

INDUSTRIAL MECHANICS AND MAINTENANCE TECHNOLOGY APPRENTICESHIP, AAS

Program Code: AAS.MACHINIST

Trade: Machinist

6000 BOLI-ATD Trades

Registered Apprenticeship in the machinist trades or occupations is a method of career and technical related training leading to certification and journey-level status.

This is a limited-entry program for registered apprentices who are sponsored by individual employers, accepted by a Joint Apprenticeship and Training Committee (JATC) or NW Willamette Trades Apprenticeship and Training Committee (TATC) and registered with the State of Oregon Bureau of Labor & Industries (BOLI).

Clackamas Community College offers three state-wide Apprenticeship degrees and their stackable Certificates of Completion and Career Pathway Certificates of Completion. These parent degrees are: [Electrician Apprenticeship Technologies AAS](#), [Construction Trades General Apprenticeship AAS](#), and [Industrial Mechanics and Maintenance Technology Apprenticeship AAS](#) (p. 1). These degrees do not guarantee licensure.

This program is articulated with Oregon Institute of Technology (OIT), which requires a higher-level math course than is required for the program. Contact an Apprenticeship Advisor at CCC for help with transfer to OIT.

For more information visit the [Apprenticeship webpage](#), or contact an Apprenticeship Advisor at 503-594-0959 or apprenticeship.advising@clackamas.edu.

Outcomes

Related Instruction Outcomes

Computation

- 1 course - MTH-080 Technical Mathematics II
- Use appropriate mathematics to solve problems

Communication

- 3-4 credits - See [Related Instruction](#) for course list
- Read actively, think critically, and write purposefully and capably for professional audiences

Human Relations

- 3-4 credits - See [Related Instruction](#) for course list
- Engage in ethical communication processes that accomplish goals

Physical Education/Health/Safety/First Aid

- 1-3 credits - See [Related Instruction](#) for course list
- Use effective life skills to improve and maintain mental and physical wellbeing

Program Outcomes

Upon successful completion of this program, students should be able to:

Machinery Operation and Maintenance

- demonstrate the functions of trade-specific industrial systems;
- define lubrication processes with trade-specific industrial materials and equipment;
- identify mechanical and/or electrical industrial systems;
- demonstrate the proper care, use and storage of hand and power tools;
- develop machine shops skills in troubleshooting.

Fabrication

- read and interpret trade-specific industrial blueprints;
- perform trade-specific welding applications;
- analyze the properties of materials and how they apply to trade-specific fabricating applications;
- fabricate industrial materials in appropriate trade-specific applications.

Mathematics of the Trade

- calculate elementary algebraic equations and formulas;
- apply appropriate formulas to mathematical situations.

Safety

- demonstrate safe working practices in accordance with state and federal regulations;
- apply standardized OSHA practices to specific trade applications;
- describe procedures for proper removal and disposal of hazardous materials

Requirements

Code	Title	Credits
Journey Level Card from Oregon BOLI ¹		22.00
Communication requirement		3.00-4.00
Human Relations requirement		3.00-4.00
PE/Health/Safety/First Aid requirement		1.00-3.00
Elective (100 level or above)		25.00-21.00
APR-104MA	Print Reading	3.00
APR-106MA	Advanced Applied Geometric Dimensioning and Tolerancing for Manufacturing	3.00
APR-111MA	Manual Machining I	4.00
APR-112MA	Manual Machining II	4.00
APR-113MA	Manual Machining III	4.00
APR-201MA	CNC I: Set-Up and Operation	4.00
APR-202MA	CNC II: Programming and Operation	4.00
APR-203MA	CNC III: Applied Programming and Operation	4.00
APR-254MA	Mill/Turn Machining	3.00
MTH-080	Technical Mathematics II	3.00
Total Credits		90

¹ Students who obtain a State of Oregon Apprenticeship Training Journey Level Card or Oregon Bureau of Labor and Industries

Apprenticeship and Training Division (BOLI-ATD) Certificate of Completion will earn 22 Credits.

Careers

- Machinist¹
- Programmable Logic Controller
- Industrial Mobile Mechanic

¹ Programs offered at Clackamas Community College through NW Willamette TATC