

Trades Notebook

FOR SKILLED TRADE OCCUPATIONS
IN THE WILLAMETTE VALLEY



CAREER
COLLEGE
COLLABORATIVE

NOTEBOOK CONTENTS

- Introduction
- How to use this Notebook
- An Introduction to Apprenticeship
- UNION VS. NON-UNION (MERIT OR OPEN SHOP)
- Occupation Profiles
 - Automotive Service Technician
 - Carpenter
 - Cement Mason/Concrete Finisher
 - Computer-Aided Drafting & Design
 - Crane Operator
 - Drywall/Ceiling Tile Installers
 - Electrician
 - Heavy Equipment/Diesel Service Technician
 - Heavy Equipment Operator
 - HVAC Technician
 - Industrial Machinery Mechanic/Millwright
 - Ironworker
 - Laborer
 - Machinist
 - Non-Destructive Testing Specialist
 - Painter
 - Piledriver
 - Plumber
 - Rigger
 - Roofer
 - Sheet Metal Worker
 - Surveying Technician
 - Water & Wastewater Treatment Operator
 - Welder

The Trades Notebook was developed and supported by the LBLC3 Steering Committee. This work has been supported by funding from the Regional Promise grant and is a resource for high school students and partners throughout the Linn Benton Lincoln region.

HOW TO USE THIS NOTEBOOK

EACH OCCUPATION PROFILE HAS THE FOLLOWING INFORMATION:

- Median salary right at the top of the page.
- List of Top 5 Skills required for the occupation.
- List of possible Job Titles.
- At least 5 Primary Tasks for that occupation (a complete list can be accessed at www.qualityinfo.org (scroll down to Tools and type the occupation in the Search box).
- Hourly Wages and Regional Job Market graphics (this info was accessed at www.qualityinfo.org and found in the tables under Linn/Benton or Mid-Valley).
- Preparation for the career which is a listing of recommended high school courses for students.
- Requirements for pursuing post-secondary education for that occupation (often community college, special training programs, or apprenticeships).
- Contact information for the training program for that occupation.
- Relevant links are at the bottom of the page. Please encourage your students to explore these and learn more about occupations they are interested in!

AN INTRODUCTION TO APPRENTICESHIP

Apprenticeship is a blended learning model combining college-articulated education with applied learning environments. Apprentices are students who are employed in their program of study. They receive direct, relevant experience in their chosen career, even advancing in their profession as they learn.

There must be a job opening for a student to begin his or her apprenticeship. Education and on-the-job training are usually concurrent.

Getting into an apprenticeship can be a very competitive and rigorous process. Because apprenticeships are dependent upon a job opening, it is important that students know they should prepare, as early as possible in high school, by taking classes which can help them be the best candidate possible.

Learn more about apprenticeships in Oregon by visiting the following websites:

- State of Oregon Apprenticeship & Training Division
(www.oregon.gov/BOLI/ATD/pages/index.aspx)
- Oregon Apprenticeship Resources (<http://oregonapprenticeship.org>)

HOW TO USE THIS NOTEBOOK

APPRENTICESHIP CONTINUED: UNION VS. NON-UNION (MERIT OR OPEN SHOP)

Although union shops used to provide their people with greater earnings and benefits, the gap in these aspects between union and non-union careers has decreased considerably. This shift appears to be due to the nationwide shortage of licensed plumbers. Today, apprentices at every level can find outstanding employment opportunities at both union and non-union companies.

Union Apprenticeship Programs

Overall, the apprenticeship programs offered by unions are great. The selection process is demanding as they don't admit everybody who applies, and the training program is very structured. Most union apprenticeship programs last from 4 to 5 years and offer a combination of practical and traditional in-class education. At the conclusion of an apprenticeship program, the apprentice is eligible to get a Journeyman license.

Non-Union Apprenticeship Programs

While a good many of the non-union apprenticeship programs are very good, many of them aren't up to the same standard of the ones provided by the unions. In looking at the many non-union programs, one needs to carefully look into the program and compare it to the union alternatives. The most crucial factor to look for is whether the apprenticeship is formalized with an organized, written program that includes plenty of in-class time plus on the job teaching. As an apprentice, you are there to learn and not to simply be a helper. Make certain the contractor who you will work for shares your focus on helping you learn and be successful. Also, definitely make certain the classroom-type training is organized and professional. You cannot afford to join an unstructured program, work four to five years with only ad-hoc, mediocre formalized training, and then find out that you do not possess the education or the technical skills to pass the certification exam to become a Journeyman.

A Personal Decision

More things to consider include continuing education opportunities and the kinds of projects you would like to work on. Continuing education is typically more organized with plumbing unions than it is with non-union employers. As a union person, you'll be paying dues to the union on a yearly basis and the continuing education programs are one of the more important benefits of being a union member. In a great many non-union firms, a structured continuous education program is not a priority, particularly in these demanding financial times.

HOW TO USE THIS NOTEBOOK

APPRENTICESHIP CONTINUED: UNION VS. NON-UNION (MERIT OR OPEN SHOP)

One other thing to take a look at when selecting the union or non-union route is to consider the kinds of work you are interested in performing. Union personnel often work on larger, more complex, longer-lasting projects. Also, any federal job must be a union job due to a law passed during President Obama's administration.

Non-union employees ordinarily build smaller sized, less complicated, shorter projects. A lot of people like focusing on the same project for a long time, while other folks want more variety. The prospective apprentice will need to think about what kinds of projects they may be interested in when choosing between the union or non-union route.

All that being said, the union vs. non-union decision is a personal decision for the future apprentice to make. The prospective apprentice must examine the various apprenticeship programs, continuing training and the types of work that interest them. Regardless of which path is chosen, a qualified apprentice has the chance to earn a very good income in a profession where their abilities will always be in demand.

NOTES

AUTOMOTIVE SERVICE TECHNICIAN

\$43,321
Median Salary

If you enjoy challenges, cars, and like to work with your hands, Automotive Technology can be a rewarding career for you. Automotive Service Technicians are employed by auto dealerships, repair shops, auto and home supply stores, and gas and service stations.

SKILLS

Repair
Industry Knowledge
Manual Dexterity
Hand Tools
Customer Service

JOB TITLES

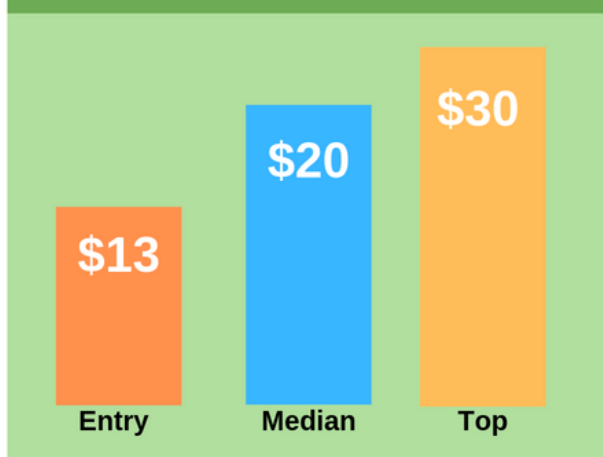
Auto Technician/Mechanic
Service Technician
Shop Technician
Automotive Service Worker
Service Writer



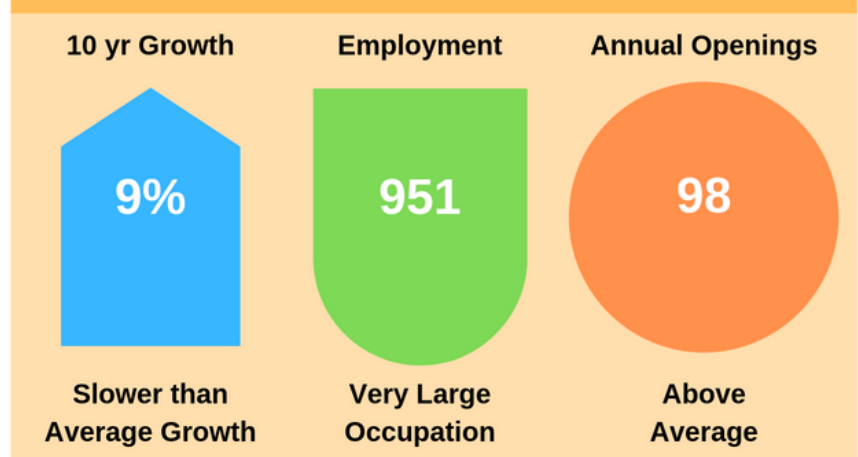
PRIMARY TASKS

- Operate transportation equipment to demonstrate function or malfunction.
- Record information about parts, materials or repair procedures.
- Test mechanical systems to ensure proper functioning.
- Adjust equipment to ensure optimal performance.
- Adjust vehicle components according to specifications.
- Read work orders or descriptions of problems to determine repairs or modifications needed.
- Estimate costs for labor or materials.
- Troubleshoot equipment or systems operation problems.
- Inspect vehicles to determine overall condition.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

AUTOMOTIVE SERVICE TECHNICIAN

Training in Automotive Technology is available locally at Linn-Benton Community College. This is a 2-year program and all classes prepare students to pass the Automotive Service Excellence (ASE) certification tests.

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry)
- Industrial Arts
- Welding
- Automotive Shop if available

LBCC'S PROGRAM

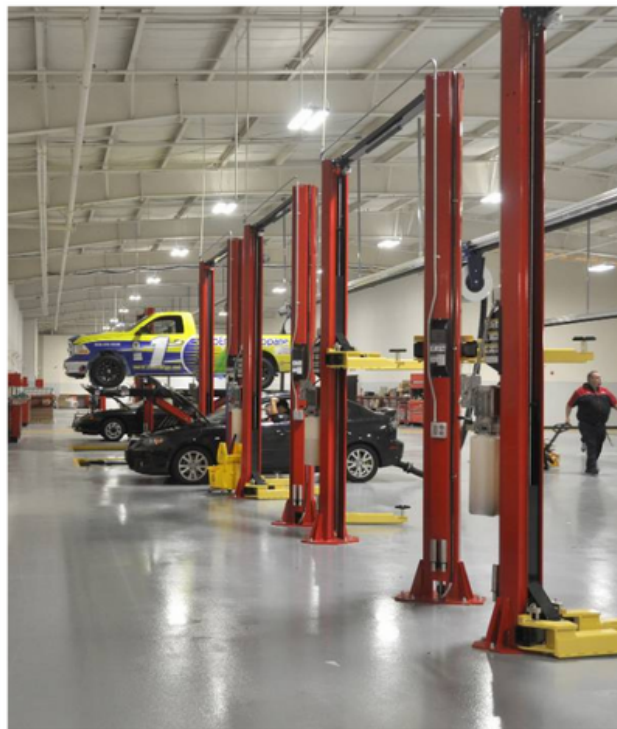
LBCC's Automotive Technology Program works closely with local employers to ensure that the program curriculum is relevant to the needs of local industry.

The programs prepare students to diagnose, repair and maintain modern automobiles and light trucks including powertrain systems, steering, suspension and braking systems, electrical systems and electronic controls, automatic transmissions, engine overhaul, air-conditioning service and engine performance.

The programs are conducted in modern, well-equipped classrooms and laboratory/shops. The automotive technology shop contains equipment for rebuilding and testing components such as engines and transmissions; a four-wheel computerized alignment rack; tune-up and computer control diagnostic equipment; 21 vehicle hoists; a chassis dynamometer; engine analyzers and many specialized tools. Learn more at www.linnbenton.edu/auto.



Scan the QR code to learn more
Automotive Technology,
Associate of Applied Science



CONTACT



6500 Pacific Blvd. SW
Albany, Oregon 97321
541-917-4999
admissions@linnbenton.edu
www.linnbenton.edu

To apply to LBCC, visit:
www.linnbenton.edu/futures-start-here/index.php

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org
State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx
Women in Trades: www.tradeswomen.net
Build Oregon: www.build-oregon.com
Automotive Tech video: <https://youtu.be/ARAUxc6Cbxw>

CARPENTER

\$49,688
Median Salary

Do you like building, traveling and being outdoors? Why not consider a career that is fun and offers financial freedom? Carpenters measure, cut and shape wood, plastic, fiberglass and drywall. Commercial and industrial carpenters construct, erect, install and repair structures and fixtures. They are involved in many different kinds of construction, from buildings to highways and bridges to power plants.

SKILLS

Carpentry
Construction
Equipment Operation
Repair
Project Management

JOB TITLES

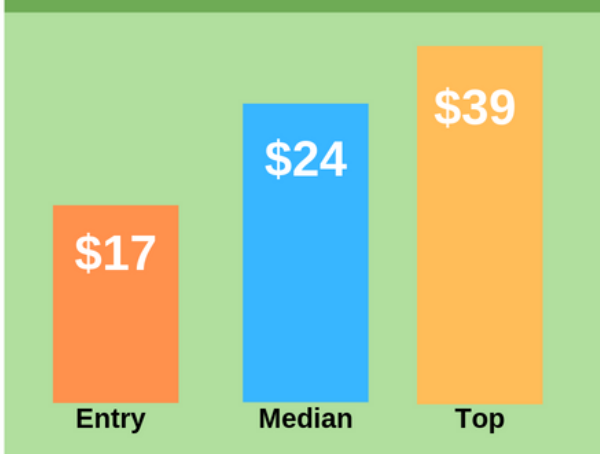
Carpentry Specialist
Carpenter/Lead Carpenter
Framer
Cabinetmaker
Furniture Maker



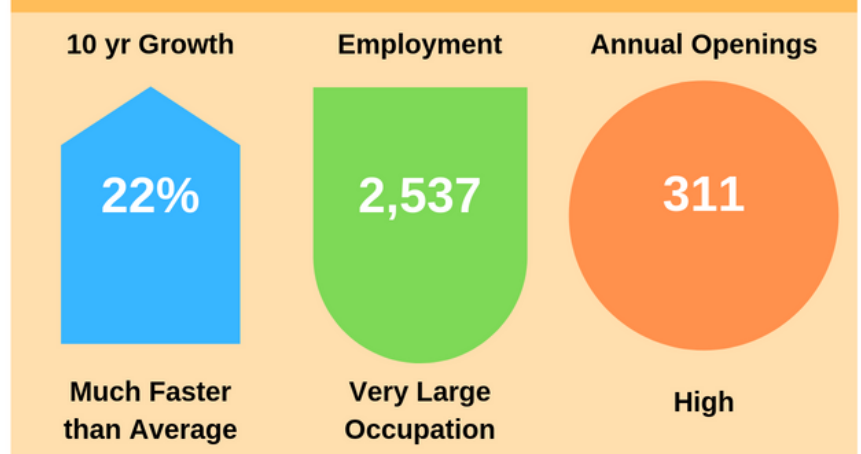
PRIMARY TASKS

- Study blueprints, sketches, or building plans to prepare project layout and determine dimensions and materials required.
- Measure and mark cutting lines on materials, using a ruler, pencil, chalk, and marking gauge.
- Shape or cut materials to specified measurements, using hand tools, machines, or power saws.
- Verify trueness of structure, using plumb bob and level.
- Install structures or fixtures, such as windows, frames, floorings, trim, or hardware, using carpenters' hand or power tools.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

CARPENTER

Training available through our local apprenticeship training facility (Pacific Northwest Carpenters Institute at the Tangent Training Center). This training prepares them for careers as a carpenter and other related occupations: Carpentry Specialist, Framers, Construction Worker, Drywall/Finisher, and Cabinetmaker/Furniture Maker.

