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**SYLLABUS of the MODULE (SUBJECT)**

**General Information**

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| **Module title: Norms of Occlusion in Development Age** | |
| 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 2, semester III |
| ECTS credits (incl. semester breakdown) | 3 |
| Type/s of training | lectures – 7 / e-learning lectures - 3 / seminars – 20 / practical – 15 |
| Form of assessment[[1]](#footnote-1) | graded assessment:  descriptive  test  practical  oral  non-graded assessment  final examination  descriptive  test  practical  oral |
| Head of the Department/ Clinic, Unit | dr hab. n.med. Liliana Szyszka-Sommerfeld |
| Tutor responsible for the module | lek. dent. Jacek Świtała |
| Department’s/ Clinic’s/ Unit’s website | Samodzielna Pracownia Propedeutyki Ortodoncji i Wad Wrodzonych Twarzy PUM  al. Powst. Wlkp. 72, 70-111 Szczecin  tel.: 91 4661702  e-mail: [kizortod@pum.edu.pl](mailto:kizortod@pum.edu.pl)  https://www.pum.edu.pl/wydzialy/wydzial-medycyny-i-stomatologii/zaklad-ortodoncji |
| Language | English |

**Detailed information**

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| **Module objectives** | | The aim of the course is to prepare for modern dental treatment by integrating the knowledge of the anatomy and physiology of the stomatognathic system in developmental age with regard to systemic relations. |
| Prerequisite /essential  requirements | Knowledge | *Knowledge, skills and competences at the level of completion of the first year of studies in the field of medicine and dentistry.* |
| Skills |
| Competences |

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| **Description of the learning out**c**omes 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 the basic clinical procedures of orthodontic prevention | C.W33. | S, O | |
| W02 | knows and understands occlusion norms and deviations in different phases of ontogenesis | F.W1. | S, O | |
| W03 | knows and understands causes of complications of stomatognathic system diseases and the rules of their management | F.W12. | S, O | |
| U01 | is able to reproduce anatomic occlusion conditions and analyze occlusion | C.U12. | S, O | |
| U02 | is able to plan the basic phases of preventive care in patients with orthodontic needs | C.U16. | S, O | |
| U03 | is able to diagnose, differentiate and classify malocclusion | F.U18. | S, O | |
| K01 | is ready to notice and recognize own limitations, make self-assessment of educational deficits and needs | K.5. | S, O | |
| K02 | is ready to draw conclusions from own measurements or observations | K.8. | S, O | |

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| **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 | C.W33. | X | X | X |  |  | X |  |
| W02 | F.W1. | X | X | X |  |  | X |  |
| W03 | F.W12. | X | X | X |  |  | X |  |
| U01 | C.U12. |  | X | X |  |  |  |  |
| U02 | C.U16. |  | X | X |  |  |  |  |
| U03 | F.U18. | X | X | X |  |  | X |  |
| K01 | K.5. |  |  | X |  |  |  |  |
| K02 | K.8. |  |  | X |  |  |  |  |

