



Pomorski Uniwersytet Medyczny w Szczecinie

SYLLABUS of the MODULE (SUBJECT) General information

Module title: GENERAL AND DENTAL RADIOLOGY	
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Medical and Dentistry
Specialty	-
Level of study	long-cycle
Mode of study	full-time/part-time
Year of studies, semester	Year 3 / semester V and VI
ECTS credits (incl. semester breakdown)	(2+2)
Type/s of training (Number of hours)	Lectures (24h) Seminars (30h) Practical classes (20h)
Form of assessment ¹	graded assessment <input checked="" type="checkbox"/> descriptive <input type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral <input type="checkbox"/> non-graded assessment <input type="checkbox"/> final examination: <input type="checkbox"/> descriptive <input type="checkbox"/> test <input type="checkbox"/> practical <input type="checkbox"/> oral
Head of the Department /Clinic, Unit	Prof. dr hab. n. med. Aleksander Falkowski zrz@pum.edu.pl
Tutor responsible for the module	dr n.med. Magdalena Sroczyk - Jaszczyńska
Name and contact data of the unit	Chair and Department of General, Dental and Procedural Radiology Al. Powstańców Wielkopolskich 72/18,70-111 Szczecin
Department's/ Clinic's/ Unit's website	www.pum.edu.pl
Language	Polish/English

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¹ where applicable, replace into

Detailed information

<p>Module objectives</p>	<p>The fundamental objective of teaching the general and dental radiology is to integrate knowledge of the use of different types of radiation and examination techniques in conjunction with clinical issues in dentistry and medicine.</p> <p>The principles of radiological protection of both the patient and medical staff are extremely important; students must demonstrate knowledge of these principles and the applicable regulations in this area.</p> <p>The presentation of carious, inflammatory lesions of the apical and marginal periodontium, osteomyelitis of the jaws, nasal sinuses on intraoral and pantomographic X-rays and CBCT images using various examination techniques is of great importance in everyday dental practice. Diagnostics of temporomandibular joint diseases, craniofacial tumours or injuries based on conventional X-ray techniques, ultrasonography, computed tomography and magnetic resonance imaging should define the possibilities and limitations of individual examination methods and their diagnostic effectiveness in various types of pathology.</p> <p>Diagnosis of diseases of the thoracic, abdominal, skeletal and vascular system on the basis of conventional X-ray techniques, ultrasonography, computed tomography, surgical radiology and magnetic resonance imaging should outline the possibilities and limitations of individual examination methods and their diagnostic efficacy in various types of pathology</p>						
<p>Prerequisite /essential requirements</p>	<table border="1"> <tr> <td data-bbox="424 1402 625 1503"> <p>Knowledge</p> </td> <td data-bbox="625 1402 1457 1503"> <p>Has knowledge of the use of different types of radiation and examination techniques in relation to clinical issues in dentistry and medicine.</p> </td> </tr> <tr> <td data-bbox="424 1503 625 1648"> <p>Skills</p> </td> <td data-bbox="625 1503 1457 1648"> <p>Interprets anatomical relations illustrated by basic methods of diagnostic examination in radiology (review and contrast agent radiographs) Observe the rules of radiological protection</p> </td> </tr> <tr> <td data-bbox="424 1648 625 1727"> <p>Competences</p> </td> <td data-bbox="625 1648 1457 1727"> <p>Ability to contact the patient, self-education, work in a team</p> </td> </tr> </table>	<p>Knowledge</p>	<p>Has knowledge of the use of different types of radiation and examination techniques in relation to clinical issues in dentistry and medicine.</p>	<p>Skills</p>	<p>Interprets anatomical relations illustrated by basic methods of diagnostic examination in radiology (review and contrast agent radiographs) Observe the rules of radiological protection</p>	<p>Competences</p>	<p>Ability to contact the patient, self-education, work in a team</p>
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Description of the learning outcomes for the subject/module			
No. of learning outcome	Student, who has passed the (subject) knows /is able to /can:	SYMBOL (referring the standards)	Method of verification of learning outcomes*
W01	explains development of organs and entire body with particular regard to masticatory system	K_A.W02	S
W02	knows and understands imaging techniques of tissues and organs, as well as operating principles of appropriate diagnostic equipment	K_B.W09	S
W03	knows rules of radiological diagnostics	K_F.W21	S
U01	interprets anatomic relationships supported by diagnostic examination methods in field of radiology (inspection x-ray and contrast-based images)	K_A.U03	F
U02	identifies correct and pathological structures and organs in additional imaging examination (X-ray, USG, computer tomography)	K_E.U05	K
K01	can co-operate with team members and care about occupational safety	K_K03	RZĆ
K02	shows respect to patient, social groups and cares for their goodwill and security	K_K05	RZĆ

Table presenting LEARNING OUTCOMES in relation to the form of classes								
No. of learning outcome	Learning outcomes	Type of training						
		Lecture	Seminar	Practical classes	Clinical classes	Simulations	E-learning	Other forms
W01	K_A.W02	X	X					
W02	K_B.W09	X	X	X				
W03	K_F.W21		X	X				
U01	K_A.U03	X		X				
U02	K_E.U05	X	X	X				
K01	K_K03			X				
K02	K_K05			X				

