State-Approved (Chapter 74)
Program Overview

Biotechnology

One of the fastest-growing career fields in the U.S., Biotechnology involves the science and business of developing new medical tests and treatments.

What Students Learn & Do

In Biotechnology programs, students learn to perform laboratory tests and procedures while deepening their understanding of this scientific and business field.

As they learn concepts from the fields of chemistry, genetics, microbiology and molecular biology, students examine the smallest components of human, plant and animal life. Technical training covers laboratory techniques and safety standards and as well as methods for studying cells, proteins, genes and other biological materials. Career exploration helps students understand the preparation and training required for careers in research, product development, pharmaceuticals, medicine, public health, business, and manufacturing.

Biotechnology students are required to meet the same high academic standards as their peers in other high school programs. These standards are set by the State of Massachusetts. In addition, students learn about real-world applications of scientific principles and the latest innovations in medicine.

Licenses & Certifications

Programs will prepare students to earn industry-recognized credentials, and typically students will be able to complete one or more before they graduate from high school. Examples:

- OSHA 10-hour Card: Health
- AHA CPR/First-Aid

Options After High School

State-Approved (Chapter 74) programs provide precise training needed for entry-level employment in this in-demand career field. Here are some possible Biotechnology career options.

High School Diploma

- Laboratory Assistant
- Biomanufacturing Technician

Trade School or Associate Degree

- Research Laboratory Technician
- Quality Assurance Associate
- Genomics Associate

Bachelor's Degree (4 Years of College)

- Laboratory Manager
- Forensic Science Technician

Advanced Degree
M.S., M.P.H., MBA, MD, Ph.D. Pharm.D.

- Research Scientist
- Pharmaceutical Executive
- Medical Doctor
- Professor
- Pharmacist

Questions to Ask a Program You Are Considering

1. **What workplace experiences do you offer to students - at school, or with an employer?**
2. **What are some common next steps for graduates of this program and how do you support them to get there?**

Learn about differences between State-Approved (Chapter 74) and Local programs:
http://www.doe.mass.edu/ccte/cvte/cte-families/state-vs-local.html

MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND SECONDARY EDUCATION

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