Pomorski Uniwersytet Medyczny w Szczecinie

CLASS SYLLABUS
General Information

Name of the course: ANATOMY AND PHYSIOLOGY OF THE MASTICATION SYSTEM, 2025 - 2026	
Type of Classes	Obligatory
Faculty of PUM	Faculty of Dentistry
Field of study	Dentistry
Specialty	-
Level of study	Master Degree
Form of studies	Full-time / part-time
Year of studies/semester of studies	I/2
Number of ECTS credits assigned	5
Course formats (number of hours)	Lectures - seminars
Methods of verifying and assessing learning outcomes	☐ passing grade: ☐ descriptive ☐ test ☐ practical ☐ oral ☒ pass without grade ☒ egzamin końcowy: ☒ descriptive ☒ test ☐ practical ☐ oral
Head of Departament	Dr hab. n. med. Danuta Lietz – Kijak, prof. PUM
Teaching assistant or person responsible for the subject	lek. dent. Lidia Szczucka lidia.szczucka@pum.edu.pl dr n. med. Helena Gronwald; helena.gronwald@pum.edu.pl; 91 466 16 73
Name and contact details of the unit	Department of Propedeutics, Physical Diagnostics and Dental Physiotherapy, al. Powstańców Wielkopolskich 72; 70 – 111 Szczecin; zpropst@pum.edu.pl; 914661673
Unit website	
https://www.pum.edu.pl/studia_iii_stopnia/informacje_z_jednostek/wmis/zaklad_propedeutyki_fizykodiagnostyki_i_fizjoterapii_stomatologicznej/	
Language of classes	Polish /English

DETAILED INFORMATION

Objectives of the classes		The learning objectives of this course are: 1. Gaining knowledge about the structure of cells, tissues, organs, and systems, with particular emphasis on the stomatognathic system; 2. Gaining the ability to recognize and label primary and permanent teeth.
Prerequisites for	Knowledge	*Knowledge of normal anatomy in topographic and functional terms, together with the histological structure of teeth and periodontium*
	Skills	*Manual skills necessary to make drawings and models of teeth*
	Social competences	*Self-directed learning habits* *Teamwork skills* *Communication skills*

LEARNING OUTCOMES

learning effect no.	A student who has passed the CLASSES knows/can/is able to: potrafi:	SYMBOL (reference to) learning outcomes for the field of study	Method of verifying learning outcomes*
W01	knows and understands the structures of the human body: cells, tissues, organs and systems, with particular emphasis on the stomatognathic system	A.W1.	EP, ET, EPR, K, S
W02	knows and understands the development of organs and the entire body, with particular emphasis on the masticatory system	A.W2.	EP, ET, EPR, K, S
W03	knows and understands the role of the nervous system in the functioning of individual organs	A.W4.	EP, ET, EPR, K, S
W04	knows and understands the functional significance of individual organs and the systems they create	A.W5.	EP, ET, EPR, K, S
W05	knows and understands the anatomy of natural teeth	A.W7.	EP, ET, EPR, K, S
U01	can recognize the anatomical features of natural teeth	A.U3.	EP, ET, EPR, K, S
U02	can reproduce anatomical occlusal conditions and analyze occlusion	C.U15.	EP, ET, EPR, K, S
K01	is ready to notice and recognize his/her own limitations, make a self-assessment of deficits and educational needs	K.5.	EP, ET, EPR, K, S
K02	is ready to promote health-promoting behaviors	K.6.	EP, ET, EPR, K, S
K03	is ready to use objective sources of information	K.7.	EP, ET, EPR, K, S
K04	is ready to draw conclusions based on his/her own measurements or observations	K.8.	EP, ET, EPR, K, S

Table of LEARNING outcomes in relation to the form of classes									
learning effect no	Learning outcomes	Form of learning							
		Lecture	Seminar	Exercises	Clinical exercises	Simulations	E-learning	Other forms
W01	A.W1.	X	X	X				
W02	A.W2.	X	X	X				
W03	A.W4.	X	X	X				
W04	A.W5.	X	X	X				
W05	A.W7.			X				
U01	A.U3.			X				
U02	C.U15.			X				
K01	K.5.	X	X	X				
K02	K.6.	X	X	X				
K03	K.7.	X	X	X				
K04	K.8.	X	X	X				

