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**SYLLABUS**

**General information**

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| **Name of the subject: ANATOMY AND PHYSIOLOGY OF STOMATOGNATHIC SYSTEM** | |
| Type of subject | Mandatory |
| Faculty of PUM | Faculty of Medicine and Dentistry |
| Field of study | dentistry |
| Speciality | - |
| Level of study | master's degree |
| Form of study | full-time |
| Year of study /semester | 1/II |
| Number of allocated ECTS credits | 5 |
| Forms of teaching  (number of hours) | Lectures - 8 g./seminars - 13 g. / exercises - 39 g. |
| Ways of verifying and learning outcomes [[1]](#footnote-1) assessing | credit:  descriptive  test  practical  oral  pass/fail  final exam:  descriptive  test  practical  oral |
| Head of the Department | Title/Degree: Danuta Lietz - Kijak, MD, PhD, Professor at PUM |
| Subject supervisor | Lek. Dent. Lidia Kozłowska |
| Name and contact details of the Department | Department of Propedeutics, Physical Diagnosis and Dental Physiotherapy PUM |
| Department website | [https://www.pum.edu.pl/uniwersytet/dydaktyka](https://www.pum.edu.pl/uniwersytet/dydaktyka_i_) \_and\_treatment/clinics\_cathedrals\_and\_workshops  /wmis/academy\_of\_physical\_diagnostics \_and\_physiotherapy\_of\_dentistry/. |
| Language of subject | English |

**Detailed information**

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| Session objectives | The aim of teaching the subject is:  1.Gain knowledge of the structure of: cells, tissues, organs and systems with particular emphasis on the stomatognathic system;  2.Obtain the ability to identify and label deciduous and permanent teeth | |
| Prerequisites for the subject | Knowledge | Knowledge of topographical and functional normal anatomy including histological structure of teeth and periodontium |
| Skills | Manual skills necessary for drawing and modeling teeth |
| Social competence | The habit of self-education  Ability to work in a group  Communication skills |

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| **LEARNING OUTCOMES** | | | |
| **n/a learning outcome** | **A student who has completed the course**  **knows/can:** | **SYMBOL** | **Means of learning outcomes verification\*** |
| 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 whole organism, with particular emphasis on the masticatory organ | A.W2. | EP; ET; EPR; K; R; S |
| W03 | knows and understands the role of the nervous system in the functioning of the various organs | A.W4. | EP; ET; EPR; K; R; S |
| W04 | knows and understands the functional significance of the different organs and the systems they form | A.W5. | EP; ET; EPR; K; R; S |
| W05 | knows and understands occlusion norms at different stages of individual development and deviations from those norms | F.W1. | EP; ET; EPR; K; S |
| W06 | knows and understands the principles of preventive and curative management of diseases of the masticatory organ at different stages of development; | F.W2. | EP; ET; EPR; K; S |
| W07 | knows and understands the viral, bacterial and fungal flora of the oral cavity and its importance | F.W3. | EP; ET; EPR; K; S |
| W08 | knows and understands the causes of complications of diseases of the stomatognathic system and the principles of managing such complications | F.W12. | EP; ET; EPR; K; S |
| U01 | is able to map the anatomical occlusion conditions and analyse the occlusion | C.U12. | EP; ET; EPR; K; S |
| U02 | can formulate research problems in dentistry | F.U12. | EP; ET; EPR; K; S |
| K01 | is ready to recognise and acknowledge his/her own limitations, make a self-assessment of his/her deficits and learning needs | K.5. | EP; ET; EPR; K; S |
| K02 | is willing to promote health-promoting behaviour | K.6. | EP; ET; EPR; K; S |
| K03 | is willing to use objective sources of information | K.7. | EP; ET; EPR; K; S |
| K04 | is willing to draw conclusions from his own measurements or observations | K.8. | EP; ET; EPR; K; SR |

