



## Dental Radiology

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2023/2024
<b>Department</b>	Faculty of Dental Medicine
<b>Field of study</b>	English Dentistry Division
<b>Main scientific discipline</b>	Medical sciences
<b>Study Profile</b>	General academic
<b>Level of studies</b>	Uniform MSc
<b>Form of studies</b>	Full-time program
<b>Type of module / course</b>	Obligatory
<b>Form of verification of learning outcomes</b>	Completion
<b>Educational Unit / Educational Units</b>	Department of Dental and Maxillofacial Radiology Medical University of Warsaw Binieckiego 6 street, 02-097 Warszawa, phone numer 22 116 64 10 e-mail: zrs@wum.edu.pl
<b>Head of Educational Unit / Heads of Educational Units</b>	Professor Kazimierz Szopiński MD. PhD, kazimierz.szopinski@wum.edu.pl
<b>Course coordinator</b>	Professor Kazimierz Szopiński MD. PhD, kazimierz.szopinski@wum.edu.pl
<b>Person responsible for syllabus</b>	Anna Pogorzelska DMD, PhD, anna.pogorzelska@wum.edu.pl
<b>Teachers</b>	Professor Kazimierz Szopiński MD. PhD, kazimierz.szopinski@wum.edu.pl Piotr Regulski DMD, PhD, piotr.regulski@wum.edu.pl Michał Szałwiński MD, PhD, michal.szalwinski@wum.edu.pl Anna Pogorzelska DMD, PhD, <a href="mailto:anna.pogorzelska@wum.edu.pl">anna.pogorzelska@wum.edu.pl</a> Anna Pantelewicz DMD, PhD, <a href="mailto:anna.pantelewicz@wum.edu.pl">anna.pantelewicz@wum.edu.pl</a> Stanisław Jąłowski DMD, stanislaw.jalowski@wum.edu.pl Oliwia Kałuża DMD, <a href="mailto:oliwia.kaluza@wum.edu.pl">oliwia.kaluza@wum.edu.pl</a> Aniela Akonom DMD, aniela.akonom@wum.edu.pl

<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	IV <sup>th</sup> year, VII <sup>th</sup> and VIII <sup>th</sup> semester	<b>Number of ECTS credits</b>	3.5
<b>FORMS OF CLASSES</b>	<b>Number of hours</b>	<b>ECTS credits calculation</b>	
<b>Contacting hours with academic teacher</b>			
Lecture (L)			
Seminar (S)	8	0,32	
Classes (C)	42	1,68	
e-learning (e-L)			
Practical classes (PC)			
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions	37,5	1,5	

<b>3. COURSE OBJECTIVES</b>	
O1	Acquiring the ability to maintain radiological documentation in terms of basic intra- and extraoral x-ray examinations.
O2	Acquiring the ability to diagnose and differentiate pathologies affecting the head and neck.
O3	Acquiring knowledge in terms of diagnostics using a panoramic x-ray machine.

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
A.K1.	structures of the human body: cells, tissues, organs and systems, with particular emphasis on the stomatognathic system
B.K9.	methods of imaging tissues and organs and principles of operation of diagnostic devices used for this purpose

E.K20.	cases in which the patient should be referred to hospital
F.K18.	principles of radiological diagnosis
G.K34.	rules for maintaining, storing and sharing medical records and personal data protection
<b>Skills– Graduate* is able to:</b>	
A.S1.	interpret anatomical relationships imaging by basic radiological methods of diagnostic (overview and scans after contrast agent administration)
E.S1.	perform differential diagnosis of the most common diseases
E.S3.	plan diagnostic and therapeutic procedures for the most common diseases
E.S5.	identify normal and pathological structures and organs in additional imaging tests (X-ray, ultrasound, computed tomography - CT)
F.S11.	maintain current patient records, issue referrals for tests or specialist dental and general medical treatment
F.S17.	diagnose and provide basic treatment for periodontal disease
F.S18.	diagnose, differentiate and classify malocclusions
F.S23.	report intraoral and panoramic radiographs
G.S26.	keep medical records correctly

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

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

<b>6. CLASSES</b>		
<b>Form of class</b>	<b>Class contents</b>	<b>Effects of Learning</b>

