

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