**STANDARD COURSE SYLLABUS**

**for academic year 2014/2015**

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| **Description of subject matter – Instructional program** | | | | | | | | | | | |
| Name of subject: | Microbiology | | **Module code according to standards**  **from A to G** | | | | |  | | | |
| Director of unit conduction the course: | Prof. dr hab. Grażyna Gościniak | |  | | | | |  | | | |
| Faculty: | Dentistry | | | | | | | | | | |
| Course of study: | Microbiology and Microbiology of oral cavity. | | | | | | | | | | |
| Level of studies | Unitary Med | | | | | | | | | | |
| Form of studies | full-time X extramural | | | | | | | | | | |
| Year: | 2 | | | Semester: 3 | | | |  | | | |
| Type of subject | obligatory x elective | | | | | | | | | | |
| Language of instruction: | English | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Name of unit conducting course** | | Winter semester (hrs.) | | | | | Summer semester (hrs.) | | | | |
| L | | | C | S | L | | | C | S |
|  | | 5 | | | 10 | 20 | - | | | - | - |
|  | |  | | |  |  |  | | |  |  |
|  | |  | | |  |  |  | | |  |  |
| Total: 45 | |  | | |  |  |  | | |  |  |
|  | | | | | | | | | | | |
| **Educational goals** *(goals for lessons set by instructor, related to the results of education, max. 6 items)*  **C1.**   * to familiarize students with the important microorganisms responsible for the oral cavity and other human body infections that constitute significant risk in dental practice. * to familiarize students with the basic microbiological diagnostic procedures: proper collection and transport of diagnostic materials, isolation and identification of pathogens, identification and susceptibility testing, the most important mechanisms of drug resistance. * to prepare students for the correct interpretation of the results of microbiological testing * knowledge of the rational choice of antibiotic therapy, prevention and control of infections (disinfection, sterilization, antibiotics, vaccinations), with particular emphasis on dental infections. | | | | | | | | | | | |
| **Matrix of educational results for subjects in reference to methods for verifying intended educational results and manner of conducting lessons.** | | | | | | | | | | | |
| Number of educational result | Description of educational result *(in conformance with detailed educational results defined in standards)* | | Methods for verifying achievement of intended educational results \* | | | | | | Manner of lessons:  \*\* provide symbol | | |
| **W 01** | Student:  1.knows the physiological  microflora of the mouth and  defines opportunistic infections,  2. characterizes infections in the oral cavity in relation to their etiology,  3. knows diagnostic procedures for bacteriological fungal and viral infections, 4. defines the concept of alert pathogens and their resistance mechanisms,  5. knows the basic methods of sterilization and disinfection used in dental practice | | tests, presentations, oral responses | | | | | | L, C, S | | |
| **U 01**  **K 01** | 1.ability to collect and transport materials for bacteriological, mycological and viral laboratory diagnostics,  2. ability to prepare and identify pathogens under the microscope.  3. ability to interpret the results of microbiological tests,  4. problem-solving skills (treatment of bacterial and fungal infections, based on the susceptibility test),  5. proper skills of hand disinfection and knowledge of disinfectants,  Student actively participates in the classes and seminars, presents professionalism and responsibility to work well with partners and cooperate in class. | | tests, presentations, oral responses, report | | | | | | C  C, S | | |
| \*e.g.. test, presentation, oral response, essay, report, colloquium, oral examination, written examination;  \*\* L- lecture; S- seminar; C- class; EL- e-learning; | | | | | | | | | | | |
| **Student work input (balance of ECTS points)** | | | | | | | | | | | |
| Lessons on-site (hrs.) 1 h / week | | | | | | | | | | | |
| Own work (hrs.) | | | | | | | | | | | |
| Summary of student workload | | |  | | | | | | | | |
| **ECTS points for subject** | | | 5,5 | | | | | | | | |
| Remarks | | |  | | | | | | | | |
| **Content of lessons:** *(please provide the subject of individual lessons, keeping in mind the need to contribute to the intended educational results)*  1. Introduction to microbiology diagnostic procedures, microscopy handing, staining principles, morphology of microorganisms. Bacterial metabolism. Cultivation and identification methods.  2. Gram-posistive cocci -*Staphylococcus, Streptococcus, Enterococcus, Peptostreptococcus*. Laboratory diagnostics.  3. Gram-negative bacteria – fermentative rods of *Enterobacteriaceae,* nonfermentative rods and obligatory anaerobes.  4. Sterilization and disinfection.  5. Microflora of oral cavity. Endogenous infections.  6. Antibiotic Susceptibility Testing. Mechanisms of bacterial resistance to antibiotics. Laboratory detection.  7. Laboratory diagnostics of dental infections.  8. Laboratory diagnostics of dental infections, cont. Course credit. | | | | | | | | | | | |
| **Primary and secondary literature**  1. Essential Microbiology for Dentistry. Lakshman Samaranayake  2. Human Virology: A Text for Students of Medicine, Dentistry, and Microbiology. [Leslie Collier](http://www.amazon.com/exec/obidos/search-handle-url?%5Fencoding=UTF8&search-type=ss&index=books&field-author=Leslie%20Collier), [John S. Oxford](http://www.amazon.com/exec/obidos/search-handle-url?%5Fencoding=UTF8&search-type=ss&index=books&field-author=John%20S.%20Oxford)  3. Medical Microbiology. P.R.Murray, K.S.Rosenthal | | | | | | | | | | | |
| **Requirements concerning instructional aids** *(e.g. laboratory, multimedia projector, other …)*  Light microscopes, a dark field microscope (CPW), a fluorescence microscope, incubators, refrigerators, laboratory tables with sinks and gas burners, a system for the identification of microorganisms (ATB). | | | | | | | | | | | |
| **Conditions for successful completion of course:**  1. Attendance at classes. 2. Completion of the program tests. 3. Obtaining a positive assessment of the final exam. | | | | | | | | | | | |
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**Name and address of unit conducting course, contact information (tel./email):**

Department of Microbiology, Wrocław Medical University,

ul. Chałubińskiego 4, 50-368 Wrocław

Tel.: (071) 784-12-75

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**Person responsible for the course for a given year: dr Ewa Dworniczek**

**Signature of head of unit conducting the course Signature of dean**

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