

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.



biotech.umbc.edu

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 biotech.umbc.edu/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: biotech.umbc.edu

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.

professionalprograms.umbc.edu

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 biotech.umbc.edu/schedule for current schedule.

This academic program is a participant in the U.S. Department of Education Gainful Employment program. For more information, <https://gradschool.umbc.edu/resources/careers/gainfulemploy/>