PROGRAM CONTENT TABLE			
program content no.	Program content	Number of hours	Reference to learning outcomes for CLASSES
Summer semester			
	Lectures		
TK01	An introduction to the anatomy and physiology of the masticatory system. Modern aspects of oral prophylaxis and hygiene.	1	A.W1.; A.W2.; A.W4.; A.W5.; A.W7. K.6.
TK02	Saliva – its composition and functions. Biochemical processes in the oral cavity.	1	A.W1.; A.W2.; A.W4.; F.W3.; A.W.5; F.W2..
TK03	Temporomandibular joint. Anatomy, physiology, biomechanics.	1	A.W1.; A.W2.; A.W4.; A.W5.; F.W16.
TK04	Fundamentals of gnathophysiology. Chewing under physiological norms, articulation states of the mandible. Physiological norms and types of occlusion.	1	A.W1.; A.W2.; A.W4.; A.W5.;C.U15
TK05	Clinical procedure for testing the functional capacity of the URNI. Determining and recording the position of the mandible in centric occlusion. Instrumentation.	1	A.W1.; A.W2.; A.W4.; A.W5.; C.U15
	Seminars		
TK01	Periodontium, oral mucosa, role and tasks. Physiology and diagnostic possibilities using physical examination.	2	A.W1.; A.W2. A.W4.;A.W.5; .; F.W16;.
TK02	Differentiating between permanent and primary dentition. Recognizing and labeling mixed dentition.	2	A.W1.; A.W2. A.W4.; A.W.7;
TK03	The process of breathing. Snoring. The process of sucking, chewing, and swallowing. The articulation of speech.	2	A.W1.; A.W2.; A.W4.; A.W5.; F.W3.

TK04	The neuromuscular system of the masticatory system. The mechanism of muscle contraction and its types. Neuromuscular transmission. The temporomandibular joint.	2	A.W1.; A.W2.; A.W4.; A.W5.; F.W16.
TK05	Modeling of permanent teeth, premolars, and molars, upper and lower, using the Essential Lines method. Practical assessment.	2	A.W1.; A.W2.; A.W5.; K.5.; K.7.; K.8.;
TK06	Occlusion – registration methods: occlusal paper, interocclusal wax, occlusal registration material. Occlusal contact patterns of upper and lower teeth.	2	A.W1.; A.W2.; A.W4.; A.W5.; F.W16.; C.U15 ;
TK07	Mixed dentition. Labeling and differentiating permanent and primary teeth. Recognition and labeling on plaster models.	1	A.W1.; A.W2. A.W5.;A.W.7.; A.U.3;.
Exercises:			
TK01	Drawing in five views. Permanent teeth, incisors. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK02	Modeling permanent teeth: incisors using the droplet method on plaster models. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK03	Drawing in five views. Permanent teeth, canines. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK04	Modeling permanent teeth: canines using the droplet method on plaster models. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK05	Five-view drawing. Permanent premolars. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK06	Modeling of permanent teeth: premolars using the droplet method on plaster models. Practical examination.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK07	Modeling permanent upper molars using the droplet method on plaster models. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK08	Drawing in five views. Permanent molars. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK09	Modeling of permanent lower molars using the droplet method on plaster models. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK10	Modeling of permanent teeth, premolars, and molars, upper and lower, using the Essential Lines method. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK11	Differentiation and labeling of mixed dentition in dental arches. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
TK12	Oral prevention and hygiene. Dental plaque, detection methods, and hygiene indicators (OHI, API, PI).	3	A.W1.; A.W2.; A.W5.; A.W7. ; K.5.;K6, K.7.; K.8.
TK13	Recognizing and labeling teeth on plaster models. Practical assessment.	3	A.W1.; A.W2.; A.W5.; A.W7. ; A.U3.; C.U15.K.5.;K6, K.7.; K.8.
Simulation			

E-learning			
TK01	Permanent teeth - anatomy, physiology, and functions of individual groups. Labeling permanent teeth.	1	A.W1.; A.W2.; A.W5.; A.W7. A.U.3;
TK02	Primary teeth - anatomy, physiology, and functions of individual groups. Identification and differentiation of permanent and primary teeth. Mixed dentition.	1	A.W1.; A.W2.; A.W.7.; A.U.3.
TK03	Differentiation of mixed dentition. Periods of tooth eruption.	1	A.W1.; A.W2.; A.W.7.; A.U3.

Recommended literature:
Basic literature
1. Stanley Nelson: Wheeler's Dental Anatomy, Physiology and Occlusion. Elsevier.
2. Netter Atlas of Human Anatomy: Head and Neck
Additional literature
1. Mopile appliaction : DENTAL LITE oraz REAL TOOTH
2. Richard W Brand ; Donald E Isselhard; Elaine Satin: Anatomy of orofacial structures. Elsevier. 2014

Student workload	
Student workload (class participation, activity, report preparation, etc.)	Student workload [h] In the teacher's opinion
Contact hours with the teacher	60
Preparation for the exercises/seminar	20
Reading the indicated literature	10
Writing a laboratory/exercise report/preparing a project/paper, etc.	10
Preparation for a test/quiz	10
Preparation for the exam	25
Other …..	-
Total student workload	135
ECTS points	**5**
Comments	