

# BIOTECHNOLOGY EDUCATION, CERTIFICATE

---

## Graduate Certificate in Biotechnology Education (<https://advanced.jhu.edu/academics/certificates/biotechnology-education/>)

The Graduate Certificate in Biotechnology Education program blends the fundamental and emerging ideas in biotechnology and the teaching and learning of bioscience at the middle and high school levels.

Middle and secondary teachers and curriculum and instructional leaders will strengthen their content knowledge and pedagogical techniques and develop effective teaching methods.

This certificate program consists of five graduate-level courses, including the Independent Research Project course, which emphasizes inquiry-oriented approaches and technology integration in bioscience education.

## Admissions Criteria for all Advanced Academic Programs (<https://e-catalogue.jhu.edu/arts-sciences/advanced-academic-programs/enrollment-services/admission/>)

### Program Specific Requirements

- Bachelor's degree from an accredited U.S. college or university. A bachelor's degree in the life sciences is recommended.
- Minimum GPA of 3.0 on a 4.0 scale. Meeting the minimum GPA requirement does not guarantee admission.

## Program Requirements

Code	Title	Credits
<b>Core Courses - Required:</b>		
AS.410.303	Foundations in Bioscience	4
AS.410.601	Biochemistry	4
AS.410.602	Molecular Biology	4
AS.410.800	Independent Research in Biotechnology	4
<b>Core Courses - Customizable</b>		
Select at least one of the following: <sup>1</sup>		4
AS.410.652	Mammalian Cell Culture Techniques	
AS.410.656	Recombinant DNA Laboratory	
AS.410.658	Biodefense & Infectious Disease Laboratory Methods	
AS.410.660	Immunological Techniques in Biotechnology	
<b>Total Credits</b>		<b>20</b>

<sup>1</sup> Students must enroll in one laboratory courses offered at the Homewood campus. Laboratory courses are not offered online.

See course descriptions in the Center for Biotechnology Education ([https://e-catalogue.jhu.edu/course-descriptions/\\_biotechnology/](https://e-catalogue.jhu.edu/course-descriptions/_biotechnology/)).