Seminars	S1 – Anatomy on panoramic x-rays. Radiological diagnosis - caries, periodontal and periapical inflammation - differential diagnosis. S2 – Radiological symptomatology of periapical inflammation. PAI index. Differential diagnosis with odontogenic periapical inflammatory cysts. S3 – Radiological diagnosis of dental trauma, alveolar process and craniofacial bony structures. X-ray signs of trauma.	F.K18., E.S1, E.S3., F.S18.,F.S23. E.K20., F.K18., E.S1., E.S3., F.U11 A.K1., F.K18., A.S1., E.K20., E.S1.,E.S3., E.S5., F.S17., G.U26.
Classes	C1 – The technique of taking panoramic x-ray. Discussion of the principle of a panoramic radiograph, the concept of a layer, discussion of the most common technical errors and the possibilities of their correction, C2 – Taking panoramic x-ray examination: the technique, practical aspects, error elimination – exercises in radiology room. C3 – Anatomy of the craniofacial area on a panoramic radiographs, shadow analysis, anatomical variations of the teeth and structures of the craniofacial area (radiolucencies, radiopacities - rare trabecularization in the spongy bone). C4 – Dental abnormalities – panoramic x-ray diagnostic. C5 – Radiologic symptomatology and differential diagnosis of dental hard tissue decays – primary and secondary teeth. Radiologic symptomatology of the periodontal disease on a panoramic radiographs. C6 – Radiologic symptomatology of the periapical disease - differential diagnosis. C7, C8 – Radiologic imaging of tooth and alveolar crest trauma. C9 - 10 – Radiologic diagnosis - panoramic imaging: radiologic symptomatology of teeth hard tissue decay, periodontal and periapical disease and trauma. C11-12 – Multimedial (e-learning)	F.K18., A.S1., E.S1., E.S5., F.S23. F.K18., G.K34., E.S1., C.S11., F.S23. F.S23. F.K18., E.S1., F.S23. F.K18., G.K34., E.S1., C.S11., F.S23. A.S1., B.K9, E.S1., E.S3., E.S5. F.S11., F.S17., F.K18., G.S26., G.K34., G.S26., F.S23.

## 7. LITERATURE

### Obligatory

- Whaites E, Drage N. Essentials of Dental Radiography and Radiology. Churchill Livingstone Elsevier 2020
- White SC, Pharoah MJ. Oral Radiology — principles and interpretation. Elsevier Mosby 2018
- Langlais RP, Miller C. Exercises in Oral Radiology and Interpretation. Saunders 2016

### Supplementary

## 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.	<b>The final colloquium</b> (60 minutes in total) consists of three parts: 1. Multiple choice test (all combinations possible - from all incorrect to all correct), 30 questions, 8 distractors. 2. Multiple choice test 10 questions One answer scheme for each question (in different order): a) all; b) II c) III	Anatomy 100% other questions - pass above 60% of points; failing anatomy results in failing the entire test;

E.S5. F.S11. F.S17. F.S18. F.S23. G.S26.	d) I and II e) I and III 3. Anatomy on a panoramic and intraoral radiograph - test or short answer 10 questions – terminology from: "Exercises in Oral Radiology and Interpretation" Robert P. Langlais, Craig Miller and X-rays and diagrams from presentations available on the e-learning platform. Pass a practical taking of panoramic and intraoral x-rays in radiology room - correct positioning of the patient for a panoramic radiograph and intraoral X-rays	
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## 9. ADDITIONAL INFORMATION

1. Three delays are treated as 1 absence.
2. During classes, it is strictly forbidden to use phones and take photos of the discussed examinations.
3. 90% attendance is required, making up the classes after agreeing on the form with the lecturer - paper, additional duty during the description of the research, duty in the laboratory outside of classes.
4. Classes are held in the exercise rooms and 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 dates of the colloquium are in the form of a test. In case of failure, the colloquium may be held only with the consent of the Head of the Department.
6. A protective apron is required for practical exercises "patient examination".

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](mailto:kazimierz.szopinski@wum.edu.pl). The work of the scientific group allows you to expand your knowledge of dental radiology and involves carrying out scientific and research projects independently or as a team. Students preparing the results of their work have the opportunity to present them at scientific conferences and, in cooperation with the Teaching Staff, prepare 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, DMD, PhD; [anna.pogorzelska@wum.edu.pl](mailto: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