

BIO-SCIENCE / ENGINEERING CLUSTER

INDUSTRY CERTIFICATIONS

- OSHA 10-Hour General Industry Safety

POSSIBLE CAREER PATHWAYS

- Aerospace/Aeronautical/Astronautical Engineer
- Agricultural Engineer
- Bioengineering and Biomedical
- Chemical Engineer
- Civil Engineering
- Computer Engineer
- Electrical/Electronics and Communications
- Electronics Engineer
- Industrial/Manufacturing Engineer
- Marketing/Sales Engineer
- Mechanical Engineer
- Nuclear Engineer
- Patent Attorney
- Petroleum Engineer
- Robotics Engineer

STARTING SALARY*

Earnings for engineers vary significantly by specialty
Average between:

\$41,100 - \$126,788

*Source: Occupational Outlook Handbook, 2010-2011.

COLLEGE PARTNERS

- Bristol Community College
- Rochester Institute of Technology
- UMass Lowell/Francis College of Engineering



Engineering Technology

PROGRAM DESCRIPTION

The Engineering Technology program is a very academically and technologically comprehensive program in various disciplines of engineering with emphasis on the engineering process and thinking. A variety of state-of-the-art equipment is utilized in transferring engineering skills to the students. Computer applications, professional communication skills, and strong work ethic are emphasized throughout the 3.5 years of the program. All learners are challenged to meet high standards and high expectations while receiving the necessary supports for success. The program's focus is on preparing students for a variety of career opportunities where STEM (Science, Technology, Engineering, and Math) concepts and skills are integrated with academic and technical knowledge. We also understand the importance of human relations, self-management, teamwork, and leadership. Our students will be participating in a global society that will expect individuals who are sensitive to ethical issues, interpersonal relations, cultural diversity, and continuous learning to keep pace with changing technologies. Our discipline provides rigorous and relevant learning opportunities for core content (English, math, science, and social studies) as well as those educational skills and competencies needed for a high level of performance within any discipline of engineering. The academic and technical content areas are interrelated enabling an individual to use the content for conducting research, generating possible solutions, and making valuable decisions based on facts.

COURSE CONTENT

- Basic Electronics
- Intro to Engineering Design (IED):
 - Technical Sketching
 - Measurement & Statistics
 - Design Solutions
 - Reverse Engineering
 - Engineering Design Ethics
 - Design Teams
- CAD - Computer Aided Design
- Digital Electronics
- Total Quality Management
- Instrumentation & Process Control
- Intro to Programmable Logic
- Controllers - Part 1 (PLCs)
- Introduction to Automation
- Engineering Communications
- Sustainability & Green Technologies

SIGNIFICANT POINTS

- Employment is projected to grow about as fast as the average for all occupations, although growth will vary by specialty; overall job opportunities for engineers are expected to be good.
- Starting salaries are among the highest of all college graduates.
- Continuing education is critical for engineers in order to keep up with improvements in technology.

ADVISORY COMMITTEE PARTNERS

Insight Technology, Knowledge Rules Inc., Middlesex Community College, MIT Lincoln Laboratory, Northeast Technical Systems, Raytheon, Teradyne, Inc., The MITRE Corporation

