.	diagnose and provide basic treatment of periodontal diseases
F.S18.	diagnose, differentiate and classify malocclusion
F.S23.	describe dental and panoramic photographs
G.S26.	keep medical records

* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)	
Number of effect of learning	Effects in the fields of:
Knowledge – Graduate knows and understands:	
K1	-
Skills– Graduate is able to:	
S1	-
Social Competencies – Graduate is ready for:	
SC1	-

6. CLASSES		
Form of class	Class contents	Effects of Learning
Seminars	S1 – Principles of referring for x-ray imaging, principles of keeping, storing and and providing access to medical records; intraoral X-rays: types, techniques of taking, indications. Atomic law (Act and Regulations of the Minister of Health). Discussion of intraoral X-ray imaging. S2 – Radiologic symptomatology and differential diagnosis of caries. Radiologic symptomatology of the periodontal disease Discussion of normal imaging and radiographic symptoms of pathology in marginal periodontitis and dental hard tissues. S3 – Radiological diagnosis in endodontic treatment. Parallax (Clark's rule). Radiological symptoms of periapical periodontitis. Discussion of normal imaging and radiographic symptoms of periapical periodontal pathology. Projections to facilitate diagnosis during endodontic treatment. S4 – Symptomatology of disease processes taking place in the dental alveolar processes. Discussion of the normal image and radiological signs of pathology in the area of the alveolar processes.	B.K9., E.K20., F.K18., G.K34. A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26. A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26. A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26.
	C1 – Technique of performing intraoral X-ray images – examination on a phantom. Discussion of theoretical and technical aspects of intraoral imaging. C2 – Performing intraoral images and radiographic anatomy of intraoral images in virtual reality. C3 – Identification and radiographic anatomy of intraoral images. Correct radiographic anatomy in intraoral imaging.	A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26 A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26. A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26.

	C4 – Radiological diagnostics of lesions in mineralized tooth tissues. Radiological signs of pathology within the hard tissues of the tooth. C5 – Differential diagnosis of chronic inflammation of periapical periodontal tissues. Radiological signs of pathology within the periapical periodontium. PAI index. Radiological diagnostics in endodontic treatment. C6 – Diagnostics of disease processes occurring in the alveolar process of the maxilla and the alveolar part of the mandible. Focal changes on intraoral images. C7 – Symptomatology of chronic inflammation of marginal periodontal tissues. Radiological signs of pathology within the marginal periodontium. C8 – Patient examination: technique of performing intraoral X-ray images. Discussion of practical aspects of intraoral imaging and performing intraoral images.	A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26. A.S1., E.S3., E.S5., G.S26. A.S1., E.S3., G.S26. A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26. A.S1., E.S1., E.S3., E.S5., F.S17., F.S23., G.S26.
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7. LITERATURE

Obligatory

1. Whaites E., Drage N. Essentials of Dental Radiography and Radiology. Churchill Livingstone Elsevier 2013.
2. White SC., Pharoah MJ. Oral Radiology — principles and interpretation. Elsevier Mosby 2013.
3. Langlais RP., Miller C. Exercises in Oral Radiology and Interpretation Elsevier 2017.

Supplementary

1. Coulthard P, Horner K, Sloan P, Theaker E. Master dentistry, volume one: Oral and maxillofacial surgery, radiology, pathology and oral medicine. Churchill Livingstone Elsevier 2008.
2. Articles: Journal of Oral Medicine and Oral Surgery, Journal of Stomatology, Contemporary Clinical Dentistry, Dentomaxillofacial Radiology

8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
A.K1. B.K9. E.K20. F.K18. G.K34. A.S1. E.S1. E.S3. E.S5. F.S11. F.S17. F.S18. G.S26	Seminar completion requirements – attendance at all seminars is mandatory. Material covered during seminars is required knowledge for the final examination The entry test will takes place during the first class and involves identifying anatomical structures on panoramic radiographs. The quiz consists of 50 single-choice questions based on images and diagrams from the presentations available on the e-learning platform Credit for the class is based on attendance and achieving a passing grade in the entrance tests. The entrance tests for the previous course topic consist of 10 single-choice questions, 4 answers (10 minutes to complete). There will be 6 entrance tests, each worth 10 points. A total of 60 points can be earned.	Active participation in seminars Entrance exam – passing grade 61%. Active participation in classes is required, as is obtaining a total of 36 points from all tests (the pass mark is 61%). If a student is unprepared for class, the supervising assistant may

	In the case of absence from classes, a justification must be submitted no later than at the next class following the period of absence. The date for making up the missed class is determined by the supervising assistant. Failure to obtain credit for the classes results in the inability to take the final credit test. The colloquium (for a total of 60 minutes) consists of three parts: 1. Multiple choice test, 30 questions, (30 points). Up to 10 questions, one answer pattern, 3-5 distractors, 1 possible answer: a) all; b) II c) III d) I and II e) I and III 2. 20 multiple choice test questions; 8 distractors, up to 8 correct answers (20 points) 3. 10 test questions on anatomy in intraoral X-rays (10 points) - X-ray's, diagrams and presentations available on the e-learning platform. Students are obliged to pass all e-learning radiological courses as an unassisted student's work. Passing classes in the Technical Radiology Lab on the last day of classes and completing the Card Credits during classes or during additional classes duty hours; correct patient positioning for intraoral X-rays, error analysis.	decide not to grant credit for that class. Final exam: – anatomy 90%: failure to pass anatomy results in failure of the entire exam – other questions – passing threshold 61% of points. Passing by sending your answers to the email address provided on the e-learning platform. Failure to send your answers will result in a fail grade for the e-learning course.
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4. ADDITIONAL INFORMATION

1. Three late arrivals to class are counted as one absence.
2. During classes, it is strictly forbidden to use phones and take photos of the discussed tests.
3. Students are allowed one excused absence. All remaining absences must be made up. Makeup work must be arranged with the teacher and may include: attending classes with another group, preparing a presentation, additional duty during imaging report sessions, or lab duty outside regular class hours.
4. Classes take place in the training rooms and the Technical Laboratory of the Department of Dental and Maxillofacial Radiology at the University Dentistry Center of the Medical University of Warsaw.
5. The first and second term of the colloquium is performed in a form of test. In case of failing the test, the student is allowed to retake the test once with the consent of the Head of Department.
6. Medical scrubs are required for clinical classes in the radiology laboratory.

The ALARA Student Scientific Club operates at the Department of Dental and Maxillofacial Radiology, supervised by prof. Ph.D. med. Kazimierz Szopiński, kazimierz.szopinski@wum.edu.pl. The work of the scientific group allows you to expand your knowledge of radiology dentistry and involves carrying out scientific and research projects independently or in teams. Students preparing the results of their work have the opportunity to present them at scientific conferences and in cooperation with the Teaching Staff preparation of scientific publications in peer-reviewed journals. The subject is related to scientific research. A detailed description of the research carried out can be found on the Department's website.

Person responsible for teaching: Anna Pogorzelska, MD; anna.pogorzelska@wum.edu.pl

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ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers