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| FACULTY: | **Faculty of Mechanical and Energy Engineering** |
| FIELD OF STUDY: | **Biomedical Engineering** |
| ERASMUS COORDINATOR OF THE FACULTY: | Igor Maciejewski, DSc PhD |
| E-MAIL ADDRESS OF THE COORDINATOR: | igor.maciejewski@tu.koszalin.pl |
| COURSE TITLE: | **Clinical microbiology** |
| LECTURER’S NAME: | Ewa Czerwińska, PhD |
| E-MAIL ADDRESS OF THE LECTURER: | ewa.czerwinska@tu.koszalin.pl |
| ECTS POINTS FOR THE COURSE: | 6 |
| ACADEMIC YEAR: | 2024/2025 |
| SEMESTER: (W – winter, S – summer) | S |
| HOURS IN SEMESTER: | 60 |
| LEVEL OF THE COURSE:  (1st cycle, 2nd cycle, 3rd cycle) | 1st cycle |
| TEACHING METHOD:  (lecture, laboratory, group tutorials, seminar, other-what type?) | Lecture (30h) Laboratory (30h) |
| LANGUAGE OF INSTRUCTION: | * **English full time scheme for classes with 5 and more International Erasmus+ students enrolled/accepted;** * **English 50% individually with the teacher + Polish 50% with Polish students or individual project work- scheme for classes with less than 5 International Erasmus+ students enrolled/ accepted;** |
| ASSESSMENT METOD:  (written exam, oral exam, class test, written reports, project work, presentation, continuous assessment, other – what type?) | Written reports/presentation |
| COURSE CONTENT: | To familiarize students with research methods used in clinical microbiology: cultivation of microorganisms, use of culture media breeding, identification of microorganisms; techniques for obtaining pure cultures, staining microorganisms and their structures, detection of inclusions, counting microorganisms.  To familiarize students with microorganisms (gram-positive and negative bacteria, fungi and viruses) that are pathogenic for humans and methods and tests allowing their identification by their size, cell structure, colony morphology and function individual cell organelles, growth and development, methods of reproduction;  To familiarize students with antibiotic therapy, principles, methods and techniques used in the fight against antibiotic resistance  To familiarize students with the clinical diagnosis of microorganisms using fluorescence microscopy methods  Skills:  Describes the principles of preparing a microbiological laboratory for tests, correctly organizes the work of a microbiological laboratory, selects work methods appropriately to the topic of classes, knows how to select media for cultivating microorganisms in laboratory conditions.  Is able to identify microorganisms pathogenic to humans and correctly performs macroscopic and microscopic assessments microorganisms, properly selects methods of staining preparations, correctly determines the shape of bacteria and cell structures allowing identify mold fungi and yeast. |
| ADDITIONAL INFORMATION: | Students should have basic knowledge about biology and chemistry.  Code: 0911>1005-MKlin |