

ONLINE

BLAZE A TRAIL IN THE ADVANCING FIELD OF BIOTECHNOLOGY

Earn your master's degree in **Applied Biotechnology** or graduate certificate in **Applied Bioinformatics** from the University of Wisconsin



GRADUATE CERTIFICATE IN
APPLIED BIOINFORMATICS



MASTER OF SCIENCE IN
APPLIED BIOTECHNOLOGY

Every day, biotechnology is working to solve some of the world's most pressing problems—infectious and hereditary disease, food security, sustainable alternatives to fossil fuels—and moving forward with revolutionary solutions.

BE PART OF THE EXCITING GROWTH IN BIOTECHNOLOGY

According to the 2020 BIO (Biotechnology Innovation Organization) report, bioscience industry employment has grown by around 7 percent since 2016. Wage growth consistently exceeds other occupations—the average annual salary for the bioscience worker is nearly double the average salary in the U.S.

The rewards are not just financial. Biotechnology professionals often cite the opportunity to improve the standard of living for the world's population. Major product offerings range from human health, animal health, environmental, industrial, and agricultural technologies, with nearly half of industry revenue resulting from healthcare products. Key drivers of growth include an aging population relying on medical treatments, and Research & Development (R&D) activity generating new products and markets.

Job opportunities can be found in a variety of settings, and in urban and rural areas, including biopharma, biomedical engineering, molecular biology, and more.



ENJOY THE FLEXIBILITY OF A 100% ONLINE PROGRAM

- » Access course content from any device
- » Zero on-campus meetings or requirements
- » No need to be online at a specific time for classes



LEARN FROM EXPERT FACULTY ACROSS SEVERAL UW CAMPUSES

- » The program is a multi-campus partnership of UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, and UW-Whitewater.



EARN A RESPECTED CREDENTIAL FROM THE UNIVERSITY OF WISCONSIN

- » You'll earn your degree or certificate from the University of Wisconsin, one of the largest and most widely respected public higher education systems in the country.



RELATED:

[Biotechnology Careers and Salaries](#) ↗

UNIVERSITY OF WISCONSIN MASTER OF SCIENCE IN **APPLIED BIOTECHNOLOGY**



11 Courses. 31 Credits. 100% Online.

Whether your experience is based in healthcare, agriculture, or industry—the online **Master of Science in Applied Biotechnology** will teach you how to bring the best of biotech innovation to market, where it can do the most good. You'll graduate with an understanding of the principles and techniques of biotechnology, ethical, safety, and privacy concerns, funding, intellectual property and patents, professional and technical communication, experimental design and analysis, and organizational leadership—all within the scope of the global biotechnology industry.

APPLIED BIOTECHNOLOGY CORE CURRICULUM + SPECIALIZATION TRACKS: **HOW IT WORKS**

Three tracks allow you to focus on acquiring the specialized skills and knowledge you'll need to succeed in these areas. Through the curriculum, you'll acquire a foundation in the principles and techniques of biotechnology through six core courses, then, you'll choose one or more specialization tracks (each track has three courses and students may complete more than one track).

CORE COURSES

- » **ABT 700** | Principles of Biotechnology
- » **ABT 705** | Ethics, Safety, and Regulatory Environments in Biotechnology
- » **ABT 710** | Professional and Technical Communication in Biotechnology
- » **ABT 715** | Techniques in Biotechnology
- » **ABT 720** | Experimental Design and Analysis in Biotechnology
- » **ABT 725** | Leadership in Organizations



READ FURTHER:

[Three Tracks of Study](#) ➔

CAPSTONE



The program concludes with a capstone course—an opportunity to apply everything you've learned in the program and gain valuable, practical experience through a fieldwork project. You'll design your project to align with your interests and career goals. Students often discover job opportunities and professional connections during this final course.

RELATED:

[Explore the Capstone Project Database](#) ➔



THREE TRACKS OF STUDY



Three specialty tracks focus your skills on what matters most to your career. Each track has three courses and students may complete more than one track.



QUALITY ASSURANCE AND COMPLIANCE TRACK

Focus on quality control and validation in product design, development, automation, and manufacturing. Examine key regulatory agencies and practices, including FDA and ICH regulations, clinical trials, and consumer and environmental protection methods, within the highly-regulated and diverse biotechnology industry.

- » ABT 735 | Quality Control and Validation
- » ABT 740 | Regulatory Practice and Compliance
- » ABT 745 | Industrial Applications in Regulatory Affairs



BUSINESS MANAGEMENT TRACK

Learn marketing and commercialization strategies, including pharmaceutical and b2b marketing, while exploring supply and distribution processes specific to biotechnology, corporate social responsibility, and sustainability. Gain competence in quality and project management from R&D to market.

