

**Microbiology of the oral cavity in pediatric patients**

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| 1. **Imprint** | |
| **Academic Year** | 2020/2021 |
| **Department** | Faculty of Medicine and Dentistry |
| **Field of study** | English Dentistry Division |
| **Main scientific discipline** *(in accord with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)* | Medical sciences |
| **Study Profile** *(general academic / practical)* | General academic |
| **Level of studies** *(1st level /2nd level/ uniform MSc)* | Uniform MSc |
| **Form of studies** | 5-years full time studies |
| **Type of module / course**  *(obligatory / non-compulsory)* | Non-compulsory |
| **Form of verification of learning outcomes** *(exam / completion)* | Completion of the course |
| **Educational Unit / Educational Units** *(and address / addresses of unit / units)* | Department of Dental Microbiology, 1a Banacha Street, 02-097 Warsaw  (+ 48 22) 599-17-77  Department of Pediatric Dentistry, 6 Binieckiego street, 02-097 Warsaw  (+ 48 22) 116-64-24 |
| **Head of Educational Unit / Heads of Educational Units** | prof. Marta Wróblewska  prof. Dorota Olczak-Kowalczyk |
| **Course coordinator** *(title, First Name, Last Name, contact)* | prof. Marta Wróblewska  Department of Dental Microbiology, 1a Banacha Street, 02-097 Warsaw  (+ 48 22) 599-17-77 |
| **Person responsible for syllabus** *(First name, Last Name and contact for the person to whom any objections concerning syllabus should be reported)* | prof. Marta Wróblewska  Department of Dental Microbiology, 1a Banacha Street, 02-097 Warsaw  (+ 48 22) 599-17-77 |
| **Teachers** | prof. Marta Wróblewska  prof. Dorota Olczak-Kowalczyk |

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| 1. **basic information** | | | | |
| **Year and semester  of studies** | Year 3, semester V and VI | | **Number of ECTS credits** | 0.75 |
| **forms of classes** | | **Number  of hours** | **ECTS credits calculation** | |
| **Contacting hours with academic teacher** | |
| Lecture (L) | |  |  | |
| Seminar (S) | | 5 | 0.5 | |
| Practical classes (PC) | | 10\* |
| Discussions (D) | |  |  | |
| e-learning (e-L) | |  |  | |
| Work placement (WP) | |  |  | |
| **Unassisted student’s work** | | | | |
| Preparation for classes and completions | | 5 | 0.25 | |

# \* 8 hours of practical classes – Department of Dental Microbiology; 2 hours of practical classes – Department of Pediatric Dentistry

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| 1. **Course objectives** | |
| O1 | Student gains knowledge on microbiology of the oral cavity in pediatric patients |
| O2 | Student gains knowledge on bacterial, fungal and viral infections of the oral cavity |
| O3 | Student gains knowledge on diagnostics of infections of the oral cavity, prudent use of antibacterial, antifungal and antiviral agents in dentistry |
| O4 | Student gains knowledge on prophylaxis of infections associated with dental practice |

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| Standards of learning – Detailed description of effects of learning *(concerns fields of study regulated by the Regulation of Minister of Science and Higher Education from 26 of July 2019; does not apply to other fields of study)* | |
| **Code and number of effect of learning in accordance with standards of learning**  *(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of*  *July 2019)* | **Effects in time** |
| III. LEARNING OUTCOMES | **1. GENERAL LEARNING OUTCOMES**   * 1. In terms of knowledge, the graduate knows and understands   issues in the field of medicine and natural sciences – in the basic scope.   * 1. In terms of skills, the graduate can plan their own educational activities and undergo trainings to update their knowledge   1.3. In terms of skills, the graduate can plan treatment in the event of dental problems  1.4. In terms of social competence, the graduate is prepared to promote health-oriented behaviour  1.5. In terms of social competence, the graduate is prepared to use objective sources of information  1.6.In terms of social competence, the graduate is prepared to draw conclusions from their own assessments  or observations |
| **Knowledge – Graduate\* knows and understands:** | |
| C.W1 | types, species and structure of viruses, bacteria, fungi and parasites, their biological characteristics and pathogenicity mechanisms |
| C.W2 | physiological bacterial flora of a person |
| C.W3 | basis for the epidemiology of viral and bacterial infections, fungal and parasitic infections and their spreading routes in the human body |
| C.W4 | species of bacteria, viruses and fungi which are the most common aetiological agents of infections and infections |
| C.W5 | basics of disinfection, sterilisation and aseptic management |
| C.W6 | external and internal pathogens |
| C.W9 | development of drug resistance |
| C.W20 | principles of the treatment of viral, bacterial, fungal and parasitic infections |
| E.W9 | principles of immunisation against infectious diseases in children and adults |
| F.W3 | viral, bacterial and fungal flora of the oral cavity and its importance |
| F.W13 | basics of antibiotic therapy and antibiotic resistance |
| **Skills– Graduate\* is able to:** | |
| C.U1 | collect properly selected type of biological material for microbiological examination depending on the location and course of infection |
| C.U2 | interpret the results of microbiological, serological and antimicrobial tests |
| C.U3 | select and carry out tests to indicate bacterial counts in body fluids |
| F.U14 | assess the risk of dental decay using bacteriological and saliva tests |

