

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

| Subject name and code | Microbiology, PG_00053382 | | | | | | | | |
|--|--|-------------------|---|------------|-------------------------------|--|---------|-----|--|
| Field of study | Biomedical Engineering, Biomedical Engineering, Biomedical Engineering | | | | | | | | |
| Date of commencement of studies | October 2024 | | Academic year of realisation of subject | | | 2024/2025 | | | |
| Education level | second-cycle studies | | Subject group | | | Optional subject group Specialty subject group Subject group related to scientific research in the field of study | | | |
| Mode of study | Full-time studies | | Mode of delivery | | | at the university | | | |
| Year of study | 1 | | Language of instruction | | | Polish | | | |
| Semester of study | 2 | | ECTS credits | | | 1.0 | | | |
| Learning profile | general academic profile | | Assessment form | | | assessment | | | |
| Conducting unit | Faculty of Chemistry | | | | | | | | |
| Name and surname | Subject supervisor | | dr hab. Beata Krawczyk | | | | | | |
| of lecturer (lecturers) | Teachers | | | | | | | | |
| Lesson types and methods of instruction | Lesson type | Lecture | Tutorial | Laboratory | Projec | t | Seminar | SUM | |
| | Number of study hours | 15.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 15 | |
| | E-learning hours included: 0.0 | | | | | | | | |
| | Additional information: materials to the lecture; e-learning Quiz; e-learning | | | | | | | | |
| Learning activity and number of study hours | Learning activity Participation ir classes include plan | | i didactic Participation in ed in study consultation hours | | Self-study SUM | | | | |
| | Number of study hours | 15 | | 2.0 | | 10.0 | | 27 | |
| Subject objectives | The idea is to introduce students to the techniques used in the microbiological laboratory, acquiring knowledge about the structure and function of a bacterial cell and learning about their role in the human environment. | | | | | | | | |
| Learning outcomes | Course outcome | | Subject outcome | | | Method of verification | | | |
| | [K7_K02] is ready to provide critical evaluation of received content and to acknowledge the importance of knowledge in solving cognitive and practical problems | | the ability to choose a diagnostic method, awareness of sterile work in a microbiological laboratory, distinguish between commensal and pathogenic microorganisms | | | [SK5] Assessment of ability to solve problems that arise in practice | | | |
| | [K7_W51] Knows and understands, to an increased extent, selected aspects of chemistry and biochemistry constituting general knowledge in the field of biomedical engineering. | | The student knows the morphology and chemical structure of bacteria and can use them in the identification of bacteria | | | [SW3] Assessment of knowledge contained in written work and projects | | | |
| Subject contents | Why we study microbiology. Classification and identification of microorganisms. The modern classification of Prokaryotes. Microbial growth control, sterilization and disinfection. Microscopes and staining of bacteria. Nutrition of microorganisms, growth of the population of microorganisms (growth phases, cultures of microorganisms, obtaining pure cultures, culture media, special cultivation techniques, storage of cultures. Measurement of microbial growth. General characteristics of prokaryotes (morphology, reproduction, endospores, organization of the prokaryotic cell. Structure and function of the cell) Koch's postulates. Host-microorganism relations - the influence of microorganisms on humans and animals. Natural human microbiota. Basics of pathogenesis. | | | | | | | | |
| Prerequisites and co-requisites | lack | | | | | | | | |
| Assessment methods | Subject passin | Passing threshold | | | Percentage of the final grade | | | | |
| and criteria | Quiz | 60.0% | | | 100.0% | | | | |

| Recommended reading | Basic literature | Abigail A. Salyers, Dixie D. Whitt Mikrobiologia, różnorodność, chorobotwórczość i środowisko; PWN Color Atlas of Medical Bacteriology. Autorzy: Luis M. de la Maza, Marie T. Pezzlo, Cassiana E. Bittencourt, Ellena M. Peterson. Brock Biology of Microorganisms, Global Edition - Michael Madigan, Kelly Bender, Daniel Buckley, W. Sattley, David Stahl | | | |
|--|--|---|--|--|--|
| | Supplementary literature | Prescott's Microbiology. McGraw.Hill International Edition https://open.oregonstate.education/generalmicrobiology/chapter/ introduction-to-microbiology/ | | | |
| | eResources addresses | Adresy na platformie eNauczanie: | | | |
| Example issues/ example questions/ tasks being completed | Which sterilization method will we choose for oily substances: | | | | |
| | dry hot air an autoclave chemicals | | | | |
| Work placement | Not applicable | | | | |

Document generated electronically. Does not require a seal or signature.