

# BIOTECHNOLOGY ENTERPRISE, CERTIFICATE

Students who want a solid understanding of the biotechnology enterprise and are well-versed in the scientific aspects can apply to the Certificate in Biotechnology Enterprise program.

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

## Program Requirements

Code	Title	Credits
<b>Required Courses</b>		
Select two of the following:		8
AS.410.643	Managing and Leading Biotechnology Professionals	
AS.410.644	Marketing Aspects of Biotechnology	
AS.410.680	Finance for Biotechnology <sup>1</sup>	
AS.410.689	Leading Change in Biotechnology	
<b>Electives</b>		
Select two-three of the following for a total of five courses:		8-12
AS.410.607	Proseminar in Biotechnology	
AS.410.627	Translational Biotechnology:From Intellectual Property to Licensing <sup>1</sup>	
AS.410.642	Economic Dynamics of Change in Biotechnology	
AS.410.643	Managing and Leading Biotechnology Professionals	
AS.410.644	Marketing Aspects of Biotechnology	
AS.410.645	Biostatistics <sup>1</sup>	
AS.410.646	Creating a Biotechnology Enterprise	
AS.410.647	Research Ethics	
AS.410.649	Introduction to Regulatory Affairs	
AS.410.650	Legal Aspects of Biotechnology	
AS.410.651	Clinical Development of Drugs and Biologics <sup>1</sup>	
AS.410.665	Bioscience Communication	
AS.410.684	Technology Transfer & Commercialization	4
AS.410.687	Ethical,Legal & Regulatory Aspects of the Biotechnology Enterprise	
AS.410.688	Project Management in Biotechnology	
AS.410.703	Strategic Planning for the Biotechnology Enterprise	
AS.410.704	Social Entrepreneurship in BioScience	
AS.410.728	Managing Innovation in the Life Sciences	
AS.410.732	Funding a New Venture	
AS.410.756	Grants and Federal Funding for Biotechnology Enterprises	
Total Credits		20-24

**Note:** This list is subject to change. Please contact the program director to determine if an elective will count toward the certificate.

See course requirements in the Center for Biotechnology Education (<http://e-catalog.jhu.edu/arts-sciences/advanced-academic-programs/programs/center-biotechnology-education/>).

Certificate requirements consist of five courses. Students may take either two or three of the required courses and then complete two to three of the elective courses listed below for a total of five courses. (While most courses have no science prerequisites, students should not enroll in AS.410.627 Translational Biotechnology:From Intellectual Property to Licensing or AS.410.651 Clinical Development of Drugs and Biologics unless they have a strong background in molecular biology, or have taken the core courses AS.410.601 Biochemistry and AS.410.602 Molecular Biology.)

<sup>1</sup> Also counts as science elective