

Graduate Programs in BIOTECHNOLOGY

UMBC
AN HONORS UNIVERSITY IN MARYLAND



Masters in Professional Studies:
Biotechnology

Post-Baccalaureate Certificate:
Biotechnology Management

Post-Baccalaureate Certificate:
Biochemical Regulatory
Engineering

Biotechnology - a professionally-focused, relevant and practical graduate degree

- » Biotechnology is a growing economic sector creating new opportunities for qualified individuals.
- » Courses in life science, management, and business are combined to create an effective curriculum.
- » Ideal for professionals pursuing management opportunities in Biotech.
- » Students gain experience in researching, analyzing and communicating the primary and current literature in the Biotech field.

When you choose UMBC Professional Programs, you can count on:

- » Courses taught by industry experts and a range of academic departments.
- » Flexible evening class schedule that accommodates working professionals.
- » Wide-ranging resources offered at a top-notch public research university.

Why UMBC?

- » The excellent academic and research expertise in the biosciences provides the foundation for the M.P.S. Biotechnology programs and certificate programs.
- » For six years running, UMBC was ranked #1 in the U.S. New and World Report's list of 'national up-and-coming' universities, and in 2015 ranked #4 as 'most innovative schools.'
- » UMBC provides a comprehensive and quality education at a manageable cost.

Professional Experience Program (PEP) Option

Students interested in acquiring professional experience by working as an apprentice with a company operating in a specific area of biotechnology may apply to the PEP. The option to earn academic credit is available.



umbc.edu/biotech

For Program Information:

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For Application Information:

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Admission Requirements

M.P.S.:

- » A bachelor's degree in Biology, Chemistry, or Chemical/Biochemical Engineering. A bachelor's degree that includes sufficient credits in relevant life science courses also may be considered
- » Minimum undergraduate GPA of 3.0 on a 4.0 scale
- » GRE scores are not required for applicants with a degree from an accredited U.S. institution
- » Two semesters of general chemistry and two semesters of organic chemistry
- » Applications for the Master's program are accepted for the Fall semester only

Graduate Certificates:

Biotechnology Management:

- » A bachelor's degree in any discipline
- » Applications for the Biotechnology Management Certificate are accepted in the fall and spring

Biochemical Regulatory Engineering:

- » A bachelor's degree in science or relevant discipline
- » Minimum undergraduate GPA of 3.0 on a 4.0 scale
- » GRE scores are not required for applicants with a degree from an accredited U.S. institution
- » Applications for the Biochemical Regulatory Engineering Certificate are accepted in the fall and spring

International Applicants:

Please visit umbc.edu/biotech/international for detailed admissions requirements for international applicants.

- » Please pay special attention to English proficiency and testing requirements

Admission Deadlines

Fall: August 1

Spring: December 1

For detailed application process please visit: umbc.edu/biotech

Master's Program

Master in Professional Studies (M.P.S.): Biotechnology 30 Credits (10 courses)

Core Courses 18 credits

BTEC 675: Business of Biotech*

BTEC 655: Emerging Topics in Biotechnology Seminar

BTEC 656: Experimental Design

BTEC 665: Leadership, Project Management, Communication and Management

BTEC 670: Legal and Ethical Issues in Biotechnology

BTEC 654 Capstone

* BTEC 675 should be taken in the first semester of enrollment



Biotechnology Tracks (Select one track) 12 Credits (4 Courses)

Regulatory Track

BTEC 660: Regulatory Issues in Biotechnology

BTEC 662: Good Manufacturing Practices for Bioprocesses

BTEC 664: Quality Control and Quality Assurance for Biotechnology Products

BTEC 668: Clinical Trials: Design and Management

Bioprocessing Track

BTEC 657: Biochemical Engineering

BTEC 653: Principals of Upstream Processing

BTEC 658: Quality and Finishing of Biotechnology Products

BTEC 659: Bioseparations

Certificate Programs

Post-Baccalaureate Certificate: Biotechnology Management 12 Credits (4 courses)

BTEC 665: Management, Leadership and Communication

BTEC 670: Legal and Ethical Issues in the Science Professions

BTEC 680: Financial Management for Science Professionals

BTEC 685: Project Management Fundamentals



Post-Baccalaureate Certificate: Biochemical Regulatory Engineering 12 Credits (4 courses)

BTEC/ENCH 660: Regulatory Issues in Biotechnology

BTEC/ENCH 662: Good Manufacturing Practices for Bioprocesses

ENCH 664: Quality Control & Quality Assurance for Biotechnology Products

ENCH 666: Design, Construction and Validation of GMP Biotechnology Facilities

Please consult umbc.edu/biotech/schedule for current schedule.

Office of Professional Programs

UMBC's Office of Professional Programs offers a broad array of professionally focused master's degree and certificate programs that address industry needs while anticipating future opportunities. umbc.edu/professionalprograms