PREPARATION

High School or College Course:

- Algebra I & II, Geometry
- Construction/Trades
- Drafting & Blueprint Reading
- Industrial Arts

Helpful:

- First-AID/CPR
- Drivers License
- Construction Work

REQUIREMENTS

ELIGIBILITY:

Minimum qualifications for applicants are: Seventeen (17) years of age and have a high school diploma, GED, or equivalent OR Eighteen (18) years of age.

LENGTH OF TIME:

A carpenter apprenticeship lasts four years. Apprentices complete a minimum of 144 hours/year of classroom training and 8,000 hours of on-the-job training.

COST:

You earn while you learn, and you are paid a wage from the first day you become a working apprentice. Some costs however may apply - please contact PNCI for more information.

OPENINGS:

Selection process is through a "ranked interview" of qualified applicants. More info at: <https://www.pnci.org/openings.lasso>

APPLY:

Applications are accepted on a continuous basis at www.PNCI.org and can be filled out online. To complete the process, you will be asked to choose a mandatory Pre-Hire class. This is an orientation about the trade and apprenticeship program requirements. Pre-Hire classes are posted every 30 days.



CONTACT



PACIFIC NORTHWEST CARPENTERS INSTITUTE

Tangent Training Center
32180 Old Highway 34 Bldg. 13 Suite B
Tangent, OR 97389
503-887-5154 & 503-287-3708
www.PNCI.org



FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Oregon Apprenticeship Resources: <http://oregonapprenticeship.org>

Women in Trades: www.tradeswomen.net

Pacific Northwest Regional Council of Carpenters: www.nwcarpenters.org

Build Oregon: www.build-oregon.com

CEMENT MASON/ CONCRETE FINISHER

\$48,564
Median Salary

Cement masons/concrete finishers smooth and finish surfaces of poured concrete such as floors, walks, beams, columns, roads, or curbs using a variety of equipment and hand/power tools. They work with a variety of materials including terrazzo, magnesite, epoxy, polymer, and other plastic materials for topping repair and injection.

SKILLS

Concrete Finishing
Forklift Operation
Hand Tools
Basic Math
Heavy Lifting

SKILLS

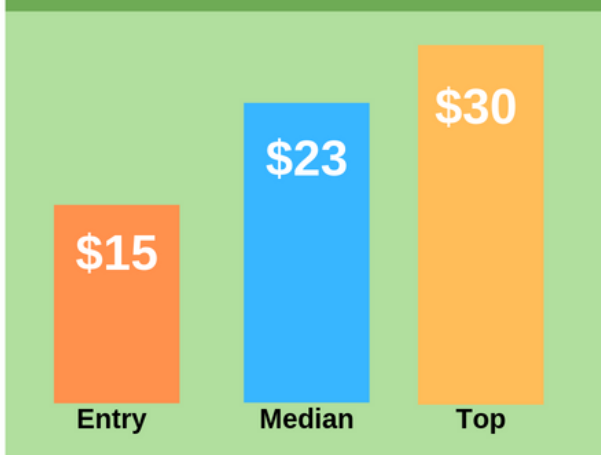
Concrete Laborer
Brick/Stone Mason
Plasterer/Stucco Stone
Mason
Chimney Mason



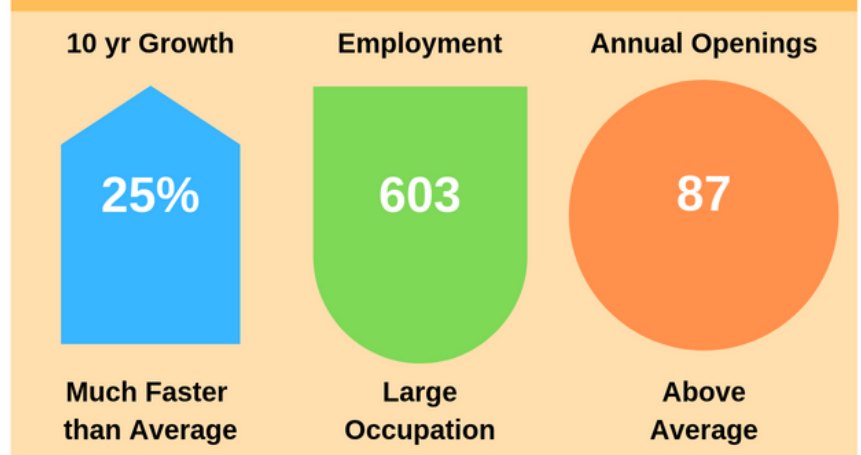
PRIMARY TASKS

- Inspect completed work to ensure proper installation.
- Position construction forms or molds.
- Spread concrete or other aggregate mixtures.
- Monitor construction operations.
- Pour materials into or on designated areas.
- Signal equipment operators to indicate proper equipment positioning.
- Direct construction or extraction personnel.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

CEMENT MASON/ CONCRETE FINISHER

The typical entry level education for this occupation is a high school graduate. Apprenticeships are available though and are highly recommended if you want to earn a higher wage.

PREPARATION

High School Courses:

- Algebra I/II
- Drafting/Blueprint reading
- Construction/Shop

APPRENTICESHIP

Apprenticeship and training is available through the Northwest College of Construction in Portland. The construction industry pays for your tuition and books. Apprentices receive a paycheck, hands-on career training in the craft of their choice, a free education, and upon completion, apprentices receive nationally recognized industry certification as a master craftsman (Journeyman).

The first thing that the college does for applicants to the apprenticeship program is place them in a job with a construction contractor.

MINIMUM REQUIREMENTS:

- Apprenticeship applicants must be at least 18 years of age.
- Must provide proof of HS Diploma or GED.

APPLICATION REQUIREMENTS

- Provide proof of at least 18 years of age.
- Submit documentaton for points for ranking placement.
- Points are awarded for: valid drivers license, military, education, certifications, work experience documented on company letterhead and completion of BOLI approved pre-apprenticeship.
- Attend 1/2 day of orientation and 2 days of jumpstart (unpaid training).
- Please provide your ID information before the end of the month you intend to apply.
- Send all required documentation to apply@NWCOC.com.

LENGTH OF APPRENTICESHIP

Classroom Hours: A minimum of 144 hours per year for 3 years On-the-Job Training: 6,000 hours (approx. 3 years).



CONTACT



Northwest College of Construction
(503) 256-7300

8111 NE Holman Street
Portland, OR 97218
apply@nwcoc.com
www.nwcoc.com



FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

Oregon and SW-WA Cement Masons JATC (statewide): www.cementmasons555.org

COMPUTER-AIDED DESIGN & DRAFTING

\$56,024
Median Salary

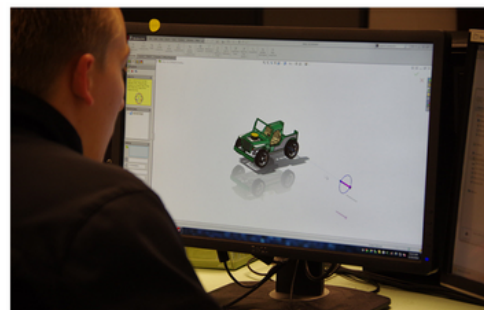
Computer Aided Designers/Drafters use software to create plans for everything from cars to skyscrapers. Because of the limitless benefits of their profession, CAD Designers may find work in many exciting fields including construction and engineering. They use specialized computer software to generate drawings, blueprints, plans, and other design documents for use across a wide variety of fields (mechanical design, architecture, construction, engineering, etc.).

SKILLS

CAD/3D Software
Design/Drafting
Blueprint Reading
Computer Literacy
Communication

JOB TITLES

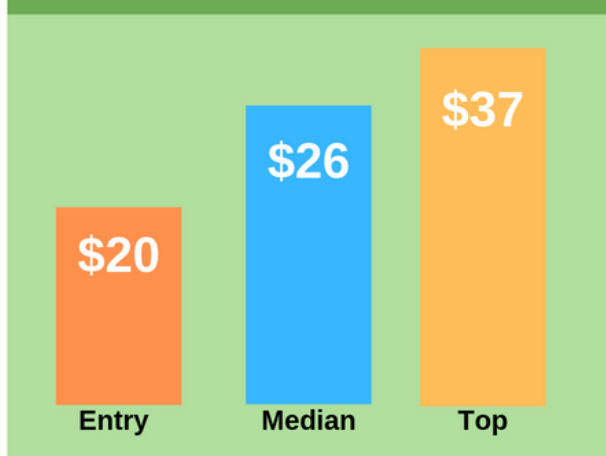
Drafting Technician
Autocad/CAD Technician
Mechanical Designer
Civil Design Technician
Drafter



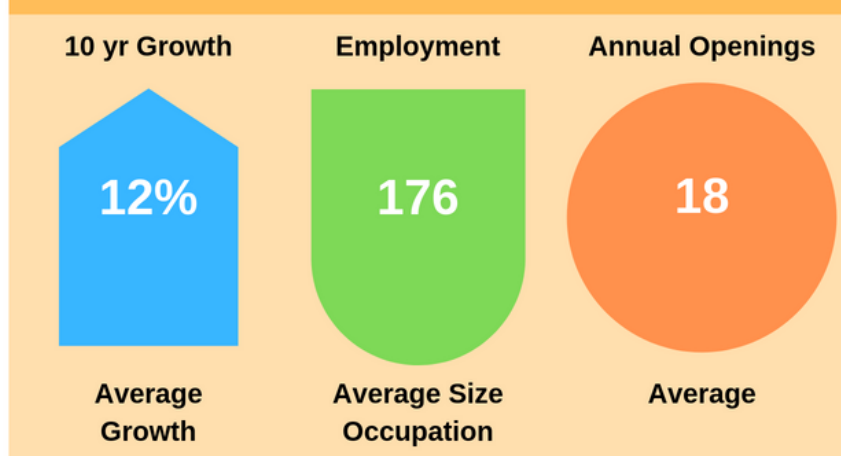
PRIMARY TASKS

- Create graphical representations of civil structures, mechanical devices or machinery, topography and more.
- Operate computer systems.
- Evaluate designs or specifications to ensure quality.
- Create diagrams, specs or maps depending on the project.
- Evaluate technical data to determine effect on designs or plans.
- Prepare detailed work plans.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

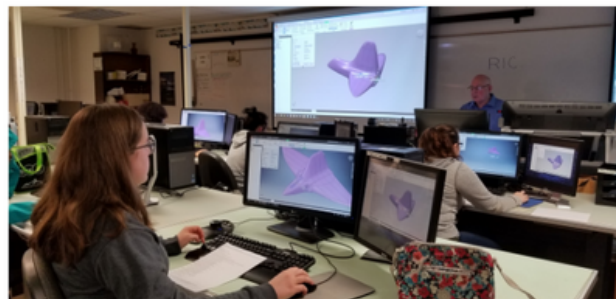
COMPUTER-AIDED DESIGN & DRAFTING

Training in Computer-Aided Design & Drafting is available locally at Linn-Benton Community College. Computer Aided Drafting workstations are used in all courses. Current industry-standard versions of Autodesk series software and Solidworks are used in engineering graphics classes.

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry and Trigonometry)
- Drafting/CAD if available
- Industrial Arts
- Graphic Design classes



PIPELINE TO JOBS

Pipeline is a program available for high school students to learn about careers in Welding, Non-Destructive Testing, Computer Aided-Drafting & Design (CADD), Mechatronics, and Machine Tool Technology. Talk to your teachers and counselors about upcoming Pipeline events where you can actually try out CAD for yourself to see if it might be something you are interested in. Learn more at www.pipelinetojobs.com.



Fast Lane to Success

LBCC'S PROGRAM

LBCC's Computer-Aided Design & Drafting Program earns you a two-year degree that prepares you to work as Drafting Technician, Autocad/CAD Technician, Mechanical Designer, Civil Design Technician, and Drafter. The first year of study provides a sound general background, while the second year provides more specific coverage of major occupational areas, such as civil, mechanical, electronic, architectural and technical illustration.

Learn more at www.linnbenton.edu/cadd.



Scan the QR code to learn more

Computer Aided Design &
Drafting (CADD) Technology,
Associate of Applied Science

CONTACT



6500 Pacific Blvd. SW
Albany, Oregon 97321
541-917-4999
admissions@linnbenton.edu
www.linnbenton.edu

To apply to LBCC, visit:
www.linnbenton.edu/futures-start-here/index.php

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

CRANE OPERATOR

\$78,548
Median Salary

Mobile crane operators use state-of-the-art heavy machinery to move construction materials, earth, and even petroleum products over short distances. A series of joysticks, levers, and pedals allows the operator to use his or her knowledge of load calculations to place materials around a construction site.