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| **Table presenting TEACHING PROGRAMME** | | | |
| **No. of a teaching programme** | **Teaching programme** | **No. of hours** | **References to learning outcomes** |
| **Winter semester** | | | |
| **Lectures** | | | |
| TK01 | Prenatal development. Bite development disorders in the fetal period. Clefts. The first period of teeth replacement. The second period of teeth replacement. The influence of the occlusion on the TMJ; reflexes and adaptive mechanisms of the stomatognathic system. Acquired malocclusion. Functional and morphological disorders of the masticatory organ. Dysfunctions and parafunctions. Principles of orthodontic prophylaxis in various stages of a child's development. | 7 | W01, W02, W03, U03 |
| **Seminars** | | | |
| TK01 | Development of the masticatory system. Periods of individual development. Muscles of the stomatognathic system and their function. Temporomandibular joint: structure, function, development. Central, lateral, incisal occlusion; resting position, lateral movements, resting gap, chewing. Functions: sucking, swallowing (visceral, mature), chewing, breathing, participating in speech. The norms of the development of the masticatory apparatus in the fetal period. Chewing organ in infancy until the eruption of milk teeth - stages of tooth development. Bite in the deciduous dentition, Baum classes - differences between the deciduous and permanent dentition. Eruption - periods of the eruption of deciduous and permanent teeth. The first period of teeth replacement. The second period of teeth replacement. Shape, size, number, and structure of permanent teeth. Functional and morphological disorders of the masticatory organ. Dysfunctions and parafunctions. The influence of the bite on the TMJ; reflexes and adaptive mechanisms of the stomatognathic system. Bite development disorders in the fetal period. Clefts. Acquired malocclusion. Principles of orthodontic prophylaxis in various stages of a child's development. | 20 | W01, W02, W03, U01, U02, U03 |
| **Practical** **classes** | | | |
| TK01 | Practical application of the acquired knowledge  theoretical during the exercises. | 15 | W01, W02, W03, U01, U02, U03, K01, K02 |
| **Simulation** | | | |
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| **E-learning** | | | |
| TK01 | Stages of bite development in deciduous and permanent dentition. Malocclusion - classification, etiology, diagnosis, differentiation. Prenatal development. Bite development disorders in the fetal period. Clefts. Functional and morphological disorders of the masticatory organ. Principles of orthodontic prophylaxis in various stages of a child's development. | 3 | W01, W02, W03, U03 |

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| **Booklist** |
| Obligatory literature: |
| 1. Jeffrey P. Okeson: Managment of Temporomandibular Disorders and Occlusion, June 2007, ISBN: 0323046142 |
| 2. Mitchell Laura: An introduction of ortodontics. 2007 |
| Supplementary literature: |
| 1. [Moyers, Robert E.](http://bg.pam.szczecin.pl:80/ALEPH/SXXDQGEU334FM1LIIYR9P5REQ8LMLF4XR8MUA1N2FBXC6X7GB6-01997/file/service-0?P01=000013820&P02=0008&P03=TAG) [Handbook of orthodontics for the student and general practitioner.](http://bg.pam.szczecin.pl:80/ALEPH/SXXDQGEU334FM1LIIYR9P5REQ8LMLF4XR8MUA1N2FBXC6X7GB6-01998/file/service-0?P01=000013820&P02=0009&P03=TAG) 3 ed. Chicago; London : Year Book Medical Publ., 1973. |
| 2. Jeryl D. English, Timo Peltomäki, Kate Pham-Litschel: [Mosby's orthodontic review/](http://bg.pam.szczecin.pl:80/ALEPH/SXXDQGEU334FM1LIIYR9P5REQ8LMLF4XR8MUA1N2FBXC6X7GB6-01760/file/service-0?P01=000089240&P02=0008&P03=TAG)  [Orthodontic review](http://bg.pam.szczecin.pl:80/ALEPH/SXXDQGEU334FM1LIIYR9P5REQ8LMLF4XR8MUA1N2FBXC6X7GB6-01761/file/service-0?P01=000089240&P02=0009&P03=TAG). St. Louis: Mosby Elsevier, cop. 2009. |
| 3. Samir E. Bishara, [contributors Athanasios E. Athanasiou [et al.]: [Textbook of orthodontics .](http://bg.pam.szczecin.pl:80/ALEPH/SXXDQGEU334FM1LIIYR9P5REQ8LMLF4XR8MUA1N2FBXC6X7GB6-01860/file/service-0?P01=000068786&P02=0008&P03=TAG) Philadelphia: W. B. Saunders Co., cop. 2001. |

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| **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 | 45 |
| 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 colloqium/ entry test |  |
| Time spent on preparing to exam | 5 |
| Other ….. |  |
| Student’s workload in total | 70 |
| **ECTS credits for the subject (in total)** | 3 |
| **Remarks** | |
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\* Selected examples of methods of assessment:

EP – written examination

EU – oral examination

ET – test examination

EPR – practical examination

K – colloqium

R – report

S – practical skills assessment

RZĆ – 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…

1. replaceintowhere applicable [↑](#footnote-ref-1)