APPLIED BIOINFORMATICS CERTIFICATE

Department website (https://www.uwp.edu/learn/programs/appliedbioinformatics.cfm)

The Graduate Certificate in Applied Bioinformatics is being offered through the established collaborative online MS in Applied Biotechnology and will include both existing and new courses. The certificate represents a fully online, asynchronous curriculum comprised of 12 credits to include four courses. As is the case with the MS in Applied Biotechnology degree, UW-Green Bay, UW-Madison, UW-Oshkosh, UW-Parkside, UW-Platteville, UW-Stevens Point, and UW-Whitewater will offer the certificate jointly. The program will serve as both an in-program learning opportunity and additional credential for MS-ABT degree-seeking students as well as a freestanding certificate program for non-degree (certificate-only) seeking students who may or may not elect to continue to the MS degree program. Students will select and enroll at a home campus from which they will receive academic supports and the certificate is conferred.

Program Learning Outcomes

Upon completion of this certificate, students will be able to demonstrate proficiency in the following program learning outcomes aligned with the M.S. in Applied Biotechnology program.

- Competency A: Demonstrate professional and scientific communication appropriate for biotechnology settings
  - Program Outcome 1: Select the most appropriate modalities, methodologies, tools, and practices to communicate complex ideas effectively across diverse audiences.
  - Program Outcome 3: Construct and deliver effective, professional presentations
- Competency B: Demonstrate comprehensive understanding of organizational processes and product development pipelines
  - Program Outcome 4: Evaluate and describe systems of product research, development, and production
- Competency C: Distinguish among diverse methods and technologies and their applications in biotechnology
  - Program Outcome 8: Compare and contrast emerging with existing technologies
  - Program Outcome 9: Exhibit strong technical knowledge to evaluate and choose appropriate technologies
  - Program Outcome 10: Demonstrate the ability to read, interpret and apply scientific literature
  - Program Outcome 11: Demonstrate competency in data analyses and statistics used in biotechnology
- Students will also demonstrate proficiency in this certificate-specific program outcomes:
  - Demonstrate competency in use of python programming strategies to solve problems in bioinformatics
  - Demonstrate the ability to integrate python programming strategies with complementary resources, especially UNIX, GitHub, and libraries.

Requirements for the Graduate Certificate in Applied Bioinformatics

Admission requirements for the Graduate Certificate in Applied Bioinformatics program will include a Bachelor's degree and a 3.0 undergraduate GPA. Program prerequisite will include General Biology with lab.

Successful completion of the certificate requires a grade of C or better in each of the certificate courses and a certificate GPA of 3.0 or better.

Code	Title	Credits
Required Courses		
ABT 720	Experimental Design and Analysis in Biotechnology	3
ABT 730	Python for Bioinformatics	3
ABT 780	Bioinformatics Inquiry	3
ABT 785	Applications of Bioinformatics	3
Total Credits		**12**

University Requirements for Graduate Certificates

Graduate certificates are designed for students at one of the following levels:

- Students who have completed a baccalaureate or higher degree from a regionally accredited institution and are enrolled for graduate credit
- Students who are enrolled simultaneously in a graduate degree program

Students must meet the admission requirements of a degree seeking or non-degree seeking graduate student to be eligible to earn a graduate certificate. At least 75% of the credits must be earned after completion of a baccalaureate or higher degree and students must attain a GPA of 3.00 within the certificate courses.

Certificate programs are designed to develop a particular expertise or set of skills. Graduate certificate programs will require a minimum of 8 graduate-level credits. For graduate certificates, at least 50% of the credits must be at the 700 level. At least 60% of the credits for the graduate certificates must be earned at UW-Parkside for program residency. Individual departments and programs may require more than 60% of the credits to be taken at UW Parkside.

Certificate programs should not be confused with certification or licensure programs which lead to certification by an outside agency.