SKILLS

Material Handling
Physical Abilities
Repair
Safety
Machinery Operation

JOB TITLES

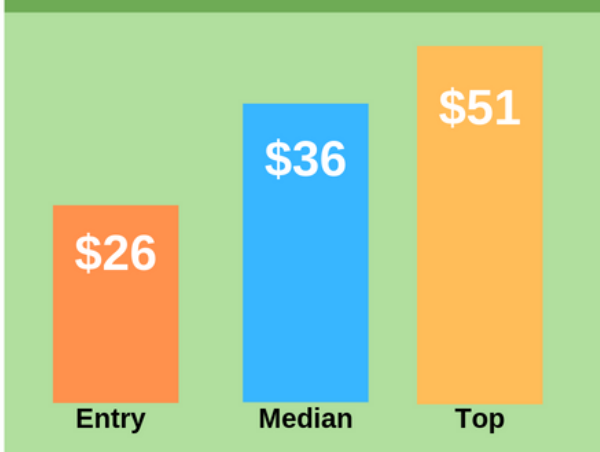
Crane Operator
Tower/Cell Tower Technician
Operating Technician
Local/Lead Technician



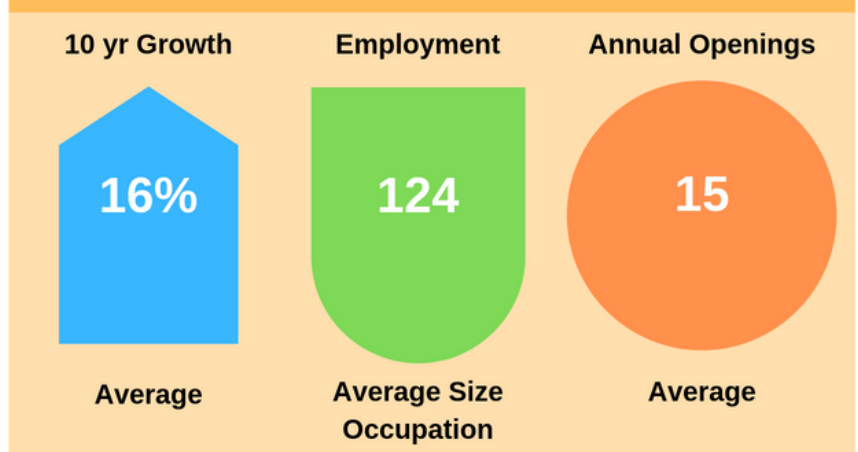
PRIMARY TASKS

- Weigh materials to ensure compliance with specifications.
- Verify information or specifications.
- Operate cranes, hoists, or other moving or lifting equipment.
- Install parts, assemblies, or attachments in transportation or material handling equipment.
- Inspect material-moving equipment to detect problems.
- Direct material handling or moving activities.
- Maintain material moving equipment in good working condition.
- Load shipments, belongings, or materials.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

CRANE OPERATOR

The typical entry level education for this occupation is a high school graduate. Training is available in Portland at All Purpose (AP) Crane Training.

PREPARATION

High School Courses:

- Algebra I/II
- Drafting/Blueprint reading
- Construction/Shop

TRAINING

The OSHA Standard states Mobile Crane Operators operating cranes above 2,000 lb. capacity, when used in construction, will need to be either certified by an accredited crane operator testing organization, such as All Purpose Crane Training, or qualified through an audited employer program [§ 1926.1427(a)].

AP Crane Training

AP Crane Training offers mobile crane operator training school locations nationwide. They improve and reduce the risk to cause serious injury or death. Cranes that are poorly maintained can cause accidents resulting in OSHA fines. Accidents can be prevented if proper mobile crane training and precautions are recognized. The employer is responsible for the continued training of its employees to ensure their competency. OSHA established requirements to ensure the safety of the operators.

Students will learn how to perform daily and monthly inspections, determine allowable wire rope load and crane working capacities, properly set up the crane for operations, select and inspect slings and rigging gear, and make proper crane movements with the load.

Crane operator training may be a 3 to 5-day class at your site or our site and may vary depending on how many types of cranes such as rough terrain cranes, lattice truck and crawler cranes, boom truck cranes and articulated boom truck cranes.

For class schedule:

<https://apcranetraining.com/services/crane-operator-training/>



CONTACT



All Purpose (AP) Crane Training
(888) 501-1355
info@apcranetraining.com
<https://apcranetraining.com/>

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

DRYWALL/CEILING TILE INSTALLERS

\$60,268
Median Salary

Skilled drywall & ceiling tile installers measure, cut, and install drywall boards and ceiling tiles correctly, then they shape, fill, and finish to perfection. These materials provide the architectural appeal, fire protection, sound protection, and structural integrity to houses, office buildings, warehouses, and shopping malls.

SKILLS

Drywall installation/finishing
Carpentry
Blueprint Reading
Physical Ability
Painting

JOB TITLES

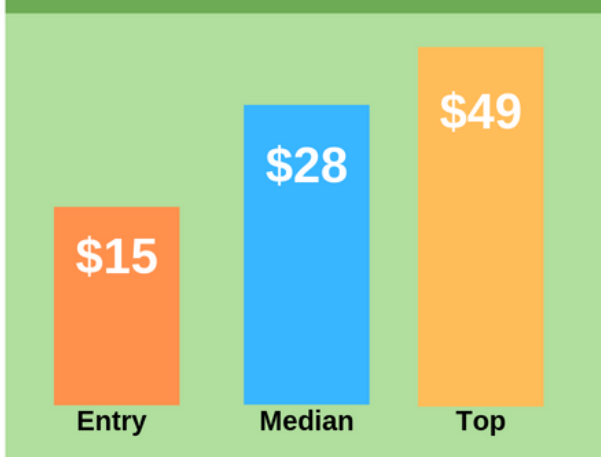
Drywall Finisher
Drywall Specialist
Drywall Technician
Sheetrock Hanger
Ceiling Tile/Flooring Installer



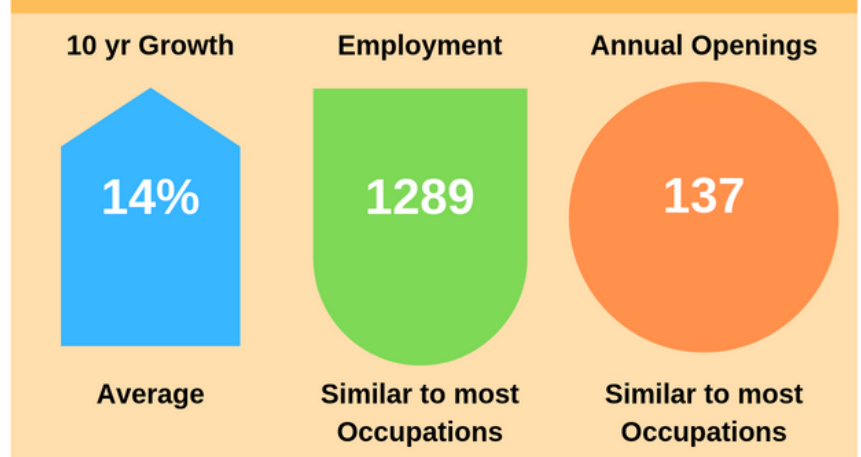
PRIMARY TASKS

- Review blueprints or specifications to determine work requirements.
- Measure materials or objects for installation or assembly.
- Mark reference points on construction materials.
- Cut openings in existing structures.
- Install trim or paneling.
- Cut wood components for installation.
- Verify alignment of structures or equipment.
- Install metal structural components.
- Cut metal components for installation.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to State of Oregon

Source: www.qualityinfo.org

DRYWALL/CEILING TILE INSTALLERS

The typical entry level education for this occupation is a high school graduate. Apprenticeships are available though and are highly recommended if you want to earn a higher wage.

PREPARATION

High School Courses:

- Algebra I/II
- Drafting/Blueprint Reading
- Construction/Shop

Helpful:

- Work experience

APPRENTICESHIP

Apprenticeship training is available through Oregon & SW Washington Drywall Finishers JATC.

MINIMUM QUALIFICATIONS:

1. Must be at least 17 years of age.
2. Must be a high school graduate or have a GED equivalent and submit copy of a high school diploma or GED certificate. Documents in other languages must be translated into English. Note: All minimum qualification documents must be provided at the time of application.

THE APPRENTICESHIP:

The apprenticeship consists of 6,000 hours of on-the-job training and an additional 432 hours of classroom instruction (Related Training). Related training is usually conducted in the evening and sometimes on Saturday, on the apprentice's own time. Satisfactory progress must be maintained in related training classes. It typically takes about 3 years to complete the program.

COSTS:

There is no charge for classes. Classes begin after you are sent to work.

FAQs:

www.rtctraining.org/wp-content/uploads/2019/04/Frequently-Asked-Questions.pdf



CONTACT



Oregon & SW Washington Drywall Finishers
JATC

Oregon #MA-1024 & Washington #241
13521 NE Whitaker Way, Portland, OR 97230
(503) 287-4856
www.rtctraining.org

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

Pacific Northwest College of Construction: www.pnci.org

ELECTRICIAN

\$69,899
Median Salary

Electricians install and maintain all of the electrical and power systems for our homes, businesses, and factories. They install and maintain the wiring and control equipment through which electricity flows. They also install and maintain electrical equipment and machines in factories and a wide range of other businesses. Electricians in large factories usually do maintenance work that is more complex.

SKILLS

Electrical Systems
Troubleshooting/Repair
Hand Tools
Construction Knowledge
Schematics

JOB TITLES

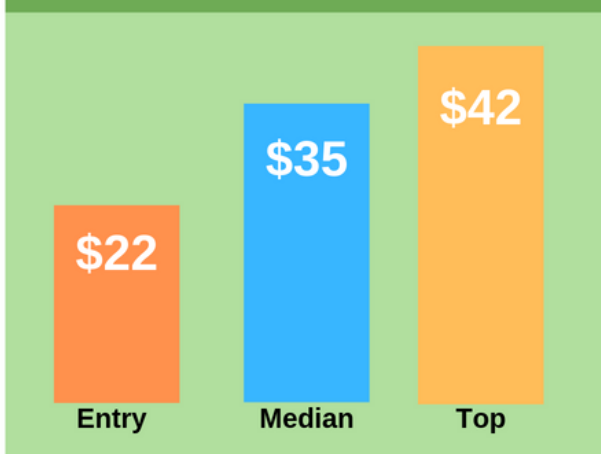
Maintenance Electrician
Residential Electrician
Commercial Electrician
Limited Energy Electrician
Cable/Phone/Security Installer
Instrumentation Technician



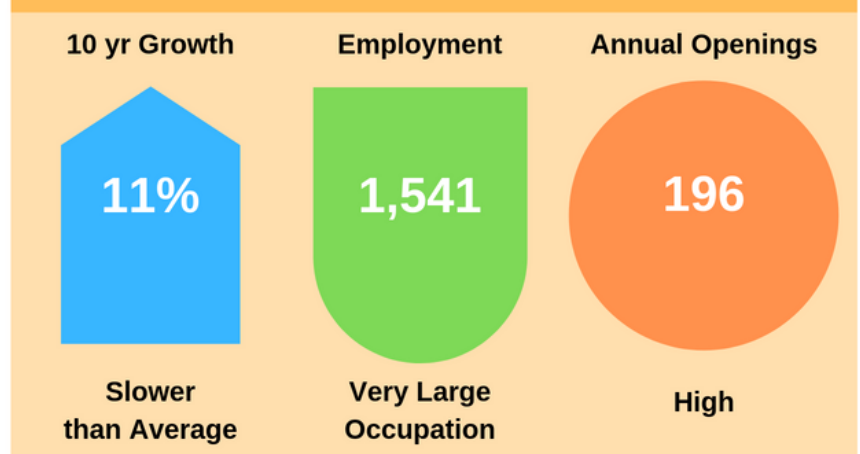
PRIMARY TASKS

- Plan layout of construction, installation, or repairs.
- Test electrical equipment or systems to ensure proper functioning.
- Inspect electrical or electronic systems for defects.
- Communicate with other construction or extraction personnel to discuss project details.
- Thread wire or cable through ducts or conduits.
- Repair electrical equipment.
- Install electrical components, equipment, or systems.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

ELECTRICIAN

Paid training is available through two local apprenticeship programs: Central Electrical Training Center in Tangent (union shop) and the Independent Electrical Training Center in Salem (open shop).

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry)
- Industrial Arts
- Physics
- Drafting

Helpful:

- First Aid/CPR

CETC IN TANGENT (UNION)

- High school diploma or GED plus proof of 1 year of high school Algebra with a grade of 'C' or better-or- 1 term of college Algebra with a grade of 'C' or better - or- a placement test from a college showing placement into Intermediate Algebra -or- NJATC Tech Math course completion.
- Must be at least 18 years of age at start of work.
- You will be hired for a full-time job while you attend school part-time and will be paid a living wage with fringe benefits while you are learning.
- Fringe benefits include employer paid health care for you and your family plus several pension plans.
- Apprentices attend day school at least two terms per year.
- Classes are 8 hours/day, 1 day/week for 3 months.
- Books range between \$600-\$800 per year and yearly tuition is \$200.
- You must have a good attitude and be able to work in a team environment, as well as be ready to do a wide variety of work.

IETC IN SALEM (OPEN SHOP)

- The Area II Inside Electrical apprenticeship program is a 4-year training program.
- Must be at least 17 years old to apply and 18 years old to begin the program. High school diploma, GED, or Associate Degree or higher from an accredited educational institution. Proof of algebra (transcripts required) or math placement test scores demonstrating that you place into Math 65 or higher.
- Classroom instruction is conducted at the Independent Electrical Training Center (IETC).
- IETC is affiliated with Chemeketa Community College and apprentices earn college credit and qualify for financial aid. Classes are two evenings a week in the fall, winter, and spring. You will start school once you are registered in the program as an apprentice.
- Related training tuition and books combined cost around \$1,800 – \$2,000 per year. This cost is the responsibility of the apprentice, although some employers do assist with expenses.

CONTACT



Apply online at:
www.cjatc.org
33309 Hwy 99E
Tangent, OR 97389
Phone: (541) 917-6199

CONTACT



Apply online at:
www.iecoregon.org
3710 Portland Rd NE
Salem, OR 97301
Phone: (503) 598-7789

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org
State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx
Oregon Apprenticeship Resources: <http://oregonapprenticeship.org>
Women in Trades: www.tradeswomen.net
IBEW 280: <http://ibew280.org/>

HEAVY EQUIPMENT/DIESEL SERVICE TECHNICIAN

\$49,518
Median Salary

Diesel Technicians repair and maintain the diesel engines that power trains, ships, generators, and the equipment used in highway construction, logging, and farming. Technicians also maintain and repair power train, electrical, and hydraulic systems used in construction equipment, farm equipment, and trucks. Some technicians work for companies that maintain their own vehicles; in these jobs, technicians spend most of their time doing tasks that will help prevent future problems.

