

# Industry Credentials, Concentration Sequences, and Career Clusters

## Power Generation Design and Function (PG8411)

### Industry Credentials:

*These apply only to 36-week courses.*

- College and Work Readiness Assessment (CWRA+)
- Energy Industry Fundamentals Certificate Assessment
- National Career Readiness 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.*

- Fundamentals of Power Generation (FP8411/36 weeks)

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

- Energy
  - Electrical Engineer
  - Electrician
  - Environmental Engineer
  - Environmental Engineering Technician
  - Environmental Science and Protection Technician
  - Environmental Scientist
  - Geoscientist
  - 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
  - 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 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
    - Environmental Engineer
    - 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
  - Chemist
  - Ecologist
  - Environmental Scientist
  - Geodetic Surveyor
  - Geoscientist
  - Occupational Health and Safety Specialist
  - Research Chemist
- Transportation, Distribution and Logistics
  - Health, Safety and Environmental Management
    - Health, Safety, and Environment Manager
  - Logistics Planning and Management Services
    - Logistics Analyst
    - Logistics Engineer
    - Logistics Manager
  - Transportation Systems/Infrastructure Planning, Management and Regulation
    - Civil Engineer
    - Civil Engineering Technician
    - Transportation Manager