

# 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
- College and Work Readiness Assessment (CWRA+)
- Customer Service Specialist (CSS) Examination
- Natural Resources Systems Assessment
- Production Agriculture Assessment

### 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)
- Biological Applications in Agriculture (8086/36 weeks)
- Biomedical Engineering (8467/36 weeks)
- Biomedical Technician (8347/36 weeks)
- Biotechnology Applications in Agriculture (8087/36 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)
- Food Science and Dietetics (8239/36 weeks)
- Forensic Technology (8409/36 weeks)
- Forestry Management (8042/36 weeks)
- Forestry Management, Advanced (8044/36 weeks)

- Foundations of Agriculture, Food, and Natural Resources (8006/36 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)
- Medical Laboratory Technology I (8377/36 weeks)
- Medical Laboratory Technology II (8378/36 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 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
    - Plant Breeder/ Geneticist
    - Soil and Plant Scientist
    - Tree Surgeon
  - 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
    - Microbiologists
    - Oceanographer
    - Plant Biologist
    - Plant Breeder and Geneticist
    - Plant Pathologist
    - Research Chemist
    - Secondary School Teacher
    - Toxicologist
    - Veterinarian