

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