- » ABT 750 | Biotechnology Marketing and Entrepreneurship
- » ABT 755 | Global Operations and Supply Chain Management
- » ABT 760 | Quality and Project Management



RESEARCH AND DEVELOPMENT TRACK

Explore strategies in evaluating scientific discovery and implementing new products within biotechnology including market valuation, intellectual property, patents, and licensing, and scaling and growth. Learn how to apply computational methods and data analysis to solve a problem.

- » ABT 765 | Assessing Innovation in Biotechnology
- » ABT 770 | Product Development
- » ABT 775 | Tools for Data Analysis

UNIVERSITY OF WISCONSIN GRADUATE CERTIFICATE IN **APPLIED BIOINFORMATICS**



4 Courses. 12 Credits. 100% Online.

The **Graduate Certificate in Applied Bioinformatics** is offered through the UW Master of Science in Applied Biotechnology program. Key drivers of growth in bioinformatics include an acceleration of data generation in the biological sciences combined with the need to use that data to make better scientific decisions.

MAKE THE CONNECTION BETWEEN THE LIFE SCIENCES AND DATA SCIENCE

Learn how to process biological data from scientific research, such as large-scale genomics and other molecular and biological datasets, using computation and analysis tools. Gain proficiency in applied statistics, machine learning, data visualization, programming, and other techniques to aid in scientific discovery.

APPLIED BIOINFORMATICS CURRICULUM

This certificate focuses on the specialized skills and knowledge required in bioinformatics through four courses, completed entirely online.

- » **ABT 720** | Experimental Design and Analysis in Biotechnology
- » **ABT 730** | Python for Bioinformatics
- » **ABT 780** | Bioinformatic Inquiry
- » **ABT 785** | Applications of Bioinformatics

Students in the Master of Science in Applied Biotechnology program may choose to earn the certificate as an additional credential.



“Bioinformatics represents the marriage of science and computing. Our capacity to generate large amounts of data is greater than ever, and the ability to organize and access that information blazes a trail to discovery.”

—Mark E. Levenstein, Academic Director,
MS in Applied Biotechnology, UW-Platteville



HOW DO THESE PROGRAMS PREPARE ME TO WORK IN BIOTECH?



An advisory board, whose members include biotechnology experts with experience in practice areas such as genetic testing, cell and gene therapy, R&D of cancer detection, laboratory instrumentation, intellectual property rights, pharmaceutical development, and agriscience, ensures the curriculum in the **Master of Science in Applied Biotechnology** and the **Graduate Certificate in Applied Bioinformatics** stays relevant to emerging trends in biotechnology. You'll graduate with confidence that your skills and knowledge will match employer needs and expectations.

ADMISSION REQUIREMENTS



- Bachelor's degree from an accredited university (min. 3.0 GPA)
- Prerequisite coursework
- **Master of Science in Applied Biotechnology:** Two semesters college-level biology and/or chemistry with lab
- **Graduate Certificate in Applied Bioinformatics:** One semester college-level biology with lab

You will also need to submit the following application materials:

- Official college transcripts
- Your resume
- Two letters of recommendation (can be professional or academic)
- A personal statement of up to 1,000 words describing the reasons behind your decision to pursue this degree or certificate

The GMAT or GRE are not required.

TUITION



Tuition is a flat fee per credit whether you live in Wisconsin or out of state. Financial aid and/or veteran's assistance may be available to those who qualify. Refer to your home campus for more information.



\$850 Per Credit



\$26,350 Total for 31 Credits



"Due to my busy schedule, I'm not confident I would have been able to complete a course if it weren't for the flexible, online format. Discussion modules offered a great chance to interact with colleagues, share perspectives, and learn from one another. Assignments are truly relevant to those working in the science field. I genuinely feel more confident and capable in discussing topics like PCR and cloning at my work."

—Erick, Applied Biotechnology master's student



GET STARTED



Enroll any semester, spring, summer, or fall.

uwex.wisconsin.edu
1-608-800-6762 | learn@uwex.wisconsin.edu

[Schedule an appointment with an enrollment adviser](#)



MASTER OF SCIENCE IN APPLIED BIOTECHNOLOGY



GRADUATE CERTIFICATE IN APPLIED BIOINFORMATICS

Program powered by:



UNIVERSITY OF WISCONSIN
extended campus