

# Industry Credentials, Concentration Sequences, and Career Clusters

## Energy Source Life Cycle (LC8411)

### Industry Credentials:

*These apply only to 36-week courses*

- Energy Industry Fundamentals Certificate 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.*

- Engineered Energy Systems

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

- Energy
  - Energy Efficiency
    - Electrical Engineer
    - Electrician
    - Environmental Engineer
    - Environmental Engineering Technician
    - Environmental Science and Protection Technician
    - Environmental Scientist
    - 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
    - Geological Technician

- 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 Power Line Installer/Repairer
  - Electrical and Electronics Repairer, Powerhouse, Substation and Relay
  - 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
    - Computer Programmer
    - Electrical Drafter
    - Electrical Engineer
    - Electrical Engineering Technician
    - Electro-Mechanical Technician
    - Electronics Engineering Technician
    - Engineer
    - Engineering Manager
    - Engineering Technician
    - Mechanical Drafter

- Mechanical Engineer
- Mechanical Engineering Technician
- Network Systems and Data Communication Analyst
- Network and Computer Systems Administrator
- Nuclear Engineer
- Petroleum Engineer
- Pipeline Drafter
- Power Systems Engineer
- Quality Engineer
- Quality Technician
- Statistician
- Systems Analyst
- Science and Mathematics
  - Biologist
  - Botanist
  - Ecologist
  - Environmental Scientist
  - Geodetic Surveyor
  - Occupational Health and Safety Specialist
- Transportation, Distribution and Logistics
  - Facility and Mobile Equipment Maintenance
    - 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 Operations
    - Transportation Manager
  - Transportation Systems/Infrastructure Planning, Management and Regulation
    - Civil Engineer
    - Civil Engineering Technician