BIOPHARMACEUTICAL PROCESS DEVELOPMENT (GRADUATE CERTIFICATE)

Contacts

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Program Description

- **STEM designated program**

The 12-credit Graduate Certificate in Biopharmaceutical Process Development curriculum is designed to credibly prepare students who have already earned a Bachelor's Degree in Engineering or Life Sciences for a variety of technical jobs in biomanufacturing. The curriculum is interdisciplinary and emphasizes inquiry, laboratory- and pilot-plant scale-based learning, and team building. We see the BPD Certificate as strongly allied to Jefferson's core mission of educating scientists and engineers for fruitful careers in biomanufacturing. A primary learning outcome of the BPD Certificate is to provide students with the basic professional skills to operate effectively in technical entry level roles in biomanufacturing.

Students also gain an understanding of the regulatory environment in which biomanufacturing operates, and the Certificate prides itself on the team-based projects that pervade the curriculum with A focus on communication and team-work skills.

The 12-credit BPD Certificate is intended to bridge the gap between traditional undergraduate courses in life sciences and engineering and the skills required for a successful career in 21st century biopharmaceutical industries. Students will gain the basic skills needed for entry level positions in biomanufacturing.

Curriculum: 12 Credits

Code	Title	Credits
BP 601	Bas Engineering for Scientists	2
or BP 602	Bas Biochem & Bio for Engineer	
BP 603	Intro to Biopharm Processing	2
BP 605	Intro to Upstream Unit Oper	4
BP 604	Intro to Downstream Unit Oper	4
Total Credits		**12**