



Pomeranian Medical University in Szczecin

SYLLABUS of the MODULE (SUBJECT) General Information

Module title: ORTHODONTICS	
Module type	Obligatory
Faculty PMU	Faculty of Medicine and Dentistry
Major	Dentistry
Level of study	long-cycle (S2J)
Mode of study	full-time studies
Year of studies, semester	Year 4, semester (VII,VIII)
ECTS credits (incl. semester breakdown)	4
Type/s of training	Lectures (8h)/ Seminars (5h) / practical (55h)
Form of assessment*	<input checked="" type="checkbox"/> 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. Krzysztof Woźniak
Tutor responsible for the module	lek.dent. Jacek Światała
Department's/ Clinic's/ Unit's website	Department of Orthodontics al. Powst. Wlkp. 72, 70-111 Szczecin tel.: 91 4661702 e-mail: kizortod@pum.edu.pl https://www.pum.edu.pl/wydzialy/wydzial-medycyny-i-stomatologii/zaklad-ortodoncji
Language	English

* replace into where applicable

Detailed information

Module objectives		The aim of the course is: to integrate the knowledge of the ontogenetic and phylogenetic development of the facial part of the skull in connection with the issues of orthodontics, learning to assess the proper development of the masticatory organ, the ability to assess the condition of the masticatory organ in terms of the occurrence of malocclusion, knowledge of the etiology of malocclusion, the ability to perform selected procedures in the field of prophylaxis and early orthodontic treatment, knowledge of malocclusion treatment techniques with the use of modern methods with the use of modern tools and equipment.
Prerequisite /essential requirements	Knowledge	<i>Knowledge, skills and competences at the level of completion of the third year of studies in the field of medicine and dentistry.</i>
	Skills	
	Competences	

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	knows and understands occlusion norms and deviations in different phases of ontogenesis	F.W1.	Verification of knowledge during clinical classes with the patient and phantom models.
W02	knows and understands the principles of preventive and therapeutic management in the masticatory system diseases at various stages of development	F.W2.	Verification of knowledge during clinical classes with the patient and phantom models.
W03	knows and understands principles of construction and operation of removable and fixed orthodontic appliances	F.W17.	Verification of knowledge during clinical classes with the patient and phantom models.
U01	is able to interview patient or his/her family	F.U1.	Assessment in clinical classes with patients (oral seminar).
U02	is able to carry out dental examination of patient	F.U2.	Assessment in clinical classes with patients (oral seminar).
U03	is able to provide patient with explanation about nature of	F.U3.	Assessment in clinical classes

	ailment, establish treatment confirmed by informed consent of the patient as well as establish prognosis		with patients (oral seminar).
U04	is able to provide patient or his/her family with the information about unfavorable prognosis	F.U4.	Assessment in clinical classes with patients (oral seminar).
U05	is able to interpret results of auxiliary diagnostics and consultations	F.U6.	Assessment in clinical classes with patients (oral seminar).
U06	is able to determine indications and contraindications to a specified dental procedure	F.U7.	Assessment in clinical classes with patients (oral seminar).
U07	is able to manage general and local complications during and after dental procedures	F.U9.	Assessment in clinical classes with patients (oral seminar).
U08	is able to keep current patient records, refer patient to general and specialist dental and medical examination or treatment	F.U11.	Assessment in clinical classes with patients (oral seminar).
U09	is able to formulate research problems in dentistry	F.U12.	Assessment in clinical classes with patients (oral seminar).
U10	is able to present selected medical problems in oral or written form relevantly to recipient standards	F.U13.	Assessment in clinical classes with patients (oral seminar).
U11	is able to establish treatment for stomatognathic system tissues diseases	F.U15.	Assessment in clinical classes with patients (oral seminar).
U12	is able to diagnose, differentiate and classify malocclusion	F.U18.	Verification of knowledge during clinical classes with the patient and phantom models.
U13	can help in the orthodontic appliance damage	F.U19.	Verification of knowledge during clinical classes with the patient and phantom models.
U14	is able to execute simple orthodontic appliances	F.U20.	Verification of knowledge during clinical classes with the patient and phantom models.
U15	is able to carry out treatment to prevent malocclusion during primary dentition and early dentition replacement phase	F.U21.	Verification of knowledge during clinical classes with the patient

			and phantom models.
K01	is ready to establish and maintain deep and respectful contact with the patient as well as to show understanding for ideological and cultural differences	K.1.	Verification of habits and assessment during clinical classes with patients.
K02	is ready to be guided by the patient wellbeing	K.2.	Verification of habits and assessment during clinical classes with patients.
K03	is ready to notice and recognize own limitations, make self-assessment of educational deficits and needs	K.5.	Verification of habits and assessment during clinical classes with patients.
K04	is ready to propagate health-promoting behavior	K.6.	Verification of habits and assessment during clinical classes with patients.
K05	is ready to implement the principles of professional fellowship and cooperation in a team of specialists, including representatives of other medical professions, also in a multicultural and multinational environment	K.9.	Verification of habits and assessment during clinical classes with patients.

