

Industry Credentials, Concentration Sequences, and Career Clusters

Biotechnology Foundations in Agricultural and Environmental Science (8085)

Industry Credentials:

These apply only to 36-week courses

- Agricultural Biotechnology Assessment
- Animal Systems Assessment
- Biotechnology Assessment
- Certified Commercial Pesticide Applicator Examination
- Certified Private Applicator Examination
- Certified Registered Technician Pesticide Applicator Examination
- College and Work Readiness Assessment (CWRA+)
- Customer Service Specialist (CSS) Examination
- Natural Resource Systems Assessment
- Production Agriculture 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.*

- Applied Agricultural Concepts (18 Weeks)
- Applied Agricultural Concepts (36 Weeks)
- Biological Applications in Agriculture
- Biomedical Engineering
- Biomedical Technician
- Biotechnology Applications in Agriculture
- Ecology and Environmental Management (18 Weeks)

- Ecology and Environmental Management (36 Weeks)
- Equine Science (18 Weeks)
- Equine Science (36 Weeks)
- Equine Science, Advanced
- Fisheries and Wildlife Management
- Food Science and Dietetics
- Forensic Technology
- Forestry Management
- Forestry Management, Advanced
- Foundations of Agriculture, Food, and Natural Resources
- Greenhouse Plant Production and Management
- Horticulture Sciences
- Introduction to Animal Systems
- Introduction to Natural Resources and Ecology Systems
- Introduction to Plant Systems
- Medical Laboratory Technology I
- Medical Laboratory Technology II
- Small Animal Care I (18 Weeks)
- Small Animal Care I (36 Weeks)
- Small Animal Care II
- Veterinary Science I
- Veterinary Science II

Career Clusters, Career Pathways, and Occupations:

- Agriculture, Food and Natural Resources
 - Animal Systems
 - Animal Breeder, Husbandry
 - Animal Geneticist
 - Animal Scientist
 - Aquacultural Manager
 - Environmental Service Systems
 - Environmental Compliance Inspector
 - Environmental Sampling and Analysis Technician
 - Toxicologist
 - Food Products and Processing Systems
 - Biochemist
 - Food Scientist

- Natural Resources Systems
 - Ecologist
 - Fisheries Technician
 - Forest Technician
 - Microbiologist
- Plant Systems
 - Botanist
 - Certified Crop Advisor
 - Crop Grower
 - Forest Geneticist
 - Ornamental Horticulturist
 - Soil and Plant Scientist
 - Tree Surgeon
 - Plant Breeder/Geneticist
- Power, Structural, and Technical Systems
 - Agricultural Engineer
- Health Science
 - Biotechnology Research and Development
 - Biochemist
 - Cell Biologist
 - Research Assistant
 - Diagnostics Services
 - Cardiovascular Technologist
 - Computer Tomography (CT) Technologist
 - Medical, Clinical Laboratory Technician
 - Radiologic Technologist, Radiographer
 - Health Informatics
 - Epidemiologist
 - Support Services
 - Environmental Sampling and Analysis Technician
 - Medical, Clinical Laboratory Technologist
- Science, Technology, Engineering and Mathematics
 - Engineering and Technology
 - Agricultural Engineer
 - Biomedical Engineer
 - Environmental Engineer
 - Petroleum Engineer
 - Science and Mathematics

- Animal Nutritionist
- Animal Scientist
- Biologist
- Botanist
- Chemist
- Ecologist
- Environmental Scientist
- Geoscientist
- Hydrologist
- Microbiologist
- Oceanographer
- Plant Biologist
- Plant Breeder/Geneticist
- Plant Pathologist
- Research Chemist
- Secondary School Teacher
- Toxicologist
- Veterinarian