

CAREER PATHWAY PROFILE

SEMICONDUCTOR & ELECTRONICS

Students in the semiconductor and electronics career path learn and practice skills that prepare them for a career in high tech manufacturing. CTE classes in this cluster will introduce you to a variety of interesting careers including Engineering, Production & Manufacturing, and Robotics. [Learn more on the OSPI website!](#)

1. Pathway Options

JOB TITLE	CERTIFICATE OR DEGREE REQUIRED	STARTING SALARY	TYPICAL SALARY	LOCAL EDUCATION OPTIONS
High Tech Manufacturing Internship	High school enrollment and age 16+	Unpaid	N/A	SEH America
High Tech Manufacturing Career Launch	College enrollment	\$16/hour	N/A	SEH America
Machine Operator	High school diploma	\$16/hour	N/A	high school
Electro-Mechanical Technician	Mechanical and Instrumentation Automation	\$46,000	\$70,000	Clark College Career Launch
Mechanical Engineer	BS Mechanical Engineering	\$65,000	\$80,000	WSU Vancouver
Machining Technologist	AAS Machine Trades	\$38,000	\$55,930	Lower Columbia College
Semiconductor Processor	HS Diploma, AAS Mechatronics	\$24,000	\$40,980	Clark College Career Launch
Production Line Supervisor	Bachelors	\$34,000	\$54,000	Clark College
Production Manager	Bachelors in Business	\$90,000	\$126,000	WSUV
CNC/Machinist	High school diploma, Certificate of Proficiency	\$34,000	\$43,000	Lower Columbia College
Electrical Engineer	BS Electrical Engineering	\$57,000	\$100,000	WSUV

2. High School Course Options:

COURSE	DESCRIPTION
Computer Integrated Manufacturing	Principles of rapid prototyping, robotics, and automation
Dream, Design, Build	PLTW - Manufacturing skills, industrial safety, tool usage, fabrication
Engineering Essentials	Principles of engineering design and fabrication
Fabrication	The organization, material processing and management practices used in industry
Manufacturing and Engineering Capstone	Internship with engineering, manufacturing, or computer science partners
Manufacturing Technology	Theories, methods and techniques of manufacturing
Materials Science	Emerging technologies related to the properties, processes, and uses of metals, ceramics, polymers
Mathematics for Manufacturing	Application of mathematics in the manufacturing context
Principles of Engineering	Technology systems and manufacturing processes
Robotics	Principles of robotics programming, design, operation, testing, maintenance, control and repair

3. Getting Started



Exploration

- Participate in a flipped internship with your class.
- Participate in a job shadow with industry partners.



Preparation

- Participate in an industry sponsored internship, [such as the one mentioned above with SEH](#).



Launch

- Clark College Semiconductor and Electronics Manufacturing Technician
- Washington State Vancouver BA Mechanical Engineering

Career Launch allows you to earn an hourly wage while you work through your courses. For more information, contact careerconnectsw@esd112.org or visit www.careerconnectsw.org/students.



DID YOU KNOW?

Many jobs in this industry have flexibility to enhance earnings via shift work and overtime, which can greatly increase compensation. They also can carry significant benefit packages including company paid retirement and insurance.

For any of the above opportunities, discuss options with your teacher or career counselor or [search the statewide directory](#).



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