SKILLS

Troubleshooting/Repair
Automotive Industry Knowledge
Electrical Systems
Maintenance
Teamwork/Collaboration

JOB TITLES

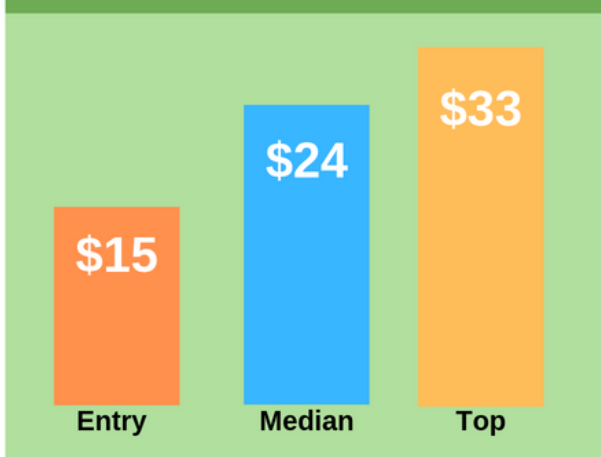
Diesel Mechanic
Heavy Equipment Mechanic
Fleet Mechanic
Maintenance Technician



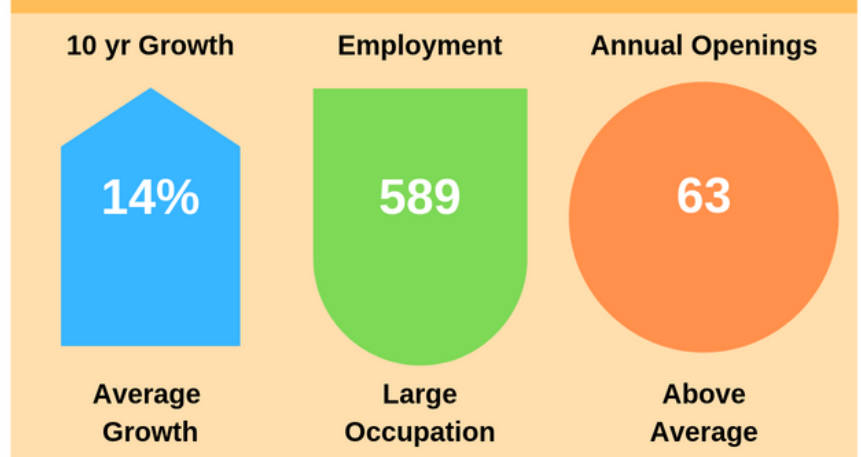
PRIMARY TASKS

- Inspect mechanical components of vehicles to identify problems.
- Adjust vehicle components according to specifications.
- Adjust equipment to ensure optimal performance.
- Service vehicles to maintain functionality.
- Operate transportation equipment to demonstrate function or malfunction.
- Test mechanical equipment to ensure proper functioning.
- Repair defective engines or engine components.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

HEAVY EQUIPMENT/DIESEL SERVICE TECHNICIAN

Training in Heavy Equipment/Diesel Service Technology is available locally at Linn-Benton Community College. Graduates can also pursue opportunities in service departments of distributors and dealers, bus lines/railways, trucking and marine industries, schools, electric power plants, local industries and state and federal government departments.

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry)
- Industrial Arts
- Welding
- Automotive Shop (if available)



LBCC'S PROGRAM

LBCC's Heavy Equipment/Diesel Technology Program works closely with local employers to ensure that the program curriculum is relevant to the needs of local industry. Students get a balance of theory and practical experience gained by diagnosing, servicing, repairing, and rebuilding components and live equipment.

Student Sponsorship Programs:

Industry partners have programs designed to sponsor students enrolled in the program. Students apply directly to the company, and if accepted, the company provides financial support to the student while progressing through the program. The student in return agrees to work for the sponsoring company during school breaks, and continue on as an employee after graduation. Participating companies include Papé, Republic Services, TEC Equipment, Ag West and Yamhill County.

John Deere Construction and Forestry Program: LBCC is one of seven colleges in the country with a John Deere Construction and Forestry Technician program. This program develops the technical competency and professional attributes of students to prepare graduates for high-paying and rewarding careers as a John Deere Construction and Forestry Equipment Technicians.

Learn more:

www.linnbenton.edu/hed

CONTACT



6500 Pacific Blvd. SW
Albany, Oregon 97321
541-917-4999
admissions@linnbenton.edu
www.linnbenton.edu

To apply to LBCC, visit:
www.linnbenton.edu/futures-start-here/index.php

Scan the QR codes to learn more



Heavy Equipment/
Diesel Technology,
Associate of Applied Science



Construction and Forestry
Equipment Technology,
Associate of Applied Science

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

HEAVY EQUIPMENT OPERATOR

\$54,272
Median Salary

Heavy Equipment Operators use machinery to move construction materials, earth, and other heavy materials at construction sites. They operate equipment that clears and grades land to prepare it for construction of roads, buildings, and bridges, as well as airport runways, power generation facilities, dams, levees, and other structures. Operation is more technologically advanced than it was in the past and requires skilled training.

SKILLS

Operate Equipment
Maintenance/Repair
Heavy Lifting
Commercial Driving
Communication

JOB TITLES

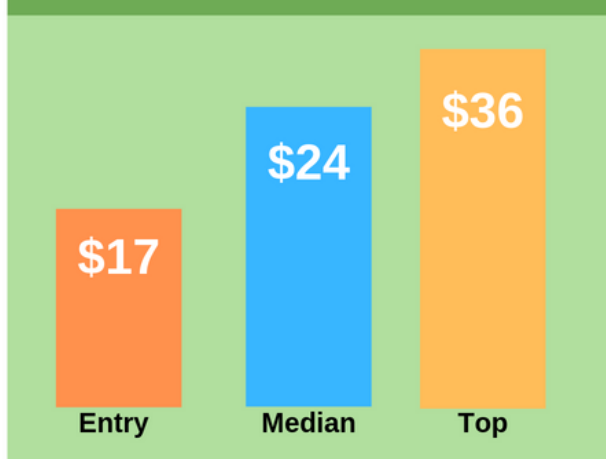
Heavy Equipment Operator
Operating Engineer
Construction Engineer
Loader/Backhoe Operator
Asphalt Roller/Paver Operator
Excavator



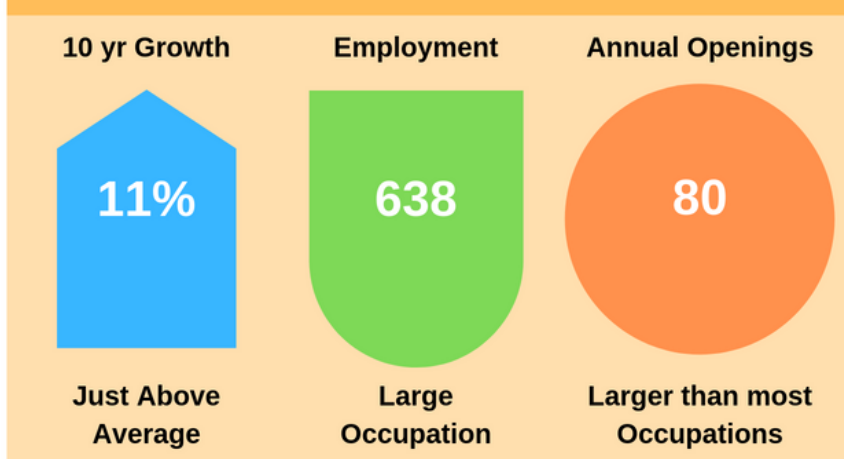
PRIMARY TASKS

- Operate heavy-duty construction or installation equipment.
- Move construction or extraction materials to locations where they are needed.
- Load or unload materials used in construction or extraction.
- Operate equipment or vehicles to clear construction sites or move materials.
- Signal equipment operators to indicate proper equipment positioning.
- Position construction or extraction equipment.
- Drive trucks or truck-mounted equipment.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

HEAVY EQUIPMENT OPERATOR

The typical entry level education for this occupation is a high school diploma or equivalent. Those who enter into an apprenticeship have a competitive advantage and will earn higher wages.

PREPARATION

High School Courses:

- Algebra I/II
- Drafting/Blueprint reading
- Construction/Shop

APPRENTICESHIP

Apprenticeship and training is available through the Northwest College of Construction in Portland. The construction industry pays for your tuition and books. Apprentices receive a paycheck, hands-on career training in the craft of their choice, a free education, and upon completion, apprentices receive nationally recognized industry certification as a master craftsman (Journeyman).

The first thing that the college does for applicants to the apprenticeship program is place them in a job with a construction contractor.

MINIMUM REQUIREMENTS:

Apprenticeship applicants must be at least 18 years of age and must provide proof of a HS Diploma or GED.

APPLICATION REQUIREMENTS:

- Provide proof of at least 18 years of age.
- Submit documentaton for points for ranking placement.
- Points are awarded for: valid drivers license, military, education, certifications, work experience documented on company letterhead and completion of BOLI approved pre-apprenticeship.
- Attend 1/2 day of orientation and 2 days of jumpstart.
- Please provide your ID information before the end of the month you intend to apply. Send to apply@NWCOC.com.

LENGTH OF APPRENTICESHIP:

Classroom Hours: A minimum of 160 hours per year for 4 years
On-the-Job Training: 8,000 hours (approx. 4 years).



CONTACT



Northwest College of Construction

(503) 256-7300

8111 NE Holman Street

Portland, OR 97218

apply@nwcoc.com

www.nwcoc.com



FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

HVAC TECHNICIAN

\$49,527
Median Salary

Heating, Ventilation, and Air Conditioning (HVAC) technicians are always piercing things together as they install, maintain, and repair systems. Can't decide between a career in mechanical systems or electronics? HVAC covers it all! Motors, compressors, pumps, fans, thermostats, and computerized switches control systems in residential, commercial, and industrial structures. Technicians can also specialize in specific equipment such as hydronics (water-based heating systems), solar panels, or commercial refrigeration.

SKILLS

HVAC
Maintenance/Repair
Customer Service
Hand/Power Tools
Diagrams/Blueprints

JOB TITLES

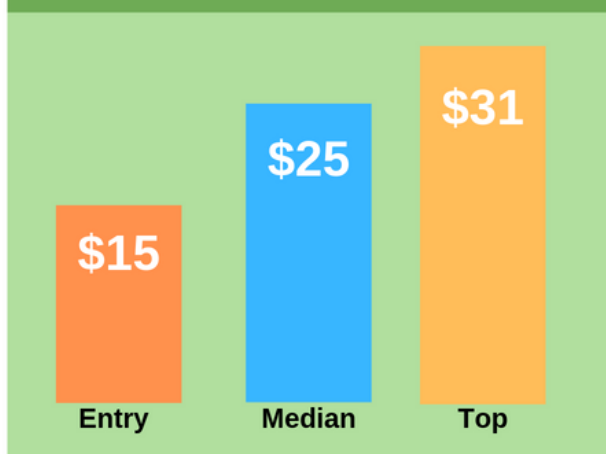
HVAC Installer
HVAC Service Technician
Journeyman HVAC Technician
HVAC Mechanic
Commercial HVAC Insulator



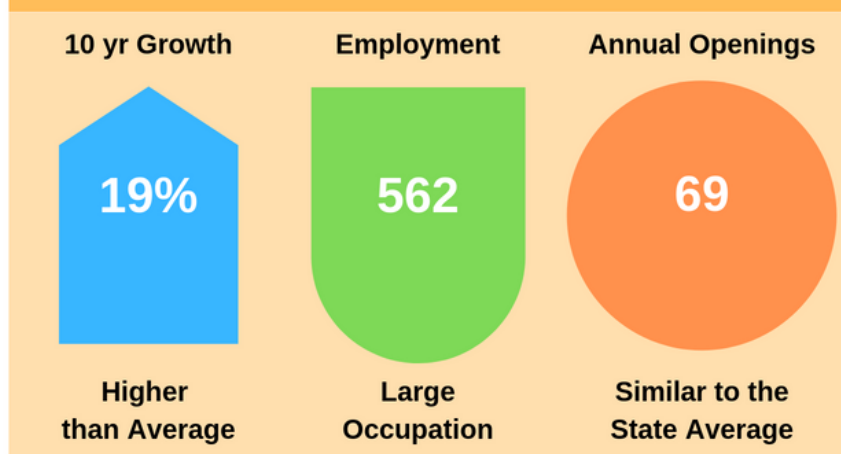
PRIMARY TASKS

- Repair pipes to stop leaking.
- Test electrical circuits or components for proper functioning.
- Replace worn, damaged, or defective mechanical parts.
- Confer with customers or users to assess problems.
- Test mechanical systems to ensure proper functioning.
- Disassemble equipment to inspect for deficiencies.
- Install heating, ventilation, or air conditioning (HVAC) equipment.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

HVAC TECHNICIAN

HVAC is a registered apprenticeship program. The Mid-Valley HVAC/R JAT Committee, MA #2026, contracts with Chemeketa to administer the HVAC/R program and provide courses. For other programs in Oregon, please visit: https://www.oregon.gov/boli/ATD/pages/a_ctrades_hvaccont.aspx.

PREPARATION

High School Courses:

- Algebra I/II, Geometry, Trigonometry
- Construction
- Drafting/CADD
- Welding & other Industrial Arts

Helpful:

- First Aid
- CPR

APPRENTICESHIP

This is a four-year program that combines 8,000 hours of on-the-job training with concurrent related-training credit courses two nights a week (currently Wednesday and Thursday). Apprentices earn 15 academic credits a year.

HOW TO APPLY:

The HVAC/R Committee is normally open for applications in the spring and summer, based on industry need. Openings are announced for 30 days before applications are accepted. Classes begin in the fall. First-year classes are open to the public. To apply, call 503-399-5255 or apprenticeship@chemeketa.edu to be added to the waiting list to receive opening notifications.

REQUIREMENTS:

- High school diploma or GED.
- Minimum of one year of high school algebra with a grade of 'C' or better or placement into Math 70 or higher on Chemeketa's Placement Test.
- High school math equivalent is Math 60 and Math 70 taken at Chemeketa Community College.
- At least 18 years of age.



