

# Master of Engineering in Biopharmaceutical Processing

## MEng

The MEng program is designed for individuals to bridge the gap between traditional undergraduate programs in life sciences and engineering and develop the skills required for a successful career in development and manufacturing for the biopharmaceutical industry. Students will gain these skills through a combination of coursework, workshops, hands-on training, internships, projects and research.

## Highlights



### Hands-on learning

Students benefit from active learning, laboratory classes, and summer internships



### Meet the demand

The MEng program educates students to meet industry needs for a skilled workforce in biologics



### Industry connection

Opportunities to develop a powerful network of senior academic and industry experts

### Team Design Project | TDP

All second year MEng students complete the capstone TDP, which provides students with real-world experience of taking a drug molecule candidate to full-scale production. Students work in teams to design a complete biomanufacturing process capable of producing commercial quantities of a drug product. Teams are guided by a panel of academic and industry experts. Each team works on a separate design project using industry best practice while applying innovative methods and technologies. At the end of the academic year, students present a report of their work at a session with KGI faculty and industry participants.



## About the program

### Year 1

- Core courses combine to build basic skills in biopharmaceutical processing
- Foundational courses enhance knowledge not directly related to student's undergraduate degree
- Fundamental courses in quality/regulatory, business, and science

### Summer

Students choose one of the following options:

- Paid industry internship
- KGI research project

### Year 2

- Courses designed to apply real-world skills and knowledge in emerging fields
- Advanced technical, management, and professional skill development courses
- Team Design Project to create an innovative solution to a bioprocess engineering design challenge



## What can I do with this degree?

### Career options

- Process development scientist and engineer
- Regulatory scientist
- Manufacturing science and technology (MS&T) specialist
- Process design engineer
- Process technology transfer and validation specialist
- Upstream—cell culture specialist
- Downstream—purification specialist
- Finished Product—formulation, filling, and lyo specialist
- Technology innovation specialist
- Project management
- Product and portfolio management

## Some employers of MEng graduates

- |                           |                         |
|---------------------------|-------------------------|
| • Amgen                   | • Satorius              |
| • Atara Bio               | • Ambrx                 |
| • Genentech               | • Celltheon             |
| • Giliead                 | • General Electric      |
| • Boeringer Ingelheim     | • Catalent              |
| • Abzena                  | • InstillBio            |
| • ThermoFisher Scientific | • Machine Bio           |
| • FDA                     | • Upside Foods          |
| • Astra Zeneca            | • Just Evotec Biologies |
| • BioMarin                | • GenVivo               |
| • Kite                    | • Allogene              |
| • Allogene                | • Broadley James        |
| • Takeda                  | • And many more.        |

## How to apply

### Dates and deadlines

**Start terms:** Fall

**Application deadline:** December 15 (priority), rolling admissions thereafter

### Application requirements:

- Completed online application
- Personal statement
- Resume
- Letter of recommendation
- Transcripts
- English language proficiency (TOEFL, PTE, IELTS, iTEP)
- \$75 non-refundable application fee

### Admission interviews:

- Phone
- Virtual
- On-campus

*Admitted students are required to submit a \$400 non-refundable enrollment fee to hold their spot in the program.*



## Contact us

### Keck Graduate Institute

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ℹ For more information, please visit [kgi.edu/meng](https://kgi.edu/meng)