

# Industry Credentials, Concentration Sequences, and Career Clusters

## Biomedical Engineering (8467)

### Industry Credentials:

*These apply only to 36-week courses.*

- College and Work Readiness Assessment (CWRA+)
- National Career Readiness Certificate Assessment
- Workplace Readiness Skills for the Commonwealth Examination

### Concentration Sequences:

*A combination of this course and those below, equivalent to two 36-week courses, is a **concentration sequence**. A **program completer** is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program. Students wishing to complete a specialization may take additional courses based on their career pathways.*

- Biotechnology Foundations in Agricultural and Environmental Science (8085/36 weeks)
- Biotechnology Foundations in Health and Medical Sciences (8344/36 weeks)
- Biotechnology Foundations in Technology Education (8468/36 weeks)
- Engineering Explorations I (8450/36 weeks)
- Engineering Practicum IV (8453/36 weeks)

### Career Clusters, Career Pathways, and Occupations:

- Agriculture, Food and Natural Resources
  - Animal Systems
    - Animal Geneticist
    - Animal Scientist
  - Food Products and Processing Systems
    - Food Scientist
  - Natural Resources Systems
    - Microbiologist
  - Plant Systems
    - Botanist
    - Plant Breeder/ Geneticist
  - Power, Structural, and Technical Systems
    - Agricultural Engineer
- Health Science

- Biotechnology Research and Development
  - Biochemist
  - Cell Biologist
  - Medical, Clinical Laboratory Technician
  - Research Assistant
- Health Informatics
  - Bioinformatics Technician
- Support Services
  - Medical, Clinical Laboratory Technologist
- Therapeutic Services
  - Physician
  - Surgeon
- Science, Technology, Engineering, and Mathematics
  - Engineering and Technology
    - Agricultural Engineer
    - Biomedical Engineer
    - Chemical Engineer
    - Human Factors Engineer
    - Industrial Engineer
    - Industrial Engineering Technician
  - Science and Mathematics
    - Biologist
    - Botanist
    - Environmental Scientist
    - Microbiologists
    - Plant Breeder and Geneticist