CONTACT



CHEMEKETA COMMUNITY COLLEGE

Apprenticeship Office
Salem Bldg. 33, Rm. 101
4000 Lancaster Dr. NE
Salem, OR 97305
503-399-5255

www.chemeketa.edu/programs-classes/program-finder/apprenticeship/hvac/

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

MA #2026 Standards of Apprenticeship: www.oregon.gov/boli/ATD/docs/Standards/2000/2026_0637.0.pdf

INDUSTRIAL MACHINERY MECHANIC / MILLWRIGHT

\$60,133
Median Salary

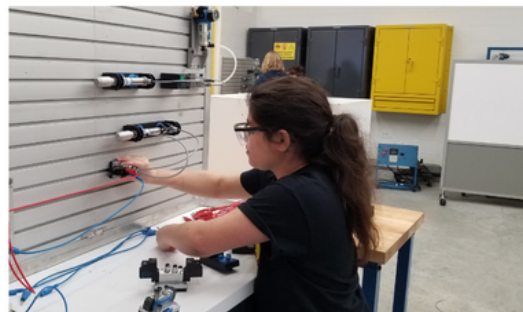
Millwrights work on construction sites and in factories assembling and disassembling machinery. This work can involve intricate technical repairs or heavy machining tools, depending on the project. Millwrights have to be able to understand technical manuals for many different types of machines, as well as a high level of problem-solving skills.

SKILLS

Maintenance/Repair
Operate Machinery
Hand/Power Tools
Safety
Physical Abilities

JOB TITLES

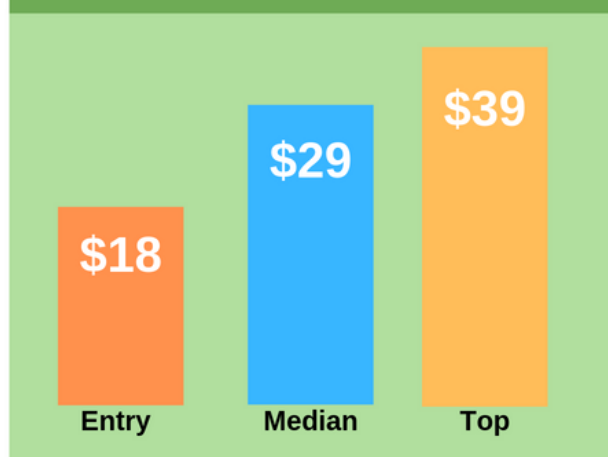
Maintenance Mechanic
Industrial Mechanic
Millwright



PRIMARY TASKS

- Maintain work equipment or machinery.
- Replace worn, damaged, or defective mechanical parts.
- Repair worn, damaged, or defective mechanical parts.
- Disassemble equipment for maintenance or repair.
- Test mechanical equipment to ensure proper functioning.
- Observe equipment in operation to detect potential problems.
- Reassemble equipment after repair.
- Clean equipment, parts, or tools to repair or maintain them in good working order.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

INDUSTRIAL MACHINERY MECHANIC / MILLWRIGHT

Training is available locally at Linn-Benton Community College in the Mechatronics program. This two-year degree prepares you in an interdisciplinary program to be a highly-trained industrial automation technician. A one-year certificate is also available in Industrial Building Mechanic/Green Technician and Career Pathways certificate in available in Industrial Refrigeration.

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry and Trigonometry)
- Industrial Arts (Drafting/CAD)
- Physics
- Computer Science



PIPELINE TO JOBS

Pipeline is a program available for high school students to learn about careers in Welding, Non-Destructive Testing (NDT), Computer Aided-Drafting & Design (CADD), Mechatronics, and Machine Tool Technology. Talk to your teachers and counselors about upcoming Pipeline events where you can attend a Mechatronics program. Learn more at www.pipelinetojobs.com.



Fast Lane to Success

LBCC'S PROGRAM

The field of Mechatronics is very broad, and in this field you are introduced to many different disciplines from hydraulics and sensors to electricity and robotics. Nearly any company that processes or creates a product uses machines and automation to get the work done. Industrial Machinery Mechanics/Mechatronics Technicians are the ones who keep the equipment running using advanced maintenance, troubleshooting, and repair techniques coupled with the latest technologies.

As part of this program, you learn to think analytically about complex systems. You will master and promote energy efficiency while creating sustainable practices. From safety and teamwork to computer-aided design (CAD) and programming, you will become familiar with a variety of skills that make you a valuable asset to any company.

Learn more about the program here:
www.linnbenton.edu/mechatronics

CONTACT



6500 Pacific Blvd. SW
Albany, Oregon 97321
541-917-4999
admissions@linnbenton.edu
www.linnbenton.edu

To apply to LBCC, visit:
www.linnbenton.edu/futures-start-here/index.php



Scan the QR code
to learn more:

Mechatronics or Industrial Automation
Technology Associate of Applied Science

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

IRONWORKER

\$67,038
Median Salary

Ironworkers place and install iron or steel girders, columns, and other construction materials to form the infrastructure all around us. Ironworkers must always be paying attention to details to check vertical and horizontal alignment with plumb bobs, laser equipment, transits, or levels - then they weld or bolt the piece permanently in place.

SKILLS

Welding
Machinery Operation
Safety
Hand/Power Tools
Physical Ability

JOB TITLES

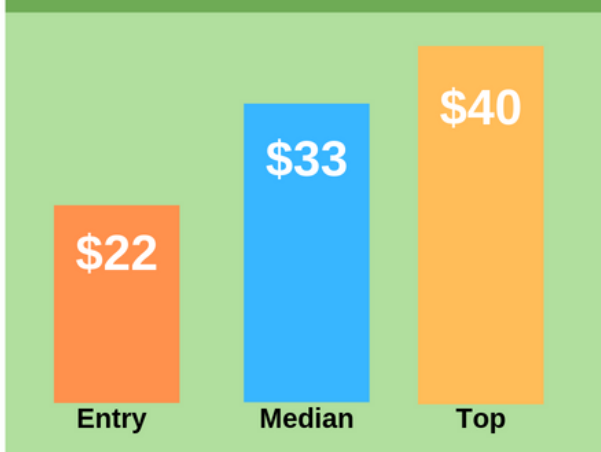
Structural Ironworker
Construction Ironworker
Steel Fabrication
Field Erector/Fabricator



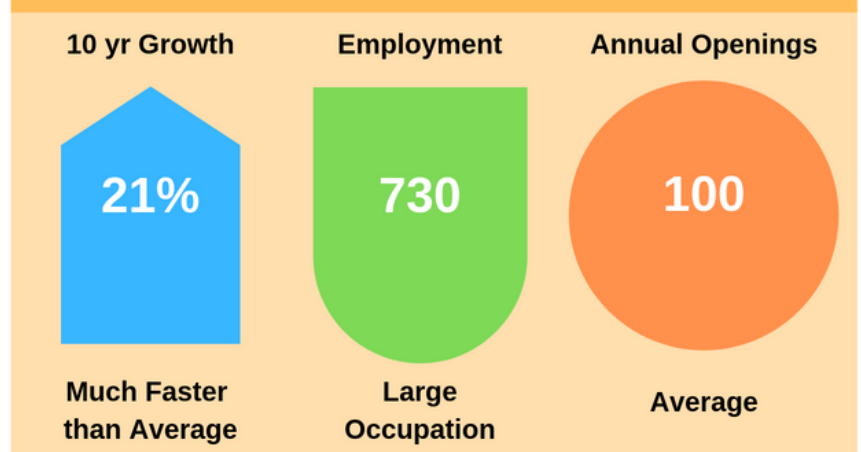
PRIMARY TASKS

- Review blueprints or specifications to determine work requirements.
- Install metal structural components.
- Verify alignment of structures or equipment.
- Signal equipment operators to indicate proper equipment positioning.
- Cut metal components for installation.
- Weld and fabricate metal parts or components
- Position structural components.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

IRONWORKER

The typical entry level education for this occupation is a high school graduate. Apprenticeships are available though and are highly recommended if you want to earn a higher wage.

PREPARATION

High School Courses:

- Algebra I/II
- Drafting/Blueprint Reading
- Construction/Shop

APPRENTICESHIP

Apprenticeship opportunities are available at the Iron Workers Training Center in Portland.

MINIMUM REQUIREMENTS:

To qualify for the training Program, an applicant must be:

- A. At least 18 years of age at the time of application
- B. High school graduate or GED
- C. Physically able to perform the work of the trade

Proof of A and B, above, are required at the time of application. Photocopies of a picture ID and high school diploma or GED will satisfy these requirements. Applicants are placed on the eligibility list by the application score they receive. Points are given for education, previous employment, past employer's recommendations, military service and an in-person interview. Apprentices are selected from a pool of eligible applicants.

HOW TO APPLY:

Applications for Apprenticeship are available on Wednesdays during normal office hours. You must apply in person.

HOW THE PROGRAM WORKS:

Union ironworkers and employers sponsor a four year apprenticeship program. Training is conducted in classroom and on the job site. Ironworker apprentices attend a four week, daytime training session each year of their apprenticeship. Classes are normally held during the winter months. There is an opportunity to advance every six months before reaching journey level. Apprentices must complete a minimum of 200 classroom hours each year and 6,400 on-the-job training hours.



CONTACT



Pacific NW Ironworker & Employer ATC#29 JATC
Iron Workers Training Center
11620 NE Ainsworth Circle, Suite 100
Portland, OR 97229
503-775-0877
www.nwiw.com/CONTACT29.htm

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

Ironworkers District Council of the Pacific Northwest: www.ironworkersnw.org

LABORER

\$37,454
Median Salary

Construction laborers and helpers work on almost all construction sites, performing a wide range of tasks from the very easy to the extremely difficult and hazardous. They may operate hand and power tools of all types. Although many of the tasks they do require some training and experience, most tasks usually require little skill and can be learned quickly.

SKILLS

Forklift Operation
Material Handling
Shipping/Receiving
Physical Ability
Inventory/Sorting

JOB TITLES

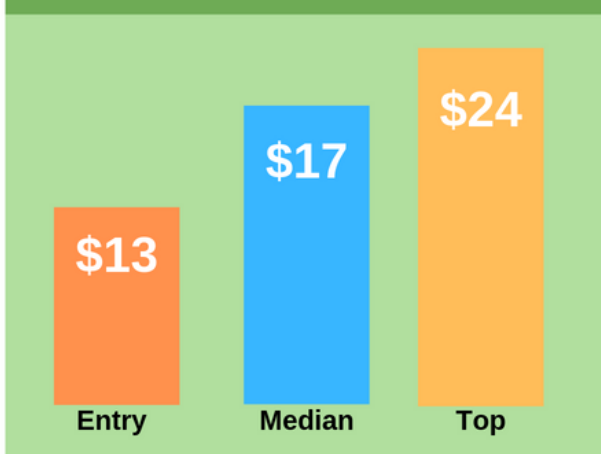
Material Handler
Warehouse Worker
General Laborer
Production Laborer
Dock Worker



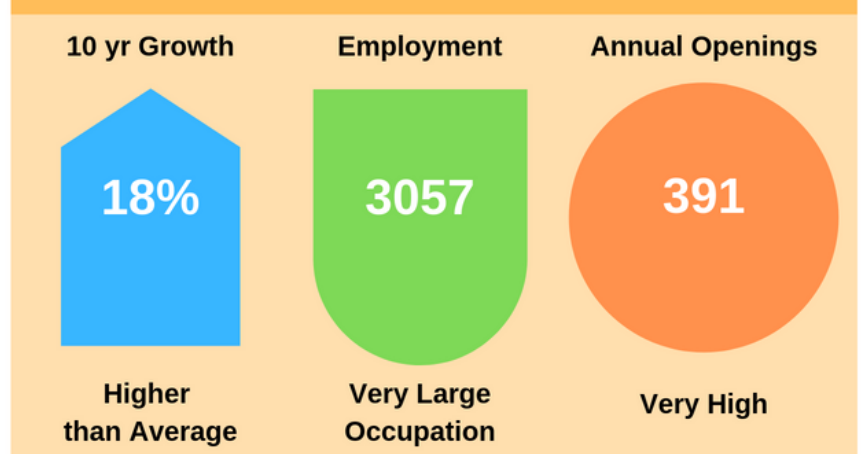
PRIMARY TASKS

- Direct vehicle traffic.
- Clean work sites.
- Signal equipment operators to indicate proper equipment positioning.
- Review blueprints or specifications to determine work requirements.
- Move construction or extraction materials to locations where they are needed.
- Measure work site dimensions.
- Mix substances or compounds needed for work activities.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

LABORER

The typical entry level education for this occupation is less than high school. Those with a high school diploma or equivalent have a competitive advantage in the labor market. An apprenticeship is highly recommended though if you want to work as a laborer and earn a higher wage.

PREPARATION

High School Courses:

- Algebra I & II
- Industrial Arts/Shop classes
- Drafting & Blueprint Reading

Helpful:

- First-aid
- Work experience

APPRENTICESHIP

Students can complete their laborer apprenticeship with the Northwest College of Construction. View their requirements at <https://nwcoc.com/apprenticeship-at-nwcoc/laborers/>.

APPLICATION REQUIREMENTS:

1. Provide proof of at least 18 years of age.
2. Submit documentation for points for ranking placement.
3. Points are awarded for: valid drivers license, military, education, certifications, work experience documented on company letterhead and completion of BOLI approved pre-apprenticeship.
4. Attend 1/2 day of orientation and 5 days of jumpstart (unpaid training).
5. Please provide your ID information before the end of the month you intend to apply.
6. Please submit all documentation to apply@nwcoc.com.

LENGTH OF APPRENTICESHIP:

Classroom Hours: A minimum of 144 hours per year for 2 years
On-the-Job Training: 4,000 hours (approx. 2 years)

WAGES:

Beginning apprentices start at 60% of the journey-level wage. Wages usually increase every six months until the journey-level rate is achieved.



CONTACT



Northwest College of Construction

8111 NE Holman St.

Portland, OR 97218

(503) 256-7300

Toll Free: (800) 309-1442

apply@nwcoc.com

www.nwcoc.com



FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

MACHINIST

\$50,230
Median Salary

Machinists create the things that make modern technologies possible. Machinists use a variety of machinery and tools to shape raw materials into a finished product. Advancements in 3D modeling, 3D printing, and robotics are taking the industry into new areas previously thought impossible. Often a machinist will see a project through from initial prototyping to the finished product. Many things--from automotive parts to advanced robotics to medical implants to the space program--rely on precision machinists.

