

# Manufacturing Pathways

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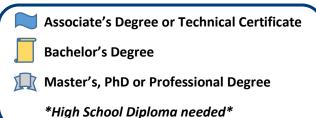
**OSPI Career Clusters** 

# Career Path - Industrial & Engineering Technology - Building & Fixing

The field of Industrial & Engineering Technology is a way to speed up production, using simpler techniques and more efficient manufacturing processes. This field craves creative and technically proficient individuals who can help a company achieve efficient and profitable productivity.

# **Career Cluster 13 – Manufacturing**

Planning, managing, and performing the processing of materials into intermediate or final products. Are you interested in how products and machines come together? Related professionals and technical support activities help with production planning and control maintenance. Manufacturing and processing engineering work together with things we consume every day like cars, computers and food.



# Career Pathway – Maintenance, Installation and Repair

\*Locksmiths and Safe Repairers\*

Maintenance and Repairs Workers

Millwrights

Telecommunications Equipment Installers and Repairers

# **Career Pathway – Manufacturing Production**

Electrical and Electronic Engineering Technicians
Industrial Engineers

Industrial Production Managers

\*Industrial Truck and Tractor Operators\*



### **Career Pathway – Production**

\*Aircraft Structure, Surfaces, Rigging, and Systems Assemblers\*

Boilermakers

Computer Numerically Controlled Machine Tool Programmers

Computer-Controlled Machine Tool Programmers

\*Dental Laboratory Technician\*

\*Electromechanical Equipment Assemblers\*

\*Extruding and Drawing Machine Setters, Operators, and Tenders\*

**Machinists** 

\*Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders\*

Welders, Cutters, Solderers, and Brazers

# **Career Pathway – Quality Assurance**

\*Inspectors, Testers, Sorters, Samplers, and Weighers\*

\*Production, Planning, and Expediting Clerks\*

# Career Pathway – Logistics and Inventory Control

Installation, Maintenance, and Repair Workers

\*Logistics Coordinator\*

\*Logistics Supervisor\*

\*Shipping and Receiving Operator\*

# Career Pathway – Health, Safety and Environmental Assurance

Environmental Scientist/Engineer



#### \*Hazardous Materials Removal Workers\*



**Occupational Health and Safety Specialist** 

### **Related Majors:**

Bioinformatics Construction Engineering Forest Engineering

Industrial Engineering Nanotechnology Operations Management

### Here is what Bellevue College Offers:

Bellevue College offers an associate degree for students pursuing <u>Mechanical Engineering</u>. Students can explore the <u>Engineering Transfer</u> to search for types of courses or reach out to faculty and resources.

### Bellevue College Offers:

- Art 108 Introduction to Hand and Power Tools (5CR)
- Art 112 Three Dimensional Design (5CR)
- Drama 210 Scene Technology (5CR)
- Marketing 203 Manufacturing and Distribution (5CR)
- ➤ MBS 350 Bioinformatics (5CR)

# <sup>1</sup>Here are 5 jobs perfect for a Manufacturing graduate:

### 1) Fabricator

To ensure the best possible product, a fabricator uses the most innovative manufacturing technology methods. Reading blueprints and plans to make the parts that comprise products is part of ensuring quality control through testing the performance and safety of all parts of a product.

### 2) Machinist

Machinists us manual operations, in addition to CAD (computer-aided design) and CAM (computer-aided manufacturing) programs to create metal tools and parts that are used to manufacture products. Used in forging and product stamping, Die makers create the tools that shape and manipulate metal.

#### 3) Field Service Engineer

For the more social, technology-inclined students, a field service engineer could be perfect for you. Traveling to a different job site to perform installation, maintenance, and testing on electrical systems is all part of this career field. You will also interact with clients more because the field service engineer serves as the face of his or her company.



<sup>&</sup>lt;sup>1</sup> ManufacturingstemJobs.com

### 4) Senior Plant Process Engineer

This position is the leader of the pack in the plant processes which requires finely tuned project-management skills. You would be handling important processes like product quality, monitoring manufacturing costs and examining employee efficiency. Promoting safety first is essential with in your working environment for your colleagues, which helps promote quality output.

### 5) Materials Engineer

As a materials engineer, you will determine the modules that yield the highest product performance. This role requires you to choose materials through considering quality-control guidelines. The expectations are established from your company and the consumers who demand the finished product.

# Best Manufacturing Colleges in Washington:

- <u>1)</u> <u>Bates Technical College</u> Bates Technical College offers 12 manufacturing degree programs.
- <u>Renton Technical College</u> Renton Technical College offers 7 manufacturing degree programs.
- <u>3)</u> <u>Bellingham Technical College</u> Bellingham Technical College offers 5 manufacturing degree programs.

∨ Filter: <b>Deg</b>	ree Levels Program Length	Control Type		
School Logo	School Name	Average tuition	Student Teacher Ratio	Enrolled Students
CECHNICAL COLLEGE	Bates Technical College  Tacoma, WA	<b>\$ \$</b> \$ \$ \$	27:1	3,272
RTC	Renton Technical College Renton, WA	<b>\$ \$ \$ \$ \$</b>	31:1	3,961
Bellingham ISONCAL COLLEGE	Bellingham Technical College  Bellingham, WA	<b>\$ \$</b> \$ \$ \$	29:1	2,403

Last Revised: 11/01/18



<sup>&</sup>lt;sup>2</sup> Universities.com

### Other Schools in the area:

# King – Snohomish Area

#### **Everett Community College**

- Advanced Manufacturing Technology (Certificate)
- Manufacturing Operations Management (Certificate)
- Manufacturing Pre-Employment (Certificate)

### **Green River College**

- > Aerospace & Advanced Manufacturing: Precision Machining 1 and 2 (Certificate)
- Machining & Manufacturing Technology (Associate Degree)

### **Shoreline Community College**

- Basic Manufacturing (Certificate)
- Manufacturing/Machinist Technology (Associate Degree)

### **South Seattle College**

- Basic Manufacturing (Certificate)
- > Intro to Manufacturing (Certificate)
- Manufacturing/Machinist Technology (Certificate)

# South Side Area

#### Clover Park Technical College

- > Fundamental Skills for Manufacturing (Certificate)
- Manufacturing Technologies: Machinist Apprentice (Certificate)
- Manufacturing Technologies (Associate Degree)

#### **Spokane Community College**

- Applied Manufacturing Preparation (Certificate)
- Industrial and Manufacturing Technology (Certificate)

# **East Side Area**

### **Big Bend Community College**

Commercial Driver's License (Certificate)

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<sup>&</sup>lt;sup>3</sup> Washington Career Bridge

- ➤ Manufacturing Clerk (Logistics Tech) (Certificate)
- > Welding, Structural Welding, or Production Welding (Associate Degree)

### Walla Walla Community College

- > Advances Truck Driver Training (Certificate)
- > Truck Driving Training (Certificate)
- Welding Technology (Associate Degree)

