

INFORMATION ON STUDY PROGRAMME: BIOTECHNOLOGY

1. 1. Name of study programme	
Undergraduate university study programme <i>Biotechnology</i>	
1. 2. Field(s) of study (Croatian)	Field(s) of study - ISCED-F
04.04.	0512
1. 3. Length of programme	
Three years (six semesters)	
1. 4. Mode of study (full-time/part time/e-learning etc.)	
Full-time	
1. 5. Number of credits	
180	
1. 6. Qualification awarded	
Sveučilišni/Sveučilišna prvostupnik/prvostupnica inženjer/inženjerka biotehnologije (univ. bacc. ing. biotechn.)	
1. 7. Level of qualification according to the National Qualification Framework	Level of qualification according to the European Qualifications Framework
6	6
1. 8. Occupational profiles of graduates	
<p>A solid interdisciplinary understanding in fundamental disciplines, including theoretical knowledge and practical skills in laboratories and process plants (industry vocational practice) which offers competences enabling direct employment in various areas of biotechnology, but also ensures a solid basis for acquiring additional knowledge in tune with the dynamic changes in the area. With this study programme the graduates will be qualified for:</p> <ul style="list-style-type: none"> • accomplishing tasks of a corresponding level of complexity related to handling, control and surveillance in biotechnological production; • accomplishing tasks of a corresponding level of complexity in microbiological, biochemical and genetic laboratories for various purposes (control laboratories in industry, laboratories for selection, preparation and maintenance of the pure culture of the production organism, in corresponding laboratories at inspection controls, in laboratories for biochemical and genetic diagnostics); • accomplishing tasks of a corresponding level of complexity in controlling of the contamination of the environment as well as in the plants for biotechnological treatment of waste water and other waste products. 	

1. 9. Programme learning outcomes

Learning outcomes

1. define and explain the principles of basic scientific disciplines, such as mathematics, physics, chemistry, biochemistry and biology with particular emphasis on microbiology and molecular genetics, and apply these skills and knowledge to the field of biotechnology
2. describe and explain the principles of basic engineering disciplines such as thermodynamics, fluid mechanics, phenomenon of transformation and unit operation, and apply in practice these knowledge and skills in the field of biotechnology
3. select and apply in practice basic biochemical engineering knowledge and skills, manage biotechnological and genetic engineering processes
4. select and use laboratory equipment and appropriate computer tools
5. conduct analyses and biotechnological procedures in chemical, biochemical, microbiological, molecular-genetic, process and development laboratories, and recognize and solve simple problems in these laboratories
6. use typical process equipment in a biotechnological plant (production and / or pilot / research)
7. manage smaller production units in industrial biotechnological systems
8. recognize and analyse production problems and communicate them to their superiors and subordinates
9. interpret routine laboratory analyses in biotechnology
10. report on laboratory, production plant and business results in verbal and written way, using specific professional terminology
11. apply ethical principles, legal regulations and standards related to specific requirements of the profession
12. develop knowledge and skills which are needed to continue studies on higher levels, primarily on graduate studies of Bioprocess Engineering and Molecular Biotechnology.

1. 10. Specific admission requirements (if applicable) and selection process

Defined by the Entrance Call for Enrolment ("Natječaj za upis", available at [FFTb web pages](#))

1. 11. Qualification requirements and regulations

Defined by the Regulation on Undergraduate and Graduate programmes ([Pravilnik o studiranju na preddiplomskom i diplomskom studiju](#)).

1. 12. Progression regulations

A prerequisite to enrol into the next year of study is 50 ECTS credits that students need to have accumulated throughout the previous academic year.

Prerequisites, which are required in order to enrol particular subjects, and also to enrol the following semester and academic year, are defined by Course catalogues / Syllabi, or by the prescribed preconditions that need to be completed beforehand signing up for particular subjects.

1. 13. Examination regulations and grading scale

Throughout the term, a university lecturer or his/her assistant involved into a tuition of a certain course, tests and grades students' knowledge on each and every tuition segment (practicals, seminars, partial exams), based on which the final grade is earned. Students take one exam per course, which, however, may be subdivided into several partial exams, so as to provide for the continuous students' knowledge testing. Partial exams are scheduled throughout the course of the term, with the exception of the final partial exam, which may as well take place in the first week of the examination period. Examination regulations are defined in individual course descriptions.

The grades scale is as follows: "excellent" (5), "very good" (4), "good" (3), "satisfactory" (2), or "unsatisfactory" (1). The lowest grade needed to pass the exam is "satisfactory" (2).

1. 14. Specific arrangements for recognition of prior learning (formal, non-formal and informal) (if applicable)

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1. 15. List of other study programmes from which credits may be obtained

[Other FFTB study programmes](#), other University of Zagreb study programmes, and study programmes of foreign universities covered by international cooperation agreements.

1. 16. Graduation requirements

Defined by the Regulation on Undergraduate and Graduate programmes ([Pravilnik o studiranju na preddiplomskom i diplomskom studiju](#))

1. 17. Access to further studies

Following the successful completion of these undergraduate academic studies, students are entitled to enter the graduate studies offered by the Faculty of Food Technology and Biotechnology University of Zagreb.
Other academic institutions hosting postgraduate studies set their own entrance requirements.

1. 18. Readmission procedure (if applicable)

The full-time undergraduate or graduate student status at the Faculty of Food Technology and Biotechnology is acquired when students sign up for the "Become a student" (Postani student) system, or sign up for a graduate study after completing an undergraduate study, in compliance with the application requirements.

1. 19. ECTS coordinator

[Branka Levaj, PhD, Full Professor](#)