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	Number of hours	References to learning outcomes
Winter semester			
Lectures (14h)			
TK01	CBCT in dentistry	2	K_B.W09
TK02	X-ray viewing patterns in dentistry	2	K_A.U03
TK03	Computed tomography in dentistry	2	K_B.W09
TK04	X-ray diagnostics of clefts, craniofacial anomalies	2	K_A.W02
TK05	Odontogenic outbrakes and systemic diseases	2	K_A.U05
TK06	Isotopic studies and their significance	2	K_B.W09
TK07	PET in medicine and dentistry	2	K_B.W09
Seminars (15h)			
TK01	Protection against ionising radiation.	1	K_K05
TK02	Equipment of x-ray practices in the light of legislation.	2	K_K05
TK03	Ways of describing and archiving X-ray examinations.	2	K_F.W21
TK04	X-ray anatomy on pantomographic and cranial radiographs.	2	K_E.U05
TK05	Basics of interpretation of bone changes on radiographs (osteolysis, osteosclerosis)	2	K_E.U05
TK06	Intraoral techniques - Cieszynski, right angle, pterygopalatine, occlusal	2	K_B.W09
TK07	Introduction to endodontic radiology	2	K_E.U05
TK08	Caries in X-ray images.	2	K_E.U05
Practical classes (10h)			

TK01	Patient positioning for intraoral and extraoral radiographs (pantomography)	2	K_F.W21 K_K03 K_K03
TK02	Intraoral X-ray apparatus - construction, diagnostic usefulness.	2	K_B.W09
TK03	Extraoral X-ray apparatus (including pantomography and cephalometry) - construction, diagnostic usefulness	2	K_B.W09
TK04	Anatomy of teeth in children and adults on X-ray images.	2	K_A.U03
TK05	Interpretation of pathological changes in tooth and periodontal tissues.	2	K_E.U05
Summer semester			
Lectures (10h)			
TK01	Magnetic resonance in dentistry	2	K_B.W09
TK02	Projection errors in x-ray imaging	2	K_B.W09
TK03	Periodontal replacement in x-ray imaging	2	K_A.W02
TK04	Caries in X-ray images	2	K_E.U05
TK05	Tooth anomalies - diagnosis with cone tomography	2	K_B.W09 K_A.W02
Seminars (15h)			
TK01	X-ray diagnostics of periapical periodontal diseases. Differential diagnosis of chronic inflammation of periapical tissues.	2	K_E.U05 K_A.U03
TK02	Endodontic treatment and its complications in x-ray images, prognosis in complications and possibilities of their radiological imaging.	2	K_A.U03 K_E.U05
TK03	X-ray diagnostics in pediatric dentistry. Anatomy of deciduous teeth, newly erupted permanent teeth in x-ray imaging. Physiological resorption. Mixed dentition Dental age	2	K_A.W02 K_A.U03
TK04	X-ray diagnostics in periodontology. Marginal periodontitis in x-ray imaging. X-ray techniques used in marginal periodontitis	2	K_A.U03 K_E.U05
TK05	Selected issues in thoracic diagnostics including radiological anatomy. Pulmonary diseases, heart defects, circulatory insufficiency, coronary artery disease - methods of examination, x-ray images in various diagnostic methods	2	K_B.W09 K_E.U05
TK06	Imaging diagnostics of abdominal cavity diseases - diagnostic effectiveness of imaging methods. Symptoms of "acute abdomen", trauma and inflammatory bowel disease.	2	K_B.W09 K_E.U05
TK07	Diagnosis of osteomyelitis and sinusitis in x-ray images	2	K_B.W09
TK08	Selected issues in image diagnostics of the urinary system	1	K_B.W09 K_E.U05
Practical classes (10h)			
TK01	CBCT tomography and CT with the "dental" option in dentistry. Comparison of techniques. Advantages and disadvantages of both techniques	2	K_B.W09 K_K05
TK02	Recall of how to perform extraoral, intraoral	2	K_B.W09

	radiographs and the most common mistakes.		K_K03
TK03	Diagnostics of craniofacial bone and sinusitis in x-ray images	2	K_B.W09 K_K05
TK04	Diagnostics of bone system diseases - fractures, inflammations, tumours	2	K_B.W09
TK05	Surgical radiology, diagnostics of the vascular system including usefulness in dentistry	2	K_B.W09 K_K05

Booklist:

Obligatory literature:

1. Różyło-Kalinowska I, Różyło TK „Współczesna radiologia stomatologiczna” wyd. Czelej
2. Różyło-Kalinowska I, Różyło TK „Tomografia wolumetryczna w praktyce stomatologicznej” wyd. Czelej
3. Langlais RP „Radiologia stomatologiczna. Interpretacja badań” wyd. Elsevier

Supplementary literature:

1. Pasler FA „Radiologia stomatologiczna” wyd. Elsevier Edra

Student's workload

Form of student's activity (in-class participation; activeness, produce a report, etc.)	Student's workload [h]	
		Tutor
Contact hours with the tutor	74	
Time spent on preparation to practical classes		
Time spent on reading recommended literature	10	
Time spent on writing report/making project		
Time spent on preparing to colloquium/ entry test	10	
Time spent on preparing to exam		
Other		
Student's workload in total	94	
ECTS credits for the course (in total)		4
Remarks		

* Selected examples of methods of assessment:

- EP – written examination
- EU – oral examination
- ET – test examination
- EPR – practical examination
- K – colloquium
- R – report
- S – practical skills assessment
- RZC – practical classes report, incl. discussion on results
- O – student's active participation and attitude assessment
- SL – lab report
- SP – case study
- PS - assessment of student's ability to work independently
- W – entry test
- PM – multimedial presentation
- other...