BIOTECHNOLOGY (FOR SCIENCE STUDENTS) MINOR (B.SC.) (24 CREDITS)

Offered by: Biology (Faculty of Science)
Degree: Bachelor of Science
Program credit weight: 24

Program Description

To obtain the Minor Biotechnology, Science students must:

1. satisfy both the requirements for the departmental program and for the Minor;
2. complete[1] 24 credits, 18 of which must be exclusively for the Minor program.

[1] Approved substitutions must be made for any of the required courses which are part of the student's main program.

Note: For information about Fall 2025 and Winter 2026 course offerings, please check back on May 8, 2025. Until then, the "Terms offered" field will appear blank for most courses while the class schedule is being finalized.

Required Courses (15 credits)

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Course	Title	Credits
BIOC 212	Molecular Mechanisms of Cell Function.[1]	3
BIOL 200	Molecular Biology.	3
BIOL 201	Cell Biology and Metabolism.[1]	3
BIOL 202	Basic Genetics.	3
BIOT 505	Selected Topics in Biotechnology.	3
MIMM 211	Introductory Microbiology.	3

[1] Students may take either BIOL 201 Cell Biology and Metabolism. or BIOC 212 Molecular Mechanisms of Cell Function..

Complementary Courses (9 credits)

9 credits selected from courses outside the department of the student's main program. Students may select three courses from one of the lists below, or may choose three alternate courses with adviser approval.

Biomedicine

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Course	Title	Credits
ANAT 541	Cell and Molecular Biology of Aging.	3
EXMD 504	Biology of Cancer.	3
PATH 300	Human Disease.	3

Chemical Engineering

Expand allContract all

Course	Title	Credits
CHEE 200	Chemical Engineering Principles 1.	3
CHEE 204	Chemical Engineering Principles 2.	3
CHEE 474	Biochemical Engineering.	3

Chemistry

Expand allContract all

Course	Title	Credits
CHEM 482	Organic Chemistry: Natural Products.	3
CHEM 502	Advanced Bio-Organic Chemistry.	3
CHEM 552	Physical Organic Chemistry.	3

General

Expand allContract all

Course	Title	Credits
FACC 300	Engineering Economy.	3

Immunology

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Course	Title	Credits
ANAT 261	Introduction to Dynamic Histology.	4
BIOC 503	Biochemistry of Immune Diseases.	3
MIMM 214	Introductory Immunology: Elements of Immunity.	3
MIMM 414	Advanced Immunology.	3
PHGY 513	Translational Immunology.	3

Management

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Course	Title	Credits
ECON 208	Microeconomic Analysis and Applications.	3
MGCR 211	Introduction to Financial Accounting.	3
MGCR 341	Introduction to Finance.	3
MGCR 352	Principles of Marketing.	3
MGCR 372	Operations Management.	3

Microbiology

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Course	Title	Credits
MIMM 323	Microbial Physiology.	3
MIMM 324	Fundamental Virology.	3
MIMM 413	Parasitology.	3
MIMM 465	Bacterial Pathogenesis.	3
MIMM 466	Viral Pathogenesis.	3

Molecular Biology (Biology)

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Course	Title	Credits
BIOL 300	Molecular Biology of the Gene.	3
BIOL 314	Molecular Biology of Cancer.	3
BIOL 520	Gene Activity in Development.	3
BIOL 524	Topics in Molecular Biology.	3
BIOL 551	Principles of Cellular Control.	3

Molecular Biology (Biochemistry)

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Course	Title	Credits
BIOC 311	Metabolic Biochemistry.	3
BIOC 312	Biochemistry of Macromolecules.	3
BIOC 450	Protein Structure and Function.	3
BIOC 454	Nucleic Acids.	3

Physiology

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Course	Title	Credits
EXMD 401	Physiology and Biochemistry Endocrine Systems.	3
EXMD 502	Advanced Endocrinology 1.	3
EXMD 503	Advanced Endocrinology 02.	3
PHAR 562	Neuropharmacology.	3
PHAR 563	Endocrine Pharmacology.	3
PHGY 518	Artificial Cells.	3

Pollution

Expand allContract all

Course	Title	Credits
CHEE 593	Industrial Water Pollution Control.	3
CIVE 225	Environmental Engineering.	4
CIVE 430	Water Treatment and Pollution Control.	3
CIVE 557	Microbiology for Environmental Engineering.	3