

Industry Credentials, Concentration Sequences, and Career Clusters

Biological Applications in Agriculture (8086)

Industry Credentials:

These apply only to 36-week courses.

- Agricultural Biotechnology Assessment
- Animal Systems Assessment
- Biotechnology Assessment
- College and Work Readiness Assessment (CWRA+)
- Customer Service Specialist (CSS) Examination
- National Career Readiness Certificate Assessment
- Natural Resources Systems Assessment
- Production Agriculture Assessment
- Small Animal Science and Technology 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 (8072/18 weeks)
- Applied Agricultural Concepts (8073/36 weeks)
- Biotechnology Applications in Agriculture (8087/36 weeks)
- 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)
- Ecology and Environmental Management (8046/36 weeks)
- Ecology and Environmental Management (8045/18 weeks)
- Equine Science (8015/18 weeks)
- Equine Science (8080/36 weeks)
- Equine Science, Advanced (8094/36 weeks)
- Fisheries and Wildlife Management (8041/36 weeks)
- Floriculture (8038/36 weeks)
- Food Science and Dietetics (8239/36 weeks)

- Forestry Management (8042/36 weeks)
- Forestry Management, Advanced (8044/36 weeks)
- Greenhouse Plant Production and Management (8035/36 weeks)
- Horticulture Sciences (8034/36 weeks)
- Introduction to Animal Systems (8008/36 weeks)
- Introduction to Natural Resources and Ecology Systems (8040/36 weeks)
- Introduction to Plant Systems (8007/36 weeks)
- Small Animal Care I (8081/18 weeks)
- Small Animal Care I (8083/36 weeks)
- Small Animal Care II (8084/36 weeks)
- Veterinary Science I (8088/36 weeks, 140 hours)
- Veterinary Science II (8089/36 weeks, 140 hours)

Career Clusters, Career Pathways, and Occupations:

- Agriculture, Food and Natural Resources
 - Animal Systems
 - Animal Breeder, Husbandry
 - Animal Geneticist
 - Animal Nutritionist
 - Animal Scientist
 - Aquacultural Manager
 - Poultry Manager
 - Veterinarian
 - Veterinary Technician
 - Environmental Service Systems
 - Environmental Compliance Inspector
 - Environmental Sampling and Analysis Technician
 - Hazardous Materials Handler
 - Recycling Coordinator
 - Secondary School Teacher
 - Toxicologist
 - Turf Farmer
 - Water Conservationist
 - Food Products and Processing Systems
 - Biochemist
 - Food Scientist
 - Natural Resources Systems
 - Ecologist
 - Fish and Game Officer
 - Fisheries Technician
 - Forest Manager, Forester
 - Forest Technician
 - Geological Technician
 - Microbiologist
 - Plant Systems

- Botanist
 - Certified Crop Advisor
 - Crop Grower
 - Forest Geneticist
 - Nursery and Greenhouse Manager
 - Ornamental Horticulturist
 - Plant Breeder/ Geneticist
 - Secondary School Teacher
 - Soil and Plant Scientist
 - Tree Surgeon
 - Turf Farmer
- Power, Structural, and Technical Systems
 - Agricultural Engineer
- Science, Technology, Engineering and Mathematics
 - Engineering and Technology
 - Agricultural Engineer
 - Science and Mathematics
 - Animal Nutritionist
 - Animal Scientist
 - Biologist
 - Botanist
 - Chemist
 - Ecologist
 - Environmental Scientist
 - Materials Scientist
 - Microbiologists
 - Oceanographer
 - Plant Breeder and Geneticist
 - Plant Pathologist
 - Research Chemist
 - Secondary School Teacher
 - Technical Writer
 - Toxicologist
 - Veterinarian
 - Veterinary Assistant