



Politechnika Łódzka

Published on *Politechnika Łódzka - Rekrutacja* (<https://rekrutacja.p.lodz.pl>)

Organizational unit running the field of study:

Faculty of Biotechnology and Food Sciences

Cycle of study:

Second-cycle

Mode of study:

Full-time (degree programme)

Language of instruction:

Polish

Degree awarded:

Master of Science

Duration of study:

2 years

Description of the field of study:

Second-cycle degree programme enables students to expand and advance their knowledge in selected branches of mathematics including differential and integral calculus to the extent necessary for modelling and design of biotechnological processes, and also their knowledge in descriptive and mathematical statistics, which enables them to analyze their research results.

Students in this field of study advance their knowledge in physics including mechanics, thermodynamics, electricity, magnetism, optics, calorimetry to the extent necessary for comprehending biotechnological processes and the manner of operation of the apparatus they serves their realization; their knowledge of raw materials and materials used in broadly-defined biotechnology industry, bioproduct manufacturing and designing biotechnological production lines. They can use methods of living organism modification for biotechnological processes.

They know basic methods, tools and materials used in laboratory studies of bioprocesses and in solving complex engineering problems in biotechnology. They acquire fundamental knowledge concerning management, including quality management, and running a business. They know and understand the concepts and principles related to industrial property protection, copyrights and appreciate the need to manage intellectual property resources.

Full-time second-cycle degree programmes starting from the winter semester last 4 semesters (2 years), whereas full-time second-cycle degree programmes starting from the summer semester last 3 semesters (1.5 years).

Specializations:

- molecular biotechnology and technical biochemistry
- environmental biotechnology
- food biotechnology
- fermentation technology and technical microbiology

Graduate profile:

Graduates from a second-cycle programme are awarded the degree of magister. Apart from the skills acquired during the first-cycle degree programme, they are prepared to design biotechnological processes and to carry them out to deliver products that have the required characteristics for food, chemical, pharmaceutical industries, for environment protection and other purposes. Graduates have an understanding of ecological, social, legal and economic aspects of biotechnology. The knowledge and skills to independently design and conduct research and to use its results implies that our graduates do well in research laboratories, diagnostic laboratories and become part of the research and development human resources for biotechnological and related industries. They also successfully pursue a career in genetic, biosynthesis, biotransformation and other laboratories at universities or at the Polish Academy of Sciences.

Additionally, graduates have skills in occupational safety in working with genetically modified microorganisms, in implementation of innovation management systems in biotechnology, and also in marketing and production management. They can also undertake efforts to enhance public acceptance of biotechnology bioproducts (GMOs, among others). They have the ability to take on managerial roles and to solve technological problems. They can work in an international environment and draw from other disciplines. Graduates from a second-cycle degree programme are well-prepared to pursue a third-cycle degree - a doctoral degree.

Date of enrolment:

29.01.- 26.02.2024, 1st recruitment for foreigners: 6.12.2023 - 4.01.2024

Admission requirements:

- [Admissions calendar](#) [1]
- [Required documents](#) [2]
- [Fees](#) [3]

Source

URL:<https://rekrutacja.p.lodz.pl/en/biotechnologia-second-cycle-faculty-biotechnology-and-food-sciences>

Links

[1] <https://rekrutacja.p.lodz.pl/en/deadlines> [2] <https://rekrutacja.p.lodz.pl/en/documents> [3] <https://rekrutacja.p.lodz.pl/en/tuition-fees>