SKILLS

CNC/Machining
Mill/Lathes/Grinders/Presses
Math/Micrometers
Hand/Power Tools
Detail-oriented

JOB TITLES

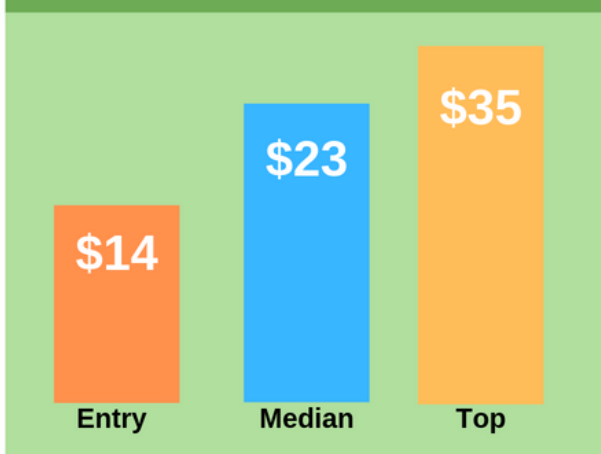
Machinist (Mill/Lathe)
CNC/Machine Operator
CNC Specialist
CNC Programmer
Journeyman Moldmaker



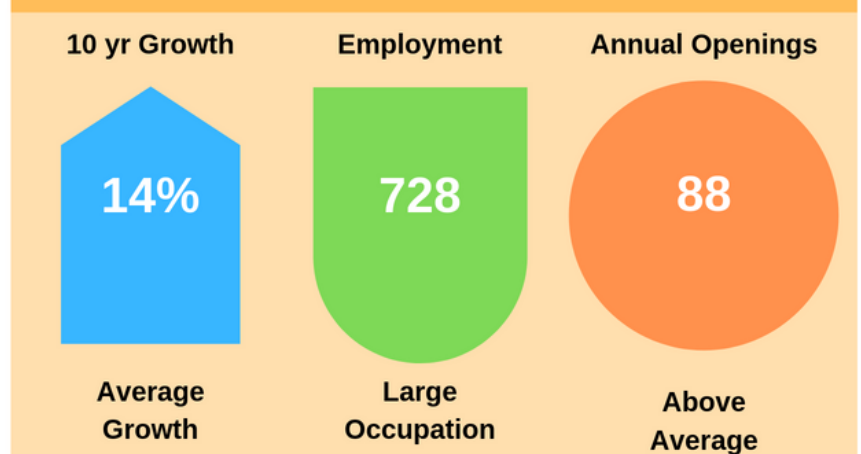
PRIMARY TASKS

- Measure dimensions of completed products or workpieces to verify conformance to specs.
- Calculate dimensions of workpieces, products, or equipment.
- Operate cutting or grinding equipment.
- Monitor equipment operation to ensure proper functioning.
- Maintain production or processing equipment.
- Review blueprints or other instructions to determine operational methods or sequences.
- Operate metal or plastic forming equipment.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

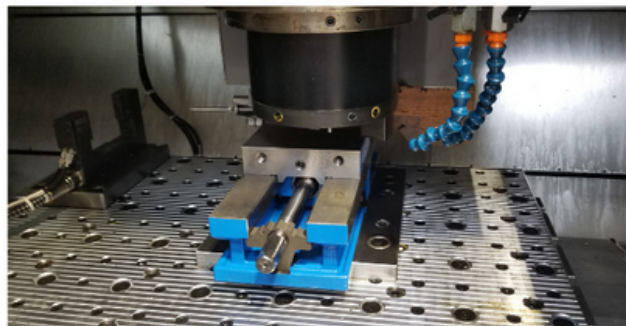
MACHINIST

Training in Machine Tool Technology is available locally at Linn-Benton Community College. You can get a one-year certification or take the two-year program and earn an Associate of Applied Science.

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry and Trigonometry)
- Drafting/CAD
- Industrial Arts
- Welding



PIPELINE TO JOBS

Pipeline is a program available for high school students to learn about careers in Welding, Non-Destructive Testing, Computer Aided-Drafting & Design, Mechatronics, and Machine Tool Technology. Talk to your teachers and counselors about upcoming Pipeline events where you can actually try out machining for yourself to see if it might be something you are interested in. Learn more at www.pipelinetojobs.com.



Fast Lane to Success

LBCC'S PROGRAM

LBCC's Machine Tool Technology Program works closely with local employers to ensure that the program curriculum is relevant to the needs of local industry. A certificate or degree from this program enables a graduate to work in the following careers:

- Machinist
- CNC Operator or Programmer
- Milling Machinist
- Tool or Die Maker
- Molders, Shapers, or Casters
- Machine Tool Setters
- Lathe Operator

Scan the QR codes to learn more:



Machine Tool Technology
Associate of Applied Science



Machine Tool Technology
One-year Certificate



CNC Machinist
Certificate

CONTACT



6500 Pacific Blvd. SW
Albany, Oregon 97321
541-917-4999
admissions@linnbenton.edu
www.linnbenton.edu

To apply to LBCC, visit:
www.linnbenton.edu/futures-start-here/index.php

Machine Tool Technology:
www.linnbenton.edu/mtt

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

Machinist Career Video: <https://youtu.be/OWNXI09WI14>

NON-DESTRUCTIVE TESTING SPECIALIST

\$56,896
Median Salary

Whether driving a car or boarding a plane, the strength or structural integrity of the parts holding everything together is imperative for the safety of all involved. Non-Destructive Testing (NDT) Technicians inspect, test, and evaluate materials, components, or assemblies for flaws or differences in characteristics that may lead to failures. They play a critical role in ensuring our transportation, bridges, buildings, and infrastructure are sound and help to prevent accidents- potentially saving lives.

SKILLS

Quality Control/Assurance
Machine/Hand Tools
Detail Oriented
Communication
Computer/Technology

JOB TITLES

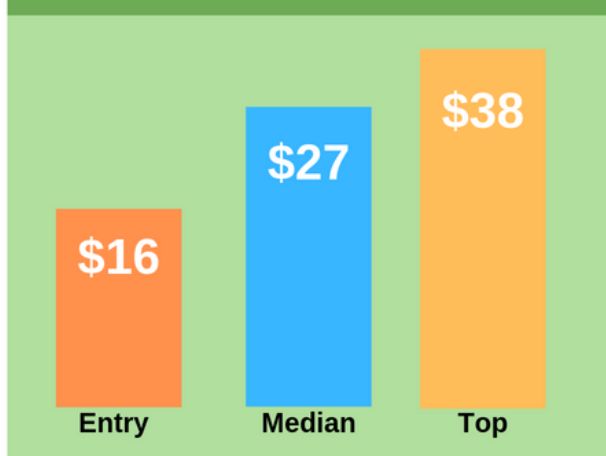
NDT Technician
NDT Level I, II, III
Penetrant Inspector Level I, II, III
Radiographer/X-ray
Quality Control Inspector



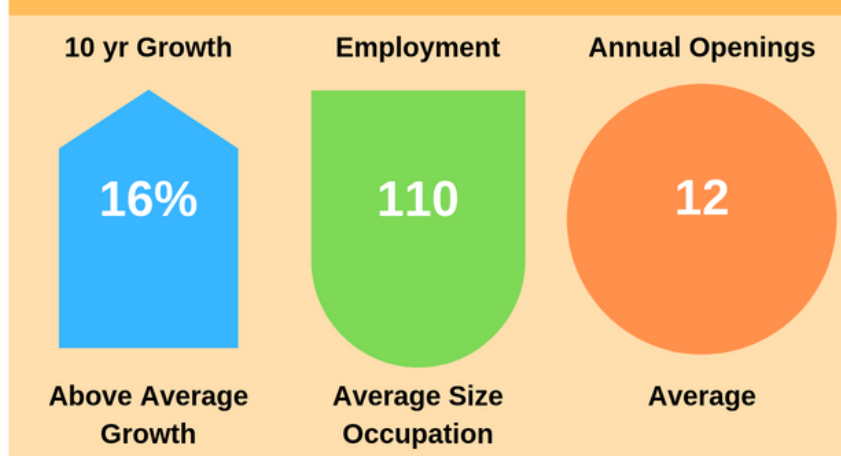
PRIMARY TASKS

- Interpret or evaluate test results in accordance with applicable codes, standards, specifications, or procedures.
- Interpret the results of all methods of non-destructive testing (NDT), such as acoustic emission, electromagnetic, leak, liquid penetrant, magnetic particle, neutron radiographic, radiographic, thermal or infrared, ultrasonic, vibration analysis, and visual testing.
- Select, calibrate, or operate equipment used in the non-destructive testing (NDT) of materials.
- Identify defects in solid materials using ultrasonic testing techniques.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

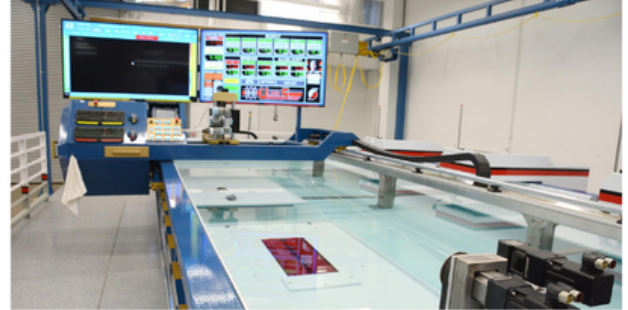
NON-DESTRUCTIVE TESTING SPECIALIST

Training in Non-Destructive Testing & Evaluation is available locally at Linn-Benton Community College. Industries that employ NDT technicians include: Aerospace, Construction & infrastructure, Manufacturing, transportation, petrochemical, and power generation. The job outlook for NDT Technicians is good, with local career opportunities at companies throughout the Mid-Valley.

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry and Trigonometry)
- Drafting/CADD if available
- Industrial Arts
- Welding



PIPELINE TO JOBS

Pipeline is a program available for high school students to learn about careers in Welding, Non-Destructive Testing (NDT), Computer Aided-Drafting & Design (CADD), Mechatronics, and Machine Tool Technology. Talk to your teachers and counselors about upcoming Pipeline events where you can attend a Welding/NDT program. Learn more at www.pipelinetojobs.com.



LBCC'S PROGRAM

LBCC's Non-Destructive Testing & Evaluation Program works closely with local employers to ensure that the program curriculum is relevant to the needs of local industry.

Students get hands-on training with state-of-the-art equipment including ultrasonic phase array 3D imaging, radiography, penetrating dyes, magnetic particle inspection, and visual inspection to find surface and sub-surface flaws and anomalies.

Graduates of this program will be Level I certified in accordance with the American Society for Nondestructive Testing standards, the world's largest technical society for nondestructive testing professionals. Opportunities exist for NDT technicians who want to move up in the industry to a Level II or III technician.

Learn more at: www.linnbenton.edu/ndt

CONTACT



6500 Pacific Blvd. SW
Albany, Oregon 97321
541-917-4999
admissions@linnbenton.edu
www.linnbenton.edu

To apply to LBCC, visit:
www.linnbenton.edu/futures-start-here/index.php



Scan the QR code
to learn more:

Nondestructive Testing (NDT) and
Evaluation, Associate of Applied Science

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

American Society for Nondestructive Testing: www.asnt.org

PAINTER

\$39,712
Median Salary

Painters prepare and paint a diverse array of surfaces in commercial, industrial and residential environments. Painters need to be skilled with a wide variety of hand and power tools, depending on the type of surface preparation and coating required.

SKILLS

Painting
Hand/Power Tools
Safety
Project Management
Customer Service

JOB TITLES

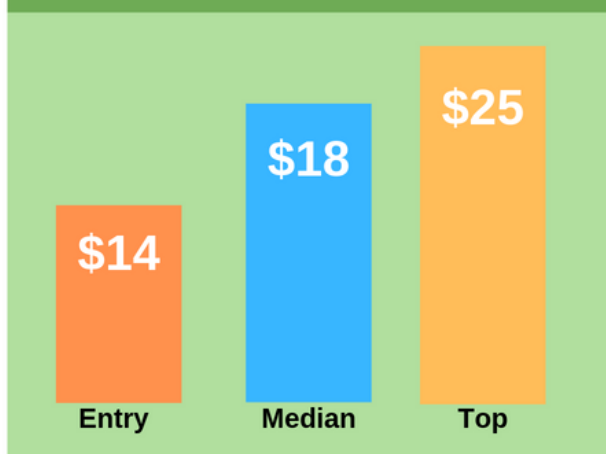
Construction Painter
Paint Crew Member
Interior/Exterior Painter
Auto Body Painter



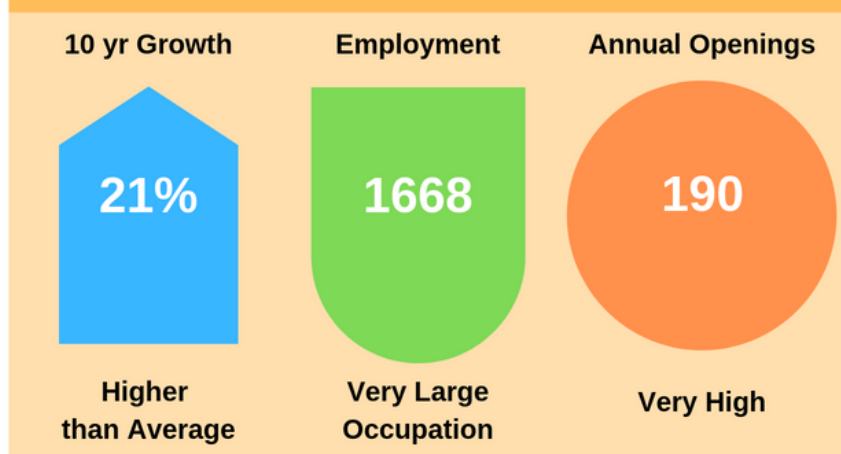
PRIMARY TASKS

- Apply material to fill gaps in surfaces.
- Protect structures or surfaces near work areas to avoid damage.
- Smooth surfaces with abrasive materials or tools.
- Review blueprints or specifications to determine work requirements.
- Prepare surfaces for finishing.
- Apply paint to surfaces.
- Mix substances or compounds needed for work activities.
- Estimate materials requirements for projects.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

PAINTER

The typical entry level education for this occupation is a high school graduate. Apprenticeships are available though and are highly recommended if you want to earn a higher wage.

