

# Industry Credentials, Concentration Sequences, and Career Clusters Engineering Studies (8491)

## Industry Credentials:

*These apply only to 36-week courses.*

- Autodesk Certified User Examinations
- Certified SOLIDWORKS Associate (CSWA) Examination
- College and Work Readiness Assessment (CWRA+)
- Manufacturing Technician Level I Certification Examination
- National Career Readiness Certificate Assessment
- Pre-Engineering Certification Examinations
- Pre-Engineering/Engineering Technology 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.*

- Engineering Computer Science (8449/36 weeks)
- Engineering Explorations I (8450/36 weeks)
- Engineering Practicum IV (8453/36 weeks)

## Career Clusters, Career Pathways, and Occupations:

- Science, Technology, Engineering and Mathematics
  - Engineering and Technology
    - Aerospace Engineer
    - Aerospace Engineering Technician
    - Agricultural Engineer
    - Architect
    - Assembler
    - Biomedical Engineer
    - Chemical Engineer
    - Civil Engineer
    - Civil Engineering Technician
    - Commercial and Industrial Designer
    - Computer Hardware Engineer

- Computer Programmer
- Computer Software Engineer
- Electrical Engineer
- Electrical Engineering Technician
- Electro-Mechanical Technician
- Electronics Engineering Technician
- Engineer
- Engineering Manager
- Engineering Technician
- Environmental Engineer
- Human Factors Engineer
- Industrial Engineer
- Industrial Engineering Technician
- Landscape Architect
- Manufacturing Systems Engineer
- Marine Engineer
- Materials Engineer
- Mechanical Drafter
- Mechanical Engineer
- Mechanical Engineering Technician
- Network and Computer Systems Administrator
- Network Systems and Data Communication Analyst
- Nuclear Engineer
- Petroleum Engineer
- Power Systems Engineer
- Production, Planning, Expediting Clerk
- Project Manager
- Quality Engineer
- Quality Technician
- Statistician
- Systems Analyst
- Technical Writer
- Telecommunications Specialist
- Transportation Manager
- Science and Mathematics
  - Atmospheric Scientist
  - Ecologist
  - Environmental Scientist
  - Geoscientist
  - Hydrologist
  - Materials Scientist
  - Oceanographer
  - Research Chemist
  - Secondary School Teacher
  - Technical Writer
  - Toxicologist

- Veterinarian
- Veterinary Assistant