

# Industry Credentials, Concentration Sequences, and Career Clusters

## Engineered Energy Systems (ESS8411)

### Industry Credentials:

*These apply only to 36-week courses.*

- Energy Industry Fundamentals Certificate 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.*

- Energy Source Life Cycle (LC8411/36 weeks)

### Career Clusters, Career Pathways, and Occupations:

- Energy
  - Energy Efficiency
    - Electrical Engineer
    - Electrician
    - Environmental Engineer
    - Environmental Engineering Technician
    - HVAC and Refrigeration Mechanic or Installer
  - Fuels Production
    - Chemical Engineer
    - Chemist
    - Continuous Mining Machine Operator
    - First-Line Supervisor of Transportation and Material-Moving Machine and Vehicle Operator
    - Petroleum Engineer
    - Petroleum Technician
    - Service Unit Operator, Oil, Gas, and Mining
    - Wellhead Pumper
  - Power Generation
    - Control and Valve Installer, Repairer

- Electrical Engineering Technician
- Electronics Engineer
- Electronics Engineering Technician
- Engineering Manager
- Health and Safety Engineer
- Mechanical Engineer
- Nuclear Engineer
- Nuclear Power Reactor Operator
- Nuclear Technician
- Solar Photovoltaic Installer
- Transmission and Distribution
  - Electrical and Electronics Repairer, Powerhouse, Substation and Relay
  - Electrical Power Line Installer/Repairer
  - Electro-Mechanical Technician
  - Gas Compressor and Gas Pumping Station Operator
  - Pipefitter, Steamfitter
  - Plumber
  - Power Distributor, Dispatcher
  - Wind Turbine Service Technician
- Science, Technology, Engineering and Mathematics
  - Engineering and Technology
    - Chemical Engineer
    - Civil Engineer
    - Civil Engineering Technician
    - Computer Hardware Engineer
    - Computer Programmer
    - Computer Software Engineer
    - Electrical Drafter
    - Electrical Engineer
    - Electrical Engineering Technician
    - Electro-Mechanical Technician
    - Electronic Drafter
    - Electronics Engineering Technician
    - Engineer
    - Engineering Manager
    - Engineering Technician
    - Mechanical Drafter
    - Mechanical Engineer
    - Mechanical Engineering Technician
    - Network and Computer Systems Administrator
    - Network Systems and Data Communication Analyst
    - Nuclear Engineer
    - Petroleum Engineer
    - Pipeline Drafter
    - Power Systems Engineer
    - Quality Engineer

- Quality Technician
    - Statistician
    - Systems Analyst
    - Transportation Manager
  - Science and Mathematics
    - Occupational Health and Safety Specialist
- Transportation, Distribution and Logistics
  - Facility and Mobile Equipment Maintenance
    - Diesel Service Technician
    - Electrical and Electronic Installer
    - Electrical and Electronic Repairer
  - Health, Safety and Environmental Management
    - Health, Safety, and Environment Manager
  - Logistics Planning and Management Services
    - Logistics Manager
  - Transportation Systems/Infrastructure Planning, Management and Regulation
    - Civil Engineer
    - Civil Engineering Technician