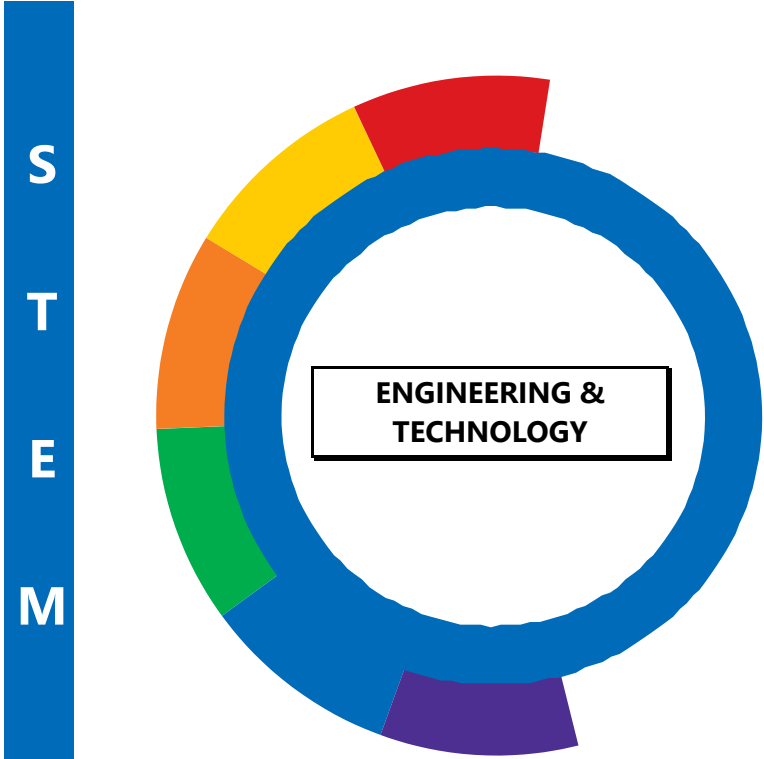




**Engineering and Technology Pathway:** Study and apply principles from advanced mathematics, life sciences, earth The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster® focuses on planning, managing, and providing scientific research and professional and technical services, including laboratory and testing services, and research and development services. and space science, and technology. In addition, future engineers and technologists learn certain processes in mathematics, science and technology.



**ALIGNED TO INDUSTRY**

OCCUPATIONS	MEDIAN WAGE	ANNUAL OPENINGS	% GROWTH
Civil Engineer	\$66,872	950	5%
Sustainability Specialist	\$76,410	4100	17%
Industrial/Mechanical Engineer	\$106,730	590	10%
Robotics Engineers	\$109,830	250	6%
Aeronautical Engineer	\$116,500	310	-6%
Architectural & Engineering Manager	\$152,400	360	5%

**APPROVED COURSES**

**EXPLORATORY**

- Sustainable Design & Technology
- Pre-Engineering Technologies
- Electronics, Engineering & Design
- Introduction to Materials Engineering
- Robotics Foundations
- Aeronautical & Aerospace Engineering Technology

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**PREPARATORY**



- Biotechnical/Biomedical Engineering
- Computer Engineering Technology
- Nanotechnology

**WORK-BASED LEARNING AND EXTENDED LEARNING OPPORTUNITIES**

**Work Experience Opportunities**  
 CTE students in many cases can pursue what is called a "work-based learning" opportunity or an internship involving a job outside of school. "Work-based learning" experiences are always paid and earn high school credit. Internships are typically paid but do not earn academic credit. Individual schools and CTE teachers work with local employers to arrange these opportunities for their students, so your local CTE or career office is the best source of information for what your own school offers.

**SkillsUSA Washington**  
 This organization promotes superior work skills, life-long education, leadership, teamwork, citizenship and community service among its student members. It also strives to build and reinforce self-confidence, work ethic and communication skills

**Washington Technology Student Association**  
 Interested in careers in architecture, engineering, construction, manufacturing, film/video production, graphic other technical areas? TSA is the only student leadership organization devoted exclusively to students interested in technology. Learn through exciting competitive events and leadership opportunities. From engineers to business managers, alumni credit TSA with having had a positive influence on their lives.

# POSTSECONDARY OPTIONS

CREDENTIALS		HIGHER EDUCATION			
HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE / LICENSE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL	SCHOOLS WITH THESE PROGRAMS
Autodesk AutoCAD, Revit	Engineer Civil Engineer Structural Engineer Electrical Engineer Environmental Engineer Mechanical Engineer	Pre-Engineering Engineering Engineering Management		Engineering Engineering Management Systems Engineering	Northwest University, Skagit Valley, St. Martin's, LWTC, NSCC, Clark, Edmonds, DigiPen, Bates, Walla Walla, Evergreen, EWU, PLU, UW, Seattle Pacific, Whitman, CWU, WWU, Gonzaga, WSU, Seattle U, UW
MS Access, Visual Basic					
Adobe InDesign					
Solidworks					

Additional industry-based certification information is available from the OSPI website.

## COURSE INFORMATION

COURSE NAME	CIP CODE	STATE COURSE CODE	TEACHER CERTIFICATION CODE	COURSE NAME	CIP CODE	STATE COURSE CODE	TEACHER CERTIFICATION CODE
Sustainable Design & Technology	030198	18001, 03003, 20101, 17002, 17102	V010000 V010601 V141000 V150100 V210100 V460200 V460302 V470101 V470600	Aeronautical & Aerospace Engineering Technology	150801	21007, 21055	V470608 V141000
Pre-Engineering Technologies	140102	21001	V143501 V150100 V210100 V141000 V480101	Biotechnical/ Biomedical Engineering	140501	14999, 14299	V260102 V261202 V141000 V143501 V150100 V210100
Electronics, Engineering & Design	141001	21007	V470101 V460302 V141000	Computer Engineering Technology	151201	21005, 21006, 21007	V141000 V470110
Robotics Foundations	150406	21009	V150100 V210100 V470101 V141000	Nanotechnology	151601	14252	V141000 V143501 V150100 V210100 V260102 V260202 V410301 V512210
Introduction to Materials Engineering	141801	21001	V141801 V141000				



Washington Office of Superintendent of  
**PUBLIC INSTRUCTION**

For additional information on this cluster, please contact:  
OSPI Career and Technical Education | [cte@k12.wa.us](mailto:cte@k12.wa.us)  
<https://www.k12.wa.us/cte>