University of Gdańsk

Subject card

| | | | |
|---|---|---|---|
| Subject name and code | Microbial biotechnology - laboratory classes, PG_00192712 | | |
| Field of study | Marine Biotechnology | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | 2026/2027 |
| Education level | Master's studies | Subject group | Obligatory subject group in the field of study |
| Mode of study | full-time studies | Mode of delivery | at the university |
| Year of study | 1 | Language of instruction | English |
| Semester of study | 1 | ECTS credits | 2.0 |
| Learning profile | academic | Assessment form | credit |
| Conducting unit | Faculty of Oceanography and Geography -> Rector | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr n. med. Dorota Pomorska | |
| | Teachers | | |

**Lesson types**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 0.0 | 0.0 | 30.0 | 0.0 | 0.0 | 30 |

E-learning hours included: 0.0

**Learning activity and number of study hours**

| Learning activity | Participation in didactic classes included in study plan | Participation in consultation hours | Self-study | SUM |
|---|---|---|---|---|
| Number of study hours | 30 | 2.0 | 18.0 | 50 |

**Subject objectives**

The course aim is:

Acquisition by students of knowledge concerning microbial biotechnological methods applied to solve problems in life science. (KW_04). Acquisition of the ability to prepare and make in English a short oral presentation, using scientific language, including specialist terminology and notional apparatus suitable for the conducted research, and to participate in a discussion (KU_03). Student will be aware of risks and dilemmas connected to scientific research and laboratory work (KK04).

## Learning outcomes

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [MBMU2-KK02] Is ready to effectively plan and organize his individual and team work, especially in the laboratory and at sea; is ready to plan his individual career and act in an entrepreneurial manner | KK_02 Can effectively plan and organize personal and team work in the laboratory and at sea | [SK2] presentation/project/paper/ report<br>[SK4] test/exam - oral or written<br>[SK6] demonstration of practical skills<br>[SK8] observation of student's independent or team work |
| [MBMU2-KK03] Is ready to apply the principles of occupational health and safety, especially in the laboratory and at sea; is responsible for their own and others' safety; can recognize hazards and take appropriate action | KK_03 Is able to apply the Health and Safety rules during working in the laboratory and during sea expedition; is prepared to take full responsibility for his own safety and for safety of others, and is able to recognize threats, and is capable of taking appropriate actions. | [SK2] presentation/project/paper/ report<br>[SK4] test/exam - oral or written<br>[SK6] demonstration of practical skills<br>[SK8] observation of student's independent or team work |
| [MBMU2-KU01] Can plan and conduct research in the laboratory and at sea, and to document procedures and results. Independently or under the supervision of an authorized staff member, carries out work using specialized equipment. Complies with occupational health and safety regulations. | KU_01 Can organize and realize research in the laboratory and at sea and can document activities and results; is able to use laboratory devices under the supervision of the tutor; applies the Health and Safety Rules | [SU2] presentation/project/paper/ report<br>[SU4] test/exam - oral or written<br>[SU6] demonstration of practical skills<br>[SU8] observation of student's independent or team work |

## Subject contents

The course covers an overview of current important microbial biotechnology methods used in bioscience. The course includes an overview of microbes (e.g., bacteria, viruses and yeast) and genetic engineering technics that have found practical application in microbial biotechnology and help to deal with various bioscience issues

## Prerequisites and co-requisites

## Assessment methods and criteria

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| Test | 51.0% | 60.0% |
| Raport | 51.0% | 30.0% |
| Activity | 51.0% | 10.0% |

## Recommended reading

| | |
|---|---|
| Basic literature | Molecular cloning - A laboratory manual by Sambrook, Fritsch and Maniatis Molecular cloning - A laboratory manual. 4thedition, (2012) Green, Sambrook Microbial Biotechnology: Fundamentals of Applied Microbiology 2nd Edition, (2007), Glazer, Nikaido<br><br>Materials prepared by lecturers and students |
| Supplementary literature | Freely selected books and articles, that can expand knowledge in the topic |
| eResources addresses | |

## Example issues/ example questions/ tasks being completed

## Work placement

Not applicable

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