PREPARATION

High School Courses:

- Industrial Arts
- Shop classes

Helpful:

- Work experience
- Business classes

APPRENTICESHIP

Apprenticeship opportunities are available in the Portland and Eugene regions through the Oregon & SW Washington Painters JATC.

MINIMUM REQUIREMENTS:

- Must be at least 17 years of age.
- Must have a high school diploma or GED.

HOW TO APPLY:

Applications are taken every Tuesday from 9:00 AM to 4:00 PM during the months of January thru September. You must apply in person.

HOW THE PROGRAM WORKS:

- They help you locate a paid job with a Union contractor.
- They require monthly reports of your work hours.
- They require attendance to all Block Training (classes for all apprentices are now referred to as Block Training). Block Training is held every month for each level and is three days in a row. Block Training is completed during your own time during the school year.

COSTS:

There is no charge for classes. Classes begin after you are sent to work.

LENGTH OF PROGRAM:

6,000 hours of on-the-job training for the Painter and Drywall Finisher programs. There is an additional 432 hours of related classroom instruction for the program.



CONTACT



Oregon & SW Washington Painters JATC

Oregon #MA-1024 & Washington #241

13521 NE Whitaker Way

Portland, OR 97230

503-287-4856

www.rtctraining.org

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

PILEDRIIVER

\$73,540
Median Salary

Piledrivers are usually the first workers to arrive at a commercial construction site. They drive sheet metal piling to hold back dirt during excavations; drive concrete, metal, and wood pilings as part of the foundation system for skyscrapers; and drive wood and concrete to hold up docks, wharves, and bridges. Some may also work as commercial divers involved in underwater construction. You also may get to work with welding equipment.

SKILLS

Operate equipment
Troubleshooting
Maintenance
Communication
Math

JOB TITLES

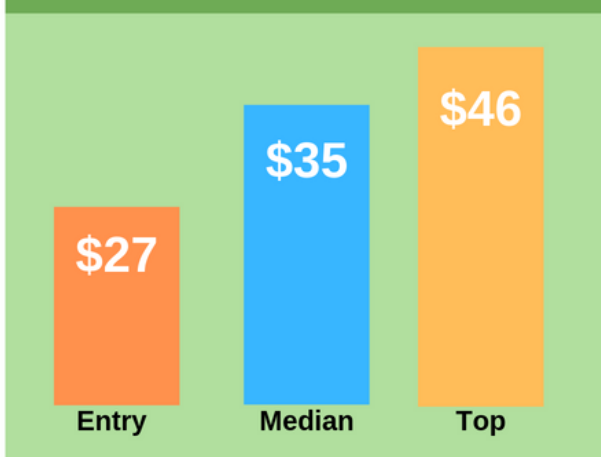
Piledriver



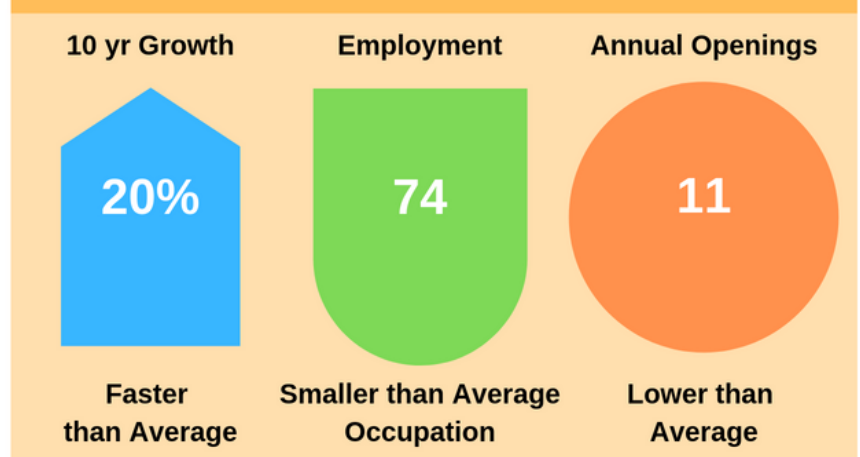
PRIMARY TASKS

- Operate cranes, hoists, or other moving or lifting equipment.
- Operate heavy-duty construction or installation equipment.
- Position structural components.
- Inspect equipment or tools to be used in construction or excavation.
- Maintain construction tools or equipment.
- Clean equipment or facilities.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

PILEDRIIVER

The typical entry level education for this occupation is a high school graduate or GED. Apprenticeships are available though and are highly recommended if you want to earn a higher wage.

PREPARATION

High School Courses:

- Algebra I/II and Geometry
- Drafting/Blueprint reading
- Construction/Shop

Helpful:

- First Aid / CPR
- Construction work

APPRENTICESHIP

Apprenticeship opportunities are available at the Pacific Northwest Carpenters Institute in Portland.

ELIGIBILITY:

Must be 17 years of age and have a high school diploma or GED OR be 18 years of age.

LENGTH OF TIME:

A piledriver apprenticeship lasts four years. Apprentices complete a minimum of 120 hours/year of classroom training and 8,000 hours of on-the-job training.

COST:

You earn while you learn, and you are paid a wage from the first day you become a working apprentice. Some costs however may apply - please contact PNCI for more information.

OPENINGS:

Selection process is through a "ranked interview" of qualified applicants. More info at: <https://www.pnci.org/openings.lasso>.

TO APPLY:

Applications are accepted on a continuous basis at www.PNCI.org and can be filled out online. To complete the process, you will be asked to choose a mandatory Pre-Hire class. This is an orientation about the Trade and the Apprenticeship Program requirements. Pre-hire classes are posted every 30 days.



WORKING CONDITIONS

Piledriver work is very physical and involves climbing, kneeling, lifting, and squatting. Travel is often required.

Piledrivers work where it is warm and dry, cold and wet, and at depths of 100 feet below or above ground.

They must be in good health, meet certain strength requirements, be agile, and have good hand-eye coordination.

CONTACT

PACIFIC NORTHWEST CARPENTERS INSTITUTE

4222 NE 158th Ave
Portland OR, 97230
503-287-3708
877-287-9282

www.pnci.org/apprenticeship.lasso



FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

PLUMBER

\$77,000
Median Salary

Are you always tinkering with objects? Do people ask for your help with fixing mechanical things? Plumbers do much more than fix sinks and toilets in residential homes. They design and install piping systems that distribute water and remove waste from buildings and connect heating and cooling systems.

SKILLS

Repair/Maintenance
Hand/Power Tools
Schematic Diagrams
Customer Service
Communication

JOB TITLES

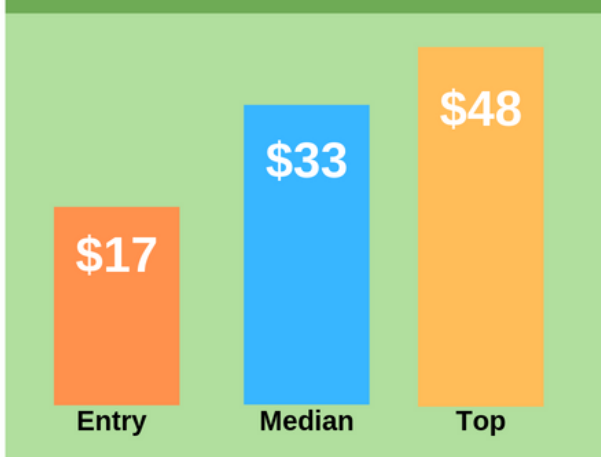
Plumbing Professional
Plumbing Technician
Licensed Plumber
Journeyman Plumber



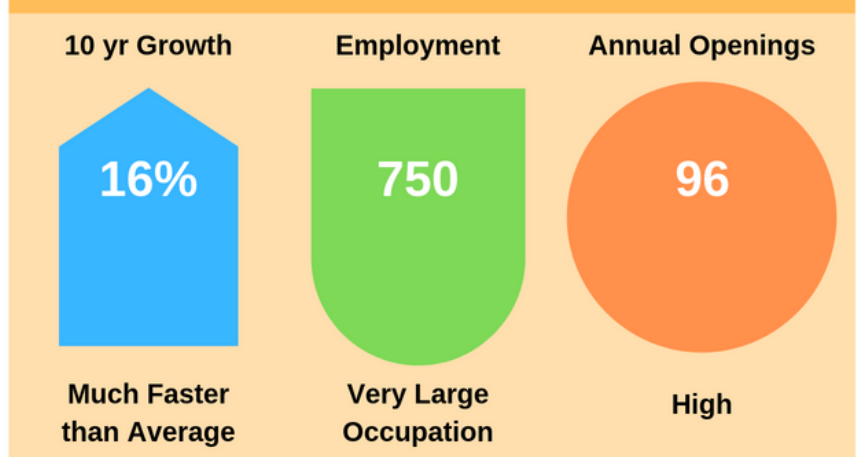
PRIMARY TASKS

- Fabricate parts or components.
- Cut metal components for installation.
- Create construction or installation diagrams.
- Measure materials or objects for installation or assembly.
- Inspect plumbing systems or fixtures.
- Plan layout of construction, installation, or repairs.
- Install plumbing or piping.
- Weld metal components.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

PLUMBER

Training available through our local apprenticeship training facility (Area II Plumbers JATC) and Chemeketa Community College. Earn 13 credits over Fall, Winter and Spring Terms taking classes two evenings/week combined with on-the-job training. Optional: Credits can be applied towards an Associate's Degree.

PREPARATION

High School or College Course:

- Algebra I & II, Geometry
- Construction/Trades/Welding
- Drafting & Blueprint Reading
- Industrial Arts/Graphic Design/Arts

Helpful:

- First-AID/CPR
- Drivers License
- Construction Work

REQUIREMENTS

TO ENTER:

1. Be 18 years old (need proof of age)
2. High School Diploma or GED
3. Get "C" or better in High School Algebra, or college course MTH 60 or higher
4. Resume with proof of previous employment

LENGTH OF TIME:

The apprenticeship is a four-year program consisting of:

- Classroom time: 144-216 hours per year
- On-the-job training: 7,700 - 8,000 hours (may receive 40-50% of journeyman wages)

COST:

You will have to pay for your classes. Contact Area II Plumbers JATC or Chemeketa Community College.

TO APPLY:

- Contact Area II Plumbers JATC to see if they are taking applications. Women, Veterans and minorities are encouraged to apply.
- Successful applicants are ranked based on points they received with their application and sent to employers in order. Visit www.area2app.com to see the list.
- Apply to Chemeketa Community College.



CONTACT

AREA II PLUMBERS JATC

www.area2app.com

2475 Lancaster Dr. NE B-9

PO Box 7106

Salem, OR 97303

503-991-5203

officeadmin@area2.com



CHEMEKETA COMMUNITY COLLEGE

Apprenticeship Office

Salem Bldg. 33, Rm. 101

4000 Lancaster Dr. NE

Salem, OR 97305

503-399-5255

www.chemeketa.edu/programs-classes/program-finder/apprenticeship/plumber/



FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Oregon Apprenticeship Resources: <http://oregonapprenticeship.org>

Women in Trades: www.tradeswomen.net

RIGGER

\$69,394
Median Salary

Riggers play important roles in all branches of heavy industry. Riggers attach loads of construction equipment to cranes or structures using cables, pulleys, and winches. Quick load calculations are necessary for each load, and engineering principles are always in play. Riggers use various suspension techniques to get their load around obstacles on a construction site to the desired location.

SKILLS

Mechanical/Repair
Material Handling
Math
Machinery/Equipment
Physical Abilities

JOB TITLES

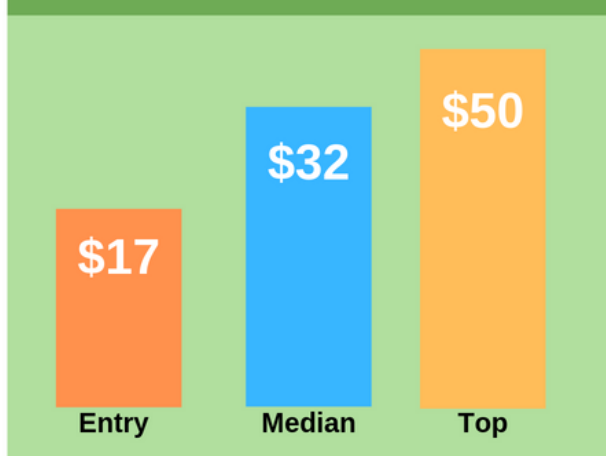
Marine Rigger
Associate Rigger
Technical Rigger
Mobile Crane Rigger
Dock Rigger



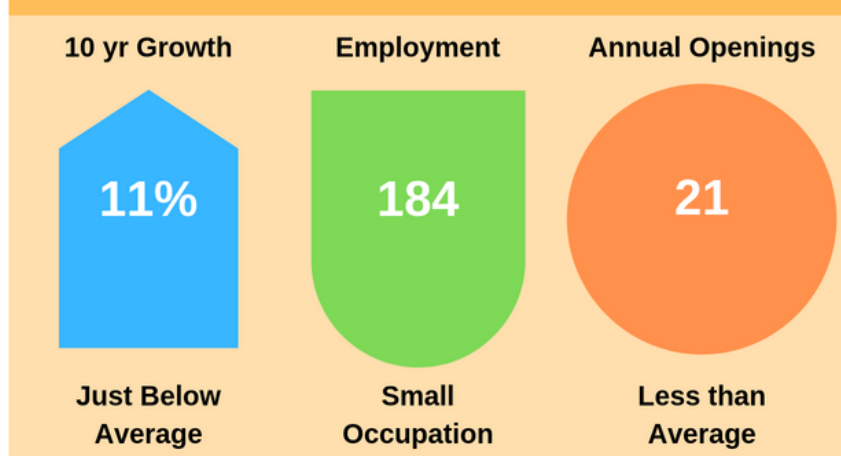
PRIMARY TASKS

- Weigh materials to ensure compliance with specifications.
- Operate cranes, hoists, or other moving or lifting equipment.
- Install parts, assemblies, or attachments in transportation or material-handling equipment.
- Inspect material-moving equipment to detect problems.
- Direct material-handling or moving activities.
- Maintain material moving equipment in good working condition.
- Load shipments, belongings, or materials.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

RIGGER

The typical entry level education for this occupation is a high school graduate. Training is available in Portland at All Purpose (AP) Crane Training. Riggers and signalpersons that work on a construction site are required to be qualified.

