



Master Program in Biotechnology

The Master Program of Biotechnology offers a multi-disciplinary program covering the fields of microbial, industrial and medical biotechnology. The program focuses on providing practical training as well as theoretical background on relevant topics.

The field of biotechnology uses living organisms to generate controlled processes or even final products. Students pursuing this degree learn about a wide range of topics with a focus on microbiology, cellular biology, genetic engineering and biochemistry.

The program will provide learners with:

- Multi-disciplinary curriculum covering the fields of microbial, medical and industrial biotechnology;
- Skills on molecular techniques, microbial and biochemical tests
- An environment for scientific knowledge transfer
- An opportunity for exposure and exchange in their chosen field

Program structure and award requirements

Course Code	Course Name	Credit Points			Prerequisite Courses
		Theoretical	Practical	Total Credit Points	
Core Courses					
1403701	Microbial Biotechnology	1	2	3	
1403702	Basics of Molecular Biology	2	-	2	
1403703	Basics of Biotechnology	2	-	2	
1403704	Biochemical Analysis	1	4	3	
1403705	Applications of Biotechnology	2	2	3	1403703
1403708	Biological Chemistry in Biotechnology	2	2	3	
Elective Course					
1403709	Fermentation Technology	2	2	3	
1403712	Biochemical Engineering	2	-	2	
1403713	Bioenergetics	2	-	2	
1403714	Genetic Engineering	1	2	2	1403702
1403716	Research Methods in Molecular Biology	2	2	3	1403702
1403720	Biostatistics	2	2	3	
1403721	Basics of Bioinformatics	2	2	3	
1403722	Human Genetics	2	-	2	
1403723	Basics of Nano-Biotechnology	2	-	2	
1403724	Cell Biology	2	2	3	
1403725	Drug metabolizing enzymes	2	2	3	1403708
1403726	Tissue Engineering	2	2	3	

Enrolled candidates are awarded the degree when

- passing courses with 24 credit hours (14 core credit hours) with a CGPA of at least C⁺.
- passing an English language proficiency test as per the University regulations.
- successfully preparing and defending master thesis dissertation.

Career prospects of the graduates

The program prepares students for biotechnology careers by encompassing a broad range of subjects as they are trained on main biotechnology and molecular biology techniques. They can choose to focus on medical, industrial or microbial biotechnology.

Potential employers include universities, research institutions and private companies. Earning the degree can improve likelihood of employment as science and engineering employers often prefer candidates with graduate degrees.

Students of the Master of Biotechnology are prepared to work

- in companies involved in biotechnology, pharmaceutical technology and microbiology;
- in research and development sector of pharmaceutical and biotechnology industries;
- in clinical pathology laboratories using their acquired molecular expertise;
- in quality control sector for food industries, environmental screening and biotechnology and pharmaceutical industries;
- in molecular analysis and microbiological testing of samples in various sectors;
- as researchers in the fields of microbiology, basic medical research and biotechnology.