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| **Table of learning outcomes in relation to the form of classes** | | | | | |
| **n/a learning outcome** | **Learning outcomes** | **Form of classes** | | | |
| **Lecture** | **Seminar** | **Exercises** |  |
| W01 | knows and understands the structures of the human body: cells, tissues, organs and systems, with particular emphasis on the stomatognathic system | X | X | X |
| W02 | knows and understands the development of organs and the whole organism, with particular emphasis on the masticatory organ | X |  |  |
| W03 | knows and understands the role of the nervous system in the functioning of the various organs |  | X | X |
| W04 | knows and understands the functional significance of the different organs and the systems they form |  | X | X |
| W05 | knows and understands occlusion norms at different stages of individual development and deviations from those norms |  | X | X |
| W06 | knows and understands the principles of preventive and curative management of diseases of the masticatory organ at different stages of development; |  | X | X |
| W07 | knows and understands the viral, bacterial and fungal flora of the oral cavity and its importance | X | X | X |
| W08 | knows and understands the causes and management of complications of diseases of the stomatognathic system | X | X | X |
| U01 | is able to map the anatomical occlusion conditions and analyse the occlusion |  | X | X |
| U02 | can formulate research problems in dentistry |  | X | X |
| K01 | is ready to recognise and acknowledge his/her own limitations, make a self-assessment of deficits and learning needs |  | X | X |
| K02 | is willing to promote health-promoting behaviour |  | X | X |
| K03 | is willing to use objective sources of information |  | X | X |
| K04 | is willing to draw conclusions from his own measurements or observations |  | X | X |

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| **TABLE OF CONTENTS OF THE PROGRAMME** | | | |
| **n/a curriculum content** | **Programme content** | **Number of hours** | **Reference to the learning outcomes for the ACTIVITIES** |
| **Summer semester** | | | |
| **Lectures** | | | |
| TK01 | Introduction to the anatomy and physiology of the masticatory organ. Modern aspects of prevention and oral hygiene. | 1 | A.W1.; A.W2.; A.W4.; A.W5. |
| TK02 | Saliva - its composition and functions. Biochemical processes in the oral cavity. | 1 | A.W1.; A.W2.; A.W4.; F.W3. |
| TK03 | Temporomandibular joint. Anatomy, physiology, biomechanics. | 1 | A.W4.; A.W5.; F.W2.; F.W12. |
| TK04 | Fundamentals of gnathophysiology. Chewing under physiological norms, articulatory states of the mandible. Physiological norms and types of occlusion. | 1 | A.W4.; A.W5.; F.W2.; F.W12.; C.U12. |
| TK05 | Clinical procedure for the functional performance testing of the stomatognathic system. Determination and recording of the position of the mandible in the central occlusion position. Instrumentation. | 1 | A.W4.; A.W5.; F.W2.; F.W12.; C.U12. |
| **Seminars** | | | |
| TK01 | Periodontium, oral mucosa, role and tasks. Physiology and diagnostic possibilities using physical examination. Prevention and oral hygiene. | 2 | A.W1.; A.W2.  A.W4.; F.W3 |
| TK02 | Saliva - its composition and functions. Biochemical processes in the oral cavity, saliva pH and buffer indicators. Dental plaque, detection methods and hygiene indicators (OHI, API, PI). | 2 | A.W1.; A.W2.  A.W4.; F.W3 |
| TK03 | The process of breathing. Snoring. The process of sucking, chewing and swallowing. Articulation of speech. | 2 | A.W1.; A.W2.  A.W4.; A.W5.; F.W2.; F.W12.; |
| TK04 | The neuromuscular system of the masticatory organ. Mechanism of muscular contraction and its types. Neuromuscular transmission. Temporomandibular joint. | 2 | A.W4.; A.W5.; F.W2.; F.W12.; |
| TK05 | Occlusion - methods of registration: bite paper, wax interbite, mass for registering occlusion. Pattern of occlusal contacts of upper and lower teeth. | 2 | A.W4.; A.W5.; F.W2.; F.W12.; C.U12. |
| TK06 | Differentiation of permanent and deciduous dentition. Recognition and marking of mixed dentition. | 2 | A.W1.; A.W2.  A.W5.; F.W1.; C.U12.; F.U12. |
| TK07 | Mixed dentition. Determination and differentiation of permanent and deciduous teeth. | 1 | A.W1.; A.W2.  A.W5.; F.W1.  C.U12.; F.U12. |
| **Exercises:** | | | |
| TK01 | Drawing in five projections. Permanent teeth - incisors. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK02 | Modelling of permanent teeth: incisors using the drip method on plaster models. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK03 | Drawing in five projections. Permanent teeth - canines. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK04 | Modelling of permanent teeth: canines using the drip method on plaster models. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK05 | Drawing in five projections - permanent premolar teeth. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK06 | Modelling of permanent premolar teeth using the drip method on plaster models. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK07 | Drawing in five projections - permanent molar teeth. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK08 | Modelling of permanent molars using the drip method on plaster models. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK09 | Modelling of permanent upper premolars using the Essential Lines method. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK10 | Modelling of permanent upper molars using the Essential Lines method. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK11 | Modelling of permanent lower premolars using the Essential Lines method. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK12 | Modelling of permanent lower molars using the Essential Lines method. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| TK13 | Identification and marking of teeth on plaster models. | 3 | A.W1.; A.W2.; A.W5.; F.W1.; C.U12.; F.U12.  K.5.; K.6.; K.7.; K.8. |
| **E-learning** | | | |
| TK01 | Permanent teeth- anatomy, physiology, functions of the different groups. Identification of permanent teeth. | **1** | A.W1.; A.W2.  A.W5.; F.W1.; C.U12.; F.U12. |
| TK02 | Deciduous teeth - anatomy, physiology, functions of the different groups. Identification and differentiation of permanent and deciduous teeth. Differentiation of mixed dentition. Teeth eruption periods. | **1** | A.W1.; A.W2.  A.W5.; F.W1.; C.U12.; F.U12. |
| TK03 | Introduction to Essential Lines method. | **1** | A.W1.; A.W2.  A.W5.; F.W1.; C.U12.; F.U12. |

