

Graduate Programs in BIOTECHNOLOGY

UMBC
AN HONORS UNIVERSITY IN MARYLAND



Master's of Professional Studies:
Biotechnology

Post-Baccalaureate Certificate:
Biotechnology Management

Post-Baccalaureate Certificate:
Biochemical Regulatory
Engineering

MPS Biotechnology - a professional industry-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 working professionals pursuing management opportunities in Biotech.
- » Students learn critical skills needed in the biotech industry including literature research and analysis, written and oral communication, experimental design, regulatory, legal, and business management techniques.

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

- » Courses taught by instructors who are subject-matter experts with extensive industry experience.
- » 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.
- » The 2017 *U.S. News & World Report Best Colleges* guide ranks UMBC in the top five on its closely-watched Most Innovative Schools list and has recognized UMBC as a global leader in higher education.
- » UMBC provides a comprehensive and quality education at a manageable cost.

Professional Experience Program (PEP) Option

The MPS Program offers assistance to students interested in expanding on their industry experiences to include a Professional Experience. Please contact the Program Director for more information.



umbc.edu/biotech

For Program Information:

Dr. Stephen Miller
Program Director
stmiller@umbc.edu | 410-455-3381

For Application Information:

Ms. Nancy Clements
Program Specialist
nancyc@umbc.edu | 410-455-5536

Admission Requirements

M.P.S.:

- » A bachelor's degree in any life science related field including Biology, Chemistry, Biochemistry, Biochemical Engineering, Biotechnology and Food and Agricultural Sciences.
- » 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

Graduate Certificates:

Biotechnology Management:

- » A bachelor's degree in any discipline

Biochemical Regulatory Engineering:

- » A bachelor's degree in science or relevant discipline
- » Minimum undergraduate GPA of 3.0 on a 4.0 scale

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

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

Master's Program

Master's of Professional Studies (M.P.S.): Biotechnology 30 Credits (10 courses)

Core Courses 18 credits (6 Courses)

BTEC 675: Business of Biotech*
BTEC 655: Emerging Topics in Biotechnology Seminar
BTEC 656: Experimental Design
BTEC 665: Management, Leadership and Communication
BTEC 670: Legal and Ethical Issues in the Science Professions
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/ENCH 660: Regulatory Issues in Biotechnology
BTEC/ENCH 662: Good Manufacturing Practices for Bioprocesses
ENCH 664: Quality Control and Quality Assurance for Biotechnology Products
ENCH 666: Biotechnology GMP Facility Design, Construction and Validation OR
BTEC 668: Clinical Trials: Design and Management

Bioprocessing Track

BTEC 653: Principals of Upstream Processing
BTEC 658: Principals of Downstream Processing
BTEC 659: Fundamentals of Bioprocess Development
ENCH 664: Quality Control and Quality Assurance for Biotechnology Products

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
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: Biotechnology GMP Facility Design, Construction and Validation

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