

# Graduate Programs in BIOTECHNOLOGY



# UMBC

THE UNIVERSITIES AT SHADY GROVE



**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.



[umbc.edu/biotechsg](http://umbc.edu/biotechsg)

### **For Program Information:**

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### **For Application Information:**

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## Admission Requirements

### M.P.S.:

#### Graduate Certificates:

#### **Biotechnology Management: Biochemical Regulatory Engineering:**

- » A bachelor's degree in science, engineering, or any subject with sufficient coursework in relevant life science topics such as foundations of biology and organic chemistry OR a bachelor's degree in any subject combined with work experience in the life sciences
- » Minimum undergraduate GPA of 3.0 on a 4.0 scale
- » GRE scores are not required.

#### International Applicants:

Please visit [umbc.edu/biotechsg](http://umbc.edu/biotechsg) 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 visit: [umbc.edu/biotechsg](http://umbc.edu/biotechsg)

## 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](http://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 is recommended for the first semester of enrollment



#### **Biotechnology Electives 12 Credits (Any 4 Courses)**

##### Regulatory Electives

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|--|
| BTEC 660: Regulatory Issues in Biotechnology                               |
| BTEC 662: Good Manufacturing Practices for Bioprocesses                    |
| BTEC 664: Quality Control and Quality Assurance for Biotechnology Products |
| BTEC 666: Biotechnology GMP Facility Design, Construction and Validation   |

##### Bioprocessing Electives

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|--|
| BTEC 653: Principles of Upstream Bioprocessing     |
| BTEC 658: Principles of Downstream Bioprocessing   |
| BTEC 659: Fundamentals of Industrial Bioprocessing |

##### General Electives

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|--|
| BTEC 657: Devices and Combination 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 675: Business of Biotechnology                           |
| BTEC 685: Project Management Fundamentals                     |



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

|  |
|--|
| BTEC 660: Regulatory Issues in Biotechnology                               |
| BTEC 662: Good Manufacturing Practices for Bioprocesses                    |
| BTEC 664: Quality Control and Quality Assurance for Biotechnology Products |
| BTEC 666: Biotechnology GMP Facility Design, Construction and Validation   |

Please consult [umbc.edu/biotechsg/schedule](http://umbc.edu/biotechsg/schedule) for schedule.