

INDUSTRY QUOTES



Massachusetts Life Sciences Center

"The workforce training you provide is top notch, high value, and deeply respected by the biomanufacturing community in Massachusetts and beyond."

- **Travis McCready, President & CEO**

Shire

"As a hiring manager, I look for prospective employees who are both technically competent and who possess the skills required to learn on the job. Working in a highly technical and strictly regulated field requires employees who are able to follow precise procedures but also to think critically about the task."

The Quincy College Biotechnology program consistently produces graduates that are prepared for this competitive marketplace."

- **Shawn Fitzpatrick, Bioreactor Operations Leader- MFG**

Repligen

"The training programs that Quincy College has created, enables their students to enter the biopharmaceutical manufacturing industry with both the theoretical and hands on experience required by the industry."

- **Don King, Senior Director Manufacturing**

MassBiologics

"MassBiologics of the University of Massachusetts Medical School has hired several graduates from the Quincy College Biotechnology & GMP Program. Those graduates have been hired directly into several departments in our cGMP environment including; Manufacturing, Supply Chain, Quality Control, and Quality Assurance. Without exception, each of those graduates has developed into a high performing member of their respective team. MassBiologics hiring managers now regard credentials from the Biotechnology & GMP programs to be a differentiator in the applicant screening process."

- **Frank Fazio, Deputy Director**

BIOTECHNOLOGY AND GMP

GOOD MANUFACTURING PRACTICE

QUINCY COLLEGE

Associate of Science Degree

2 years

Certificate

10 months

Professional Development & Custom Short Courses

1-5 days



QUINCY COLLEGE PARTNERS



QUINCYCOLLEGE.EDU/BTC



Students learn the theory and instrumentation behind upstream and downstream manufacturing processes for both traditional and single-use technologies.

Training Program and Industry Collaboration

This program is designed to equip students with specific skills for employment in the Biopharmaceutical and Biotechnology industry.

Areas of training include:

Regulatory

GMP, cGMP, FDA, and ICH

Validation

Equipment and Final Product

Process Control

Operation of Automated Systems

Quality Control

Bioburden, Endotoxin, Air Sampling

Upstream Bioprocessing

Cell Culture, Wave Rockers, Bioreactors

Downstream Bioprocessing

Filtration TFF:UF/DF, AKTA Protein Purification

Curriculum for this training program was established eight years ago with industry professionals. This program was established eight years ago with industry collaboration to ensure students are equipped with the required skills for the biomanufacturing industry. Curriculum is updated periodically with industry partner's participation (Shire, GE, Biogen, MassBiologics, RA Pharmaceuticals, and Takeda).

Associate Degree & Certificate Program Outcomes

450 hours of hands-on training and the practical experience that will allow them to excel in the biomanufacturing industry. Class size is restricted to a maximum of 16.

Associate Degree Program

	FALL 2014	SPRING 2015	FALL 2015	SPRING 2016	FALL 2016	SPRING 2017	3 year totals
Enrolled	14	32	13	23	11	23	116
Graduated		14		10		8	32

98% job placement of Graduates (3 yr/avg)

Certificate Program (10 months; two cohorts/yr)

	FALL 2014	SPRING 2015	FALL 2015	SPRING 2016	FALL 2016	SPRING 2017	3 year totals
Enrolled	21	28	32	35	32	33	181
Graduated		10	13	13	11	15	62

92% job placement of Graduates (3 yr/avg)



Industry Professional Development Short Courses (1-5 Days)

Virtual Lab - Upstream Processing

<https://atelearning.com/qcbio/>

Login: Your email address | **Password:** qcbtc

Instrumentation (Lecture 25%/Lab 75%)

- **AKTA pure system** (Unicorn software)
- **HPLC Agilent**
- **GC Agilent**
- **TFF UF/DF**
- **Packing and validation of small columns** (HETP; Asymmetry)
- **Quality Control** (Bioburden, Endotoxin, Air Sampling (Viable/nonviable))

Upstream & Downstream Processing (Lecture 20%/Lab 80%)

- **Microbial** (Applikon 3L Traditional bioreactor and Controller)
- **Mammalian** (CHO Cells) (Single-use systems: shake flask, wave reactor, XDR-10 bioreactor); Harvest & Clarification; Concentration; Protein Purification

Laboratory Techniques (Lecture 10%/Lab 90%)

- **Aseptic techniques:** biosafety cabinets etc.
- **Cell count:** automated, hemocytometer
- **Pipetting Skills:** Serial dilutions and Standard plots
- **Spectrophotometry:** UV/Vis (Protein/DNA concentration; Protein spectra)
- **Electrophoresis:** Protein and DNA

Science for the non-Scientist

How biotechnology impacts your daily life (50% hands-on)

- Gene Therapy, GMO's, Pollution, Cell Therapy, etc.

Customizable Courses Available Upon Request



For more info please contact

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