*\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.*

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| 1. **Additional effects of learning** *(non-compulsory)* | |
| **Number of effect of learning** | **Effects of learning in time** |
| **Knowledge – Graduate knows and understands:** | |
| K1 |  |
| K2 |  |
| **Skills– Graduate is able to:** | |
| S1 |  |
| S2 |  |
| **Social Competencies – Graduate is ready for:** | |
| SC1 |  |
| SC2 |  |

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| 1. **Classes** | | |
| **Form of class** | **Class contents** | **Effects of Learning** |
| Seminar 1 | Microbiology of the oral cavity of pediatric patients   * dental caries – etiology and pathogenesis * infectious diseases of the oral cavity in children < 6 years of age * infectious diseases of the oral cavity in children > 6 years of age. | C.W2, C.W4, C.W6, F.W3, C.U3, F.U14 |
| Seminar 2 | Diagnostics of infections of the oral cavity   * classical methods of microbiological diagnostics of the oral cavity diseases * rapid diagnostic tests in microbiology * diagnostics of dental caries – qualitative and quantitative tests, rapid test. | C.W1, C.W4, C.W6, F.W3, C.U1, C.U2, C.U3, F.U14 |
| Seminar 3 | Prophylaxis of infections associated with dental practice. | C.W3, C.W4, C.W5, E.W9 |
| Practical class 1 | Bacterial infections of the oral cavity. Prudent use of antibiotics in dentistry. | C.W1, C.W4, C.W6, C.W9, C.W20, F.W3, F.W13, C.U2 |
| Practical class 2 | Fungal infections of the oral cavity. Antifungal agents. | C.W1, C.W4, C.W6, C.W9, C.W20, F.W3, F.W13, C.U2 |
| Practical class 3 | Viral infections of the oral cavity. Antiviral agents. | C.W1, C.W4, C.W6, C.W9, C.W20, F.W3, F.W13, C.U2 |

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| 1. **Literature** |
| **Supplementary textbooks** |
| 1. Essential Microbiology for Dentistry. L. P. Samaranayake. Elsevier, 5th edition, 2018. 2. Medical Microbiology. P. R. Murray, K. S. Rosenthal, M. A. Pfaller. Elsevier, 9th edition, 2020. 3. Review of Medical Microbiology and Immunology. W. E. Levinson. Lange, 14th edition, 2016. 4. Human virology. J. Oxford, P. Kellam, L. Collier. Oxford University Press, 5th edition, 2016. |

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| Verifying the effect of learning | | |
| **Code of the course effect of learning** | **Ways of verifying the effect of learning** | **Completion criterion** |
| C.W1- C.W6, C.W9, C.W20, E.W9, F.W4, F.W15, C.U1- C.U3, F.U17 | Credit for the classes | Active participation in the classes |

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| 1. **Additional information** *(information essential for the course instructor that are not included in the other part of the course syllabus e.g. if the course is related to scientific research, detailed description of, information about the Science Club)* |
| Person responsible for teaching: prof. Marta Wróblewska, tel. (22) 599-17-77  Practical classes are held in the Department of Physiology and Experimental Pathophysiology, 3c Pawińskiego street.  Seminars are held in the Didactic Centre, 2a Trojdena street.  Seminars and practical classes notes are available at the website: www.epikro.pl  Students are welcome to sign in to the Microbiology Research Circle. |