

CONSTRUCTION TRADES, GENERAL APPRENTICESHIP, CERTIFICATE

Program Code: CC.CONSTRUCTPB

Trades: Plumber

8000 BOLI-ATD Trades

Registered Apprenticeship in the construction 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) 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**. 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.

Electricians and plumbers require state licensure. Related training courses meet industry standards and are offered through a partnership between the Oregon State Apprenticeship & Training Council and the local Joint Apprenticeship & Training Committee.

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

Outcomes

Related Instruction Outcomes

Computation

- 3-5 credits - See [Related Instruction](#) for course list
- 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.

PROGRAM OUTCOMES

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

Building Fundamentals/Safety

- demonstrate safe working practices including rigging and lock out tag out in accordance with state and federal regulations;
- apply OSHA practices in relation to the specific trade;
- apply theory as it relates to trade competencies;
- utilize recognized standard building code guidelines as applicable;
- demonstrate ability to perform welding/brazing applications (plumbers);
- analyze the properties of materials and how they apply to welding and brazing applications (plumbers).

Mathematics/Measurement/Calculations and Equipment

- calculate elementary algebraic equations and formulas;
- apply appropriate formulas to mathematical situations;
- demonstrate the proper care, use, and storage of hand and power tools.

Blueprint and Schematics

- read and interpret building plans and drawings;
- prepare and utilize isometric sketching and detailed drawings per individual trade (plumbers).

Code and Journey Level Preparation (Plumbers)

- utilize recognized standard building codes guidelines as applicable;
- complete a code prep exam with a 75% or higher score per individual trade.

Requirements

Code	Title	Credits
Computation requirement		3.00-5.00
Communication requirement		3.00-4.00
Human Relations requirement		3.00-4.00
APR-109PB	Plumbing Conservation Systems	2.00
APR-117PB	Plumbing Basic Trade & Code	3.00
APR-127PB	Plumbing Fittings & Materials	3.00
APR-137PB	Plumbing Basic Installation & ISO	3.00
APR-147PB	Plumbing Math	3.00
APR-157PB	Plumbing Pipe Sizing & Advanced Math	3.00
APR-167PB	Plumbing Welding and Print Reading	3.00
APR-177PB	Plumbing Related Science	3.00
APR-187PB	Plumbing Related Codes	3.00
APR-197PB	Plumbing Backflow Prevention	1.00
APR-205PB	Service Plumbing	3.00
APR-207PB	Municipal Systems	2.00
APR-217PB	Advanced Plumbing Installation	3.00
APR-227PB	Plumbing Gas Venting & Drains	3.00
APR-237PB	Plumbing Water Heater & Circuit Controls	3.00
APR-247PB	Advanced Plumbing Code I	3.00
APR-257PB	Advanced Plumbing Code II	3.00

Code	Title	Credits
APR-267PB	Advanced Plumbing Code III	3.00
Total Credits		59-63

Careers

- Asbestos Removal
- Carpenter
- HVAC/R
- Interior/Exterior Finisher
- Painter
- Pile Driver
- Plumber¹
- Scaffold Erector
- Sheet Metal

¹ Programs offered at Clackamas Community College through partnership with local JATC.