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| **Recommended literature:** |
| Reference literature |
| 1. Krocin A, Dargiewicz D., Grodner M.: Modeling in dental prosthetics / Warsaw: Wydawnictwo Lekarskie PZWL, cop. 2010. |
| 1. Kulas J.: Modelling of tooth crowns. Wydawnictwo Projekt. Warsaw 2004. |
| 1. Śmiech Słomkowska G.: Wheeler Dental structure, physiology and occlusion. Elsevier Urban&Partner Wrocław 2014. |
| 1. Olczak-Kowalczyk D., Szczepańska J., Kaczmarek U.: Contemporary developmental age dentistry. Med Tour Press 2017. |
| 1. Lipski M., Kaczmarek U., Jańczuk Z.: Stomatologia zachowawcza z endodoncją zarys kliniczny. PZWL.2014 (IBUK LIBA PUM) |
| 1. Mobile application: DENTAL LITE and REAL TOOTH |
| Complementary literature |
| 1. Łasiński W. (1915-2010): Anatomy of the head for dentists. Wyd. 6 popr. i uzup. Warsaw : Państwowy Zakład Wydawnictw Lekarskich, 1993. (pdf) |
| 1. Conservative Dentistry. Contemporary methods of carious cavity preparation and filling. ANATOMY OF PERMANENT TEETH. Textbook for phantom exercises for students of dentistry edited by Prof. zw. dr hab. Danuta Piątowska. BESTOM Dentonet. 2010. E-book. |
| 1. Tables from Netter's Atlas of Antomy (pdf version) |

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| **Student workload** | |
| Form of student workload  (class participation, activity, report preparation, etc.). | Student workload [h] | |
| In the teacher's assessment (opinion) | |
| Contact hours with the teacher | 60 | |
| Preparation for exercise/seminar | 20 | |
| Reading of designated literature | 10 | |
| Writing a lab/exercise report/preparing a project/reference etc. | 10 | |
| Preparation for a colloquium/quiz | 10 | |
| Preparation for the examination | 25 | |
| Total student workload | **135** | |
| ECTS credits | **5** |
| **Comments** | |
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\*Example ways to verify learning outcomes:

EP - written exam

EU - oral examination

ET - test examination

EPR - practical exam

K - colloquium

R – oral presentation

S - test of practical skills

RZĆ - exercise report with discussion of results

O - assessment of student activity and attitude

SL - laboratory report

SP - case study

PS - assessment of ability to work independently

W - entrance exam, test before the start of class

PM - multimedia presentation

and others

1. tick as appropriate, **changing**  t**o**  [↑](#footnote-ref-1)