

Industry Credentials, Concentration Sequences, and Career Clusters

Ecology and Environmental Management (8045, 8046)

Industry Credentials:

These apply only to 36-week courses.

- College and Work Readiness Assessment (CWRA+)
- Customer Service Specialist (CSS) Examination
- Ecology Conservation & Management Examination
- National Career Readiness Certificate Assessment
- Natural Resources Systems 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.*

- Agricultural Business Fundamentals I (8022/36 weeks)
- Agricultural Business Management III (8026/36 weeks)
- Agricultural Business Operations II (8024/36 weeks)
- Applied Agricultural Concepts (8072/18 weeks)
- Applied Agricultural Concepts (8073/36 weeks)
- Biological Applications in Agriculture (8086/36 weeks)
- Biotechnology Applications in Agriculture (8087/36 weeks)
- Biotechnology Foundations in Agricultural and Environmental Science (8085/36 weeks)
- Community Forestry and Tree Management (8048/36 weeks)
- Fisheries and Wildlife Management (8041/36 weeks)
- Forestry Management (8042/36 weeks)
- Forestry Management, Advanced (8044/36 weeks)
- Introduction to Natural Resources and Ecology Systems (8040/36 weeks)
- Introduction to Plant Systems (8007/36 weeks)
- Outdoor Recreation, Parks, and Tourism Systems Management (8043/36 weeks)
- Sustainability and Renewable Technologies (8414/36 weeks)

Career Clusters, Career Pathways, and Occupations:

- Agriculture, Food and Natural Resources
 - Agribusiness Systems
 - Agricultural Commodity Broker
 - Agricultural Economist
 - Agricultural Loan Officer
 - Agricultural Products Sales Representative
 - Farm Products Purchasing Agent and Buyer
 - Farm, Ranch Manager
 - Farmer/Rancher
 - Feed, Farm Supply Store Sales Manager
 - Sales Manager
 - Animal Systems
 - Agricultural Products Sales Representative
 - Animal Breeder, Husbandry
 - Animal Geneticist
 - Animal Nutritionist
 - Animal Scientist
 - Aquacultural Manager
 - Poultry Manager
 - Veterinarian
 - Veterinary Technician
 - Environmental Service Systems
 - Agricultural Products Sales Representative
 - 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
 - Logging Equipment Operator
 - Microbiologist
 - Outdoor Recreation Guide

- Park Manager
 - Park Technician
 - Range Technician
 - Wildlife Manager
- Plant Systems
 - Agricultural Products Sales Representative
 - Botanist
 - Certified Crop Advisor
 - Crop Grower
 - Custom Harvester
 - Farm, Ranch Manager
 - Farmer/Rancher
 - Floral Designer
 - Floral Shop Manager
 - Forest Geneticist
 - Golf Course Superintendent
 - Machine Setter, Operator
 - 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
 - Agricultural Equipment Operator
 - Agricultural Equipment Parts Manager
 - Agricultural Equipment Parts Salesperson
 - Machinist
 - Parts Manager
 - Welder
- Science, Technology, Engineering, and Mathematics
 - Engineering and Technology
 - Chemical Engineer
 - Environmental Engineer
 - Science and Mathematics
 - Environmental Scientist
 - Oceanographer
 - Toxicologist