Dental Radiology

1. IMPRINT

Academic Year	2026/2027
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	Exam
Educational Unit / Educational Units	Department of Dental and Maxillofacial Radiology Medical University of Warsaw ul. Binieckiego 6, 02-097 Warszawa; Phone No.(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	Lek. dent. Oliwia Kałuża, oliwia.kaluza@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 Jalowski, stanislaw.jalowski@wum.edu.pl Lek. dent. Oliwia Kałuża, oliwia.kaluza@wum.edu.pl Lek. med. Patrycja Bielska, patrycja.bielska@wum.edu.pl

2. BASIC INFORMATION

Year and semester of studies	5 rd year, 9 th semester	**Number of ECTS credits**	1.00

FORMS OF CLASSES **Contacting hours with academic teacher**	**Number of hours**	**ECTS credits calculation**
Lecture (L)		
Seminar (S)	5	0.2
Classes (C)	10	0.4
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	10	0.4

3. COURSE OBJECTIVES

O1	To acquire the ability to write radiological reports and documentation of basic intra- and extraoral examinations
O2	To acquire skills in radiological and differential diagnosis head and neck pathologies.
O3	To acquire knowledge in diagnosis using intraoral CBCT 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	**Effects in the field of:**
Knowledge – Graduate* knows and understands:	
A.W1.	structures of the human body: cells, tissues, organs and systems, with particular emphasis on the stomatognathic system
B.W9.	methods of tissue and organ imaging and the principles of operation of diagnostic equipment for this purpose

E.W20.	cases in which the patient should be referred to the hospital
F.W18.	principles of radiological diagnosis
G.W34.	the principles of keeping, storing and providing access to medical records and of personal data protection
Skills– Graduate* is able to:	
A.U1.	interpret anatomical relations illustrated by basic diagnostic methods in radiology (plain scans and scans after contrast agent administration)
E.U1.	perform differential diagnosis of the most common diseases
E.U3.	plan the diagnostic and therapeutic treatment of the most common diseases
E.U5.	identify normal and pathological structures and organs in additional imaging (X-ray, ultrasound, computed tomography – CT)
F.U11.	know the procedures in case of general and local complications during dental procedures and after dental procedures
F.U17.	diagnose and provide basic treatment of periodontal diseases
F.U18.	describe pathological changes of cells, tissues and organs according to basic mechanisms
F.U23.	describe dental and panoramic radiographs
G.U26.	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:	
W1	-
Skills– Graduate is able to:	
U1	-
Social Competencies – Graduate is ready for:	
K1	-

6. CLASSES

Form of class	**Class contents**	**Effects of Learning**

Seminars	S1 – Anatomy in CBCT examinations of the maxilla and mandible. Radiological diagnostics – differentiation of hard tissue lesions of the tooth; evaluation of marginal and periapical periodontium – differentiation. S2 – Radiological diagnostics of focal lesions. Tooth trauma and injuries of the alveolar process, and bony structures of the facial part of the skull. Radiographic signs of injuries.	F.W18., E.U1, E.U3., F.U18., F.U23. A.W1., E.W20., F.W18, A.U1., E.U1., E.U3., E.U5., F.U11., F.U17., G.U26.
Classes	C1 – Technique of performing CBCT, cephalometric images, panoramic images, and intraoral images. Discussion of the principle of operation of CBCT, discussion of the most common technical errors and possibilities for their correction, artifact analysis. Patient examination: technique of performing CBCT, cephalometric images, panoramic images, and intraoral images. Discussion of practical aspects of CBCT, cephalometric images, panoramic images, and intraoral images, error elimination – exercises in the X-ray laboratory. C2 – Anatomy of the facial part of the skull on CBCT, shadow analysis, densifications, reduced density – rare trabeculation in cancellous bone, dental abnormalities. Classes in virtual reality. C3 – Trial exam and summary of knowledge acquired in the third, fourth, and fifth year.	F.W18., A.U1., E.U1., E.U5., F.U23. F.W18., G.W34., E.U1., C.U11., F.U23. A.S1.,B.K9, E.S1., E.S3., E.S5. F.S11., F.S17., F.K18., G.S26., G.K34., G.S26.

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.W1. B.W9. E.W20. F.W18. G.W34. A.U1. E.U1. E.U3. E.U5. F.U11.	The entrance colloquium (25 min for all parts, max.25 points) consists of two parts: 1. Theoretical part: single choice test -15 questions, 2. Anatomy on panoramic radiographs (10 points) – single choice test – 10 questions - X-ray's, diagrams and presentations available on the e-learning platform. To excuse an absence, the student is required to notify the course coordinator by email or in writing no later than three working days after the day on which the classes took place. A medical certificate must be submitted	Entrance exam and diploma exam: passing grade 61%.

F.U17. F.U18. F.U23. G.U26.	within 7 working days of the date it was issued. The make-up class date and form is determined by the supervising assistant. An unexcused absence may result in failing to pass the class. Diploma exam The exam consists of three parts: a test, anatomy and a description of the X-rays: 1. Multiple choice test 40 questions. One answer pattern for each question: a) all; b) II c) III; d) I and II; e) I and III. For the test section, a student can receive a maximum of 40 points. 2. Anatomy on panoramic radiographs (10 points) – single choice test – 10 questions - X-ray's, diagrams and presentations available on the e-learning platform. 3. Report: – three intraoral photos; – two panoramic radiographs. For each correctly described radiograph, the student can receive 10 points. For the descriptive section, 50 points (10 points per image).	Diploma exam 2.0 (failed) <60% 3.0 (sat.) >= 61% &<68% 3.5 (r. good) >= 68% & <75% 4.0 (good) >= 75% & <82% 4.5 (m.t. good) >= 82% & <90% 5.0 (v. good) >= 90% In order to pass the diploma exam, you must obtain a passing grade in each section in the following proportions: 1. Test Part: ≥ 61% 2. Descriptive part: >60%.

4. ADDITIONAL INFORMATION

1. 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.
2. During classes, it is strictly forbidden to use phones and take photos of the discussed radiographs.
3. Medical scrubs are required for clinical classes in the radiology laboratory.
4. Three late arrivals to class are counted as one absence.
5. Students are allowed one excused absence (minimum 90% attendance is required). 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.
6. The first and second examination attempts are in the form of a written test. The second attempt covers only the part of the material the student failed to pass in the first attempt. The student is entitled to three exam attempts, with the second and third being resit attempts. In the case of the second resit attempt, the student may submit a request to the Dean for a student government representative to be present as an observer. The Dean may grant approval for a committee exam if justified objections regarding the conduct of the exam are raised.
7. In the event of an excused absence from the exam, the student is entitled to sit the exam at the next scheduled date. An unexcused absence from the exam is equivalent to a failing grade for that date.
8. The "PARALAKSA" Student Scientific Club operates at the Department of Dental and Maxillofacial Radiology. The work of the scientific club allows students to expand their knowledge of dental radiology 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 academic staff, to prepare scientific publications in peer-reviewed journals. The subject is related to scientific research. A detailed description of the research conducted can be found on the Department's website. Club meetings are conducted in Polish. Students interested in writing a scientific paper may contact the course instructor.

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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