Biotechnology

Learning objectives and graduate profile
At the time of graduation, students of the biotechnology study programme have knowledge of the basics of chemistry (general, inorganic, organic, analytical, physical, biochemistry), biology (microbiology and molecular), genetics, biotechnology (microbial, agricultural, enzymatic and environmental), ecology, as well as mathematics, physics and statistical analysis. In the Bachelor's degree, students also acquire knowledge in selected, specialised areas, such as virology, food quality, nutrition, toxicology, bioinformatics, scientific databases. They acquire or improve their knowledge and practice in scientific English. They acquire skills and competences for defining scientific hypotheses, preparing (experimental) projects to verify them, experimental design, defining outputs and their characterisation, presenting, defending and implementing them (also in practice).

Graduates of the bachelor's degree have theoretical knowledge of the structures of prokaryotic and eukaryotic biological systems and the nature of the processes (physicochemical, biochemical and physiological) taking place in them as well as the mechanisms of their regulation. They gain an overview of these and know how to apply them in practice. They learn the basics of methods of intervention into the genome of prokaryotic and eukaryotic cells, principles of genetic modification of organisms, basic ways of characterising genetic changes and gain an overview of the use of genetically modified organisms in various fields of practice. They are able to carry out the preparation of biological systems for their practical use and independently solve (manage) partial operations related to their targeted use in the agro-food, pharmaceutical-medical and chemical-environmental fields. They have sufficient theoretical knowledge and practical experience necessary to carry out laboratory control and evaluation of the data obtained and can communicate with an equivalent level of management. They possess knowledge of the economic, legal, ethical and environmental aspects of biotechnology that enables them to apply themselves at the middle level of functional activities in the scientific, research, production and business spheres.
Recommended study schedule
In case of interest, it is possible to view the profile subjects of the study programme and find out what knowledge, skills or competences the student will acquire after their successful completion, or view a detailed description of the study programme.

Requirements for applicants, method of selection and recommended personal qualities
Number of students admitted to the study programme: 50
Requirements for applicants and the method of their selection are specified in §56 to 58 of Act no. 131/2002 Coll. on Higher Education Institutions, they are regulated in more detail by the UCM Study Regulations in Trnava and the UCM Admission Procedure Regulations in Trnava. There is a fee for studying..
The admission procedure takes place without an entrance examination.
For admission to the bachelor's degree programme, data on the applicant's studies at secondary school will be decisive. More information here.

Graduate employment and occupations that a graduate of the SP can pursue
Graduates of the bachelor's degree programme in biotechnology are applied in chemical, pharmaceutical, medical, environmental research and operational facilities, in the production sphere in monitoring the natural environment, processing and use of databases. Occupations where graduates can find employment include laboratory technician in various departments (biochemistry, microbiology, etc.), chemical production operator, raw material receiving worker, fermenter/distiller, production technician, and others.
90% of the students go on to pursue a 2nd degree in biotechnology or a related field.

Teaching and learning rules
The rules of teaching are clearly defined in the information sheets of individual courses as well as in the UCM Study Regulations, which govern the FNS.

Assessment procedures and criteria
Lists of information sheets

Conditions for completing the study programme
The prerequisite for the award of the degree of Bc. degree is the acquisition of a minimum of 180 credits and passing the state examination.

Success rate
Without graduates

Further detailed information about the study programme is available at **vsk.ucm.sk** or on the department's website.

Person responsible for the quality of the study programme
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Persons responsible for profile subjects
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