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...
W01	F.W1	X	X		X			
W02	F.W2	X	X		X			
W03	F.W17	X	X		X			
U01	F.U1				X			
U02	F.U2				X			
U03	F.U3				X			
U04	F.U4				X			
U05	F.U6		X		X			
U06	F.U7		X		X			
U07	F.U9		X		X			
U08	F.U11				X			
U09	F.U12		X		X			
U10	F.U13		X		X			
U11	F.U15		X		X			
U12	F.U18		X		X			
U13	F.U19				X			
U14	F.U20				X			

U15	F.U21				X			
K01	K.1.		X		X			
K02	K.2.		X		X			
K03	K.5.		X		X			
K04	K.6.		X		X			
K05	K.9.		X		X			

Table presenting TEACHING PROGRAMME			
No. of a teaching programme	Teaching programme	No. of hours	References to learning outcomes
Winter and Summer semester			
Lectures			
TK01	<p>Prophylaxis of malocclusion. Preventive devices - principle of operation, types, construction. Movable mechanical appliances - principle of operation, construction (retention elements, elements that are a source of force, additional elements), execution. Types of orthodontic screws. Removable, functional, inflexible appliances - principle of operation, construction bite, structure, application. Flexible movable functional appliances - principle of operation, construction bite, structure, application. Double plates for mandible protrusion. Fixed functional appliances.</p> <p>Biomechanics and physiology of tooth movement in orthodontic treatment. Fixed, thick-arc devices - principle of operation, types, structure, application. Devices for opening the palatal suture. Fixed thin-arc appliances - principle of operation, structure, application. Materials used (feet, orthodontic arches). 1-, 2-, and 3-row folds. Phases of treatment with a fixed arch apparatus. Retention in orthodontics. Retention devices. Selection of devices in various clinical situations. Other appliances: headgear-extraoral extractor, Delaire mask. Microimplants.</p> <p>Interdisciplinary cooperation. Cooperation of an orthodontist with a maxillofacial surgeon, dental surgeon, prosthetist, periodontist, ENT specialist and speech therapist. Distractive osteogenesis.</p>	8	W01, W02, W03
Seminars			
TK01	<p>Planes, reference points, biometric field, facial features, Schwarz profile subtypes, face height and width measurements, extraoral examination. Various profile diagrams for determining: facial features in the biometric field, profile types according to Schwarz, Ricketts aesthetic line, face width and height, cross measurements using anthropometric calipers. Photography in orthodontics, application, projection, use of Schwarz mirrors. Model analysis (determination of Angle and canine classes on models, overbite and overjet measurements, disturbances in relation to spatial planes), measurement tools. Measurements of orthodontic indicators on models and interpretation of results. Diagnosis of malocclusion - recognition on models, profile diagrams. Pantomograms - analysis. Teeth eruption tables according to Noll. Dental age (Matiega and Lukasowa, Demirjana), determination of age on models and X-rays. Bone age (according to Sikorska, Björk, method of bone age determination on the basis of CVM cervical vertebrae), determination of bone age using the above methods on X-rays. Cephalometry according to Segner and Hasund. Points and reference lines. Angles and Segments. Interpretation of telereöntgenograms according to Segner and Hasund's method. Application (selection) of removable appliances in selected clinical situations.</p>	5	W01, W02, W03, U05, U06, U07, U09, U10, U11, U12, K01, K02, K03, K04, K05
Practical classes			
TK01	Practical application of the acquired knowledge	55	W01, W02, W03,

	theory during clinical exercises in patients.		U01, U02, U03, U04, U05, U06, U07, U08, U09, U10, U11, U12, U13, U14, U15, K01, K02, K03, K04, K05
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Booklist
Obligatory literature:
1. M.T. Cobourne, A.T. DiBiase: Handbook of Orthodontics. Elsevier 2015
2. Moyers, Robert E. Tytuł Handbook of orthodontics for the student and general practitioner. 3 ed. Chicago; London: Yearbook Medical Publ., 1973
Supplementary literature:
1. Jeffrey P. Okeson: Managment of Temporomandibular Disorders and Occlusion, June 2007, ISBN: 0323046142
2. Mitchell Laura: An introduction of ortodontics. 2007

Standards of procedures required to complete the year:		
1.	Clinical examination of the patient. Analysis of facial features.	5 procedures
2.	Taking an impression.	6 procedures
3.	Preparation and development of a diagnostic model.	2 procedures
4.	Analysis of diagnostic models.	6 procedures
5.	Analysis of the pantomographic image.	6 procedures
6.	Cephalometric analysis of the lateral distance photo of the head.	4 procedures
7.	Assessment of dental age on the basis of X-rays and diagnostic models.	4 procedures
8.	Assessment of bone age on the basis of X-rays.	4 procedures
9.	Preparation of an orthodontic preventive and therapeutic plan.	4 procedures
10.	Conducting treatment to prevent malocclusion in the period of primary dentition and early replacement of the dentition.	4 procedures
11.	Treatment with a simple orthodontic appliance.	3 procedures
12.	Provision of first aid in the event of damage to the orthodontic appliance.	2 procedures

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	68
Time spent on preparation to seminars/ practical classess	10
Time spent on reading recommended literature	10
Time spent on writing report/making project	
Time spent on preparing to colloquium/ entry test	
Time spent on preparing to exam	40
Other	
Student's workload in total	88

ECTS credits for the subject (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...