

Industry Credentials, Concentration Sequences, and Career Clusters

Introduction to Natural Resources and Ecology Systems (8040)

Industry Credentials:

These apply only to 36-week courses.

- College and Work Readiness Assessment (CWRA+)
- Customer Service Specialist (CSS) Examination
- Ecology Conservation & Management Examination
- FAA Remote Pilot Small Unmanned Aircraft Systems Certification Examination
- Forest Products and Processing Assessment
- 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)
- Agricultural Production Technology (8010/36 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)
- Cybersecurity in Food and Agriculture (8074/36 weeks)
- Ecology and Environmental Management (8045/18 weeks)
- Ecology and Environmental Management (8046/36 weeks)
- Fisheries and Wildlife Management (8041/36 weeks)
- Forestry Management (8042/36 weeks)
- Forestry Management, Advanced (8044/36 weeks)

- Foundations of Agriculture, Food, and Natural Resources (8006/36 weeks)
- Operating the Farm Business (8014/36 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**
 - **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
 - **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
 - Forest Geneticist
 - Nursery and Greenhouse Manager
 - Ornamental Horticulturist
 - Plant Breeder/ Geneticist
 - Secondary School Teacher
 - Soil and Plant Scientist
 - Tree Surgeon
- **Science, Technology, Engineering and Mathematics**
 - **Engineering and Technology**
 - Civil Engineer

- Civil Engineering Technician
- Environmental Engineer
- Human Factors Engineer
- **Science and Mathematics**
 - Ecologist
 - Environmental Scientist
 - Geoscientist
 - Hydrologist
 - Microbiologists
 - Oceanographer
 - Plant Biologist
 - Secondary School Teacher