PREPARATION

High School Courses:

- Algebra I/II
- Drafting/Blueprint reading
- Construction/Shop

TRAINING

AP Crane Training

Rigging involves attaching a Crane's hook or connecting a component to a workload for lifting. Proper Rigging is critical to ensure a workload will be lifted safely. A workload that is not properly rigged is at risk of failing which will cause it to collapse and come crashing down on a work area/fall zone. This collapse may be very critical as it may potentially injure workers.

They provide training at your worksite or you can visit many established affiliated sites around the country.

Rigging and Signalperson Qualification is good for three years upon a successful completion of testing.

Learn more about this qualification:

<https://apcranetraining.com/wp-content/uploads/2017/08/Rigging-and-Signalperson-Instructor-Training-2017.pdf>

For class schedule:

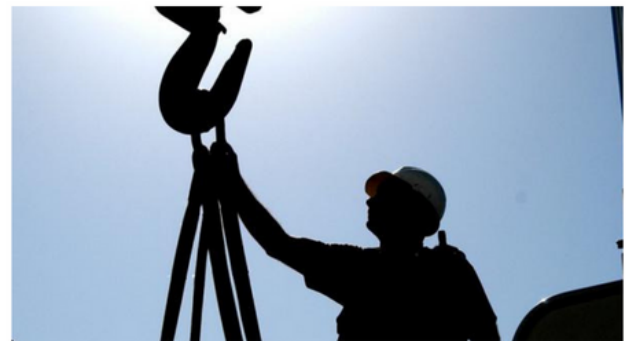
<https://apcranetraining.com/portland-oregon-crane-training/>



CONTACT



All Purpose (AP) Crane Training
(888) 501-1355
info@apcranetraining.com
<https://apcranetraining.com/>



FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

ROOFER

\$37,111
Median Salary

Roofers work outdoors using modern materials and methods to install shelter and coverings for all types of homes and businesses. Roofers need to understand and read blueprints, schematics, and technical drawings; read work orders and specifications; and provide customer service.

SKILLS

Roofing
Safety
Carpentry
Material Handling
Physical Ability

JOB TITLES

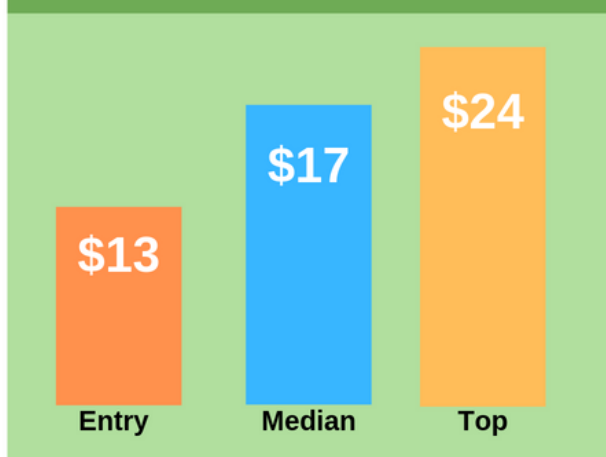
Commercial Roofing Tech
Gutter Installer
Roofing and Siding Installer
Roofing Inspector
Roofing Safety Inspector



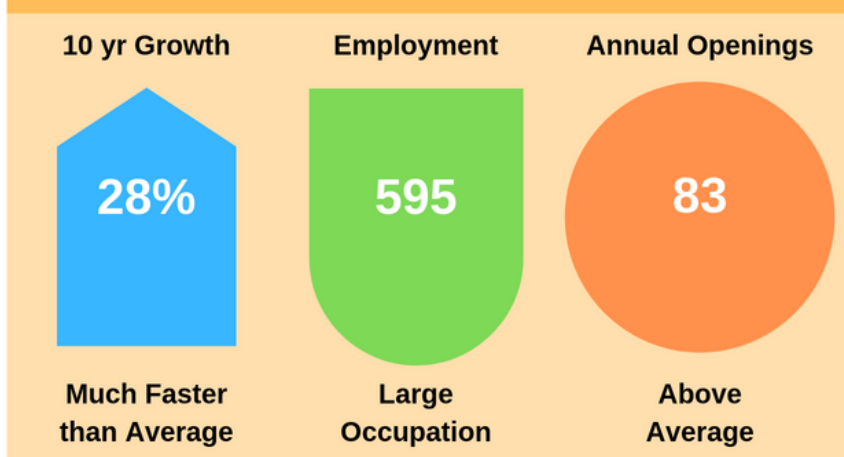
PRIMARY TASKS

- Inspect work sites to determine condition or necessary repairs.
- Assemble temporary equipment or structures.
- Estimate materials requirements for projects.
- Apply adhesives to construction materials.
- Cut carpet, vinyl or other flexible materials.
- Install roofing materials.
- Apply paint to surfaces.
- Install insulation in equipment or structures.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

ROOFER

The typical entry level education for this occupation is a high school graduate. Apprenticeships are available though and are highly recommended if you want to earn a higher wage.

PREPARATION

High School Courses:

- Algebra I/II
- Drafting/Blueprint reading
- Construction/Shop

APPRENTICESHIP

Apprenticeship and training is available through the Oregon SW WA Roofers & Waterproofers JATC in Portland.

MINIMUM QUALIFICATIONS:

Apprenticeship applications must be at least 18 years of age.

HOW TO APPLY:

The application process is simple. They take in-person applications on Monday through Friday from 9am to 2pm. There is some paperwork involved so they ask you to bring your driver's license/picture identification, GED/High School Diploma and any other certifications. Download an application from their website:

www.orswroofersapp.com/application-process/

NEXT STEPS:

Their office will schedule an interview. Thereafter a "Basic Skills" class will be required to pass before acceptance.

ENTRY LEVEL WAGE:

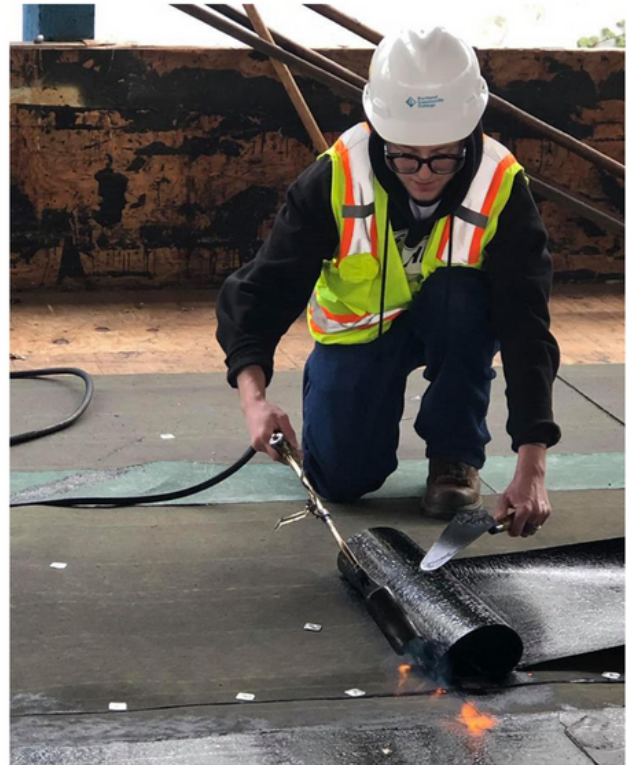
As of now (2018) \$19.94 no experience needed.

LENGTH OF APPRENTICESHIP:

The apprenticeship lasts two years. Apprentices must complete a minimum of 144 classroom hours/year and 4,000 on-the-job training hours.

COSTS:

An apprentice will pay \$2000 for the four years of the program which comes to \$500 a year. \$20 is paid for every week that you work.



CONTACT



Oregon SW WA Roofers & Waterproofers JATC

5032 SE 26th Ave.

Portland, OR 97202

503-546-4235

office@orswroofersapp.com

www.orswroofersapp.com

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

Roofers Union: www.roofersunionlocal49.com

SHEET METAL WORKER

\$47,502
Median Salary

Sheet metal workers cut and mold sheets of metal into products for installing and repairing ventilation and air ducts. They set up and operate shears, press brakes, hand brakes, bending rolls, welding machines, and other equipment to cut, form, and attach metal together for applications such as metal roofing and stainless steel work for restaurants, kitchens, and hospitals. Most shops are completely computerized, so sheet metal workers may be responsible for programming control systems on various pieces of equipment.

SKILLS

Welding/Fabrication
Machinery
Math
Hand/Power Tools
Detail-Oriented

JOB TITLES

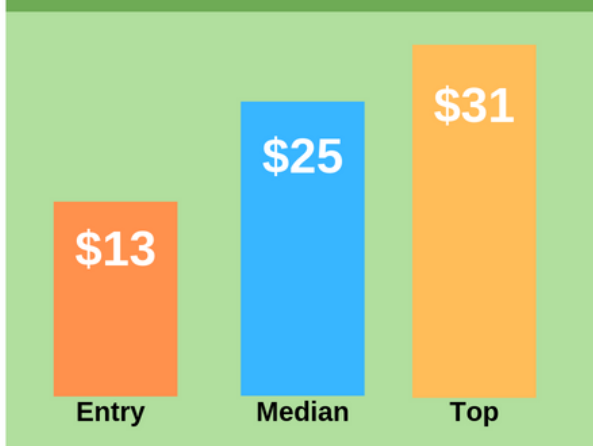
Sheet Metal Mechanic
Sheet Metal Fabricator
Deburr Technician
Fabrication Technician
Sheet Metal Worker



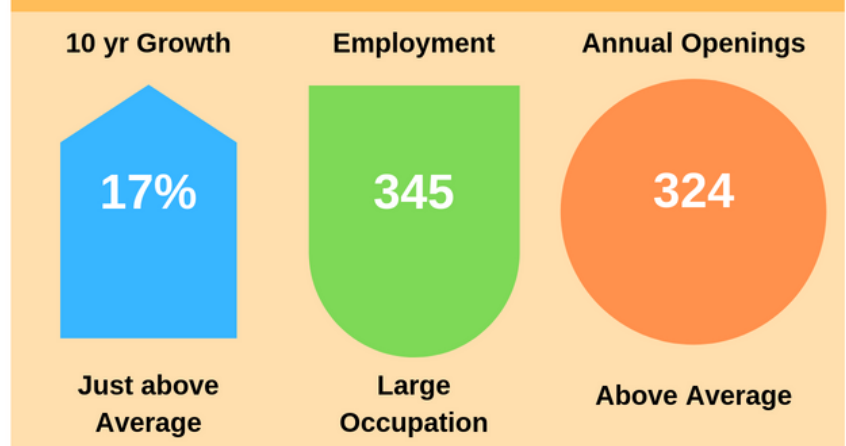
PRIMARY TASKS

- Create construction or installation diagrams.
- Review blueprints or specifications to determine work requirements.
- Measure materials or objects for installation or assembly.
- Mark reference points on construction materials.
- Assemble products or production equipment.
- Plan layout of construction, installation, or repairs.
- Smooth surfaces with abrasive materials or tools.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

SHEET METAL WORKER

Sheet Metal is a registered apprenticeship program. The Mid-Valley Sheet Metal Committee, MA #1060, contracts with Chemeketa Community College to administer the Sheet Metal program and provide courses under the guidance of the Bureau of Labor and Industries.

PREPARATION

High School Courses:

Algebra I and II / Geometry
Blueprint Reading
Drafting / CAD
Industrial Arts
Welding

Helpful:

First-Aid
CPR



APPRENTICESHIP

HOW TO APPLY:

Opening announcements: www.chemeketa.edu/programs-classes/program-finder/apprenticeship/sheet-metal/.

REQUIREMENTS:

- Proof of age: 17 years or older and HS diploma or GED Certificate
- High School transcript with 1 year of algebra or equivalent with grade "C" or higher, OR one post high school algebra course with a grade "C" or higher OR place into Math 070 or higher on the Chemeketa math placement test

LENGTH OF TIME:

This is a four-year program that combines 7,200 hours of on-the-job training with concurrent related-training credit courses. Apprentices earn 15 academic credits a year and attend classes year round.

WAGES:

The average journey-level wage for sheet metal workers working for program training agents for 2018 is \$24.41 per hour.

STEPS TO ENROLL:

- Get on the list to receive notice of openings.
- Compile your portfolio of documentation required for program entry.
- Submit your completed application during an application period.
- Attend the mandatory orientation to learn more about the program.

CONTACT



CHEMEKETA COMMUNITY COLLEGE

Apprenticeship Office
Salem Bldg. 33, Rm. 101
4000 Lancaster Dr. NE
Salem, OR 97305
503-399-5255

www.chemeketa.edu/programs-classes/program-finder/apprenticeship/sheet-metal/

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training: www.oregon.gov/boli/ATD/pages/a_ctrades_sheetmetalworker.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

Portland Sheet Metal Worker JATC: www.sheetmetal-16.org

Sheet Metal JATC: www.abcpnw.org

SURVEYING TECHNICIANS

\$56,865
Median Salary

Perform surveying and mapping duties, usually under the direction of an engineer, surveyor, cartographer, or photogrammetrist to obtain data used for construction, mapmaking, boundary location, mining, or other purposes.

SKILLS

GPS
Robotics
Data Collection/Surveying
Math
Drafting/Engineering

JOB TITLES

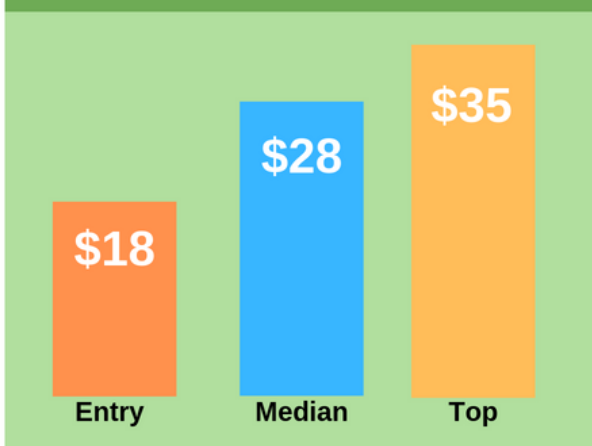
Field Technician
Survey Field Instrument
Person
Assistant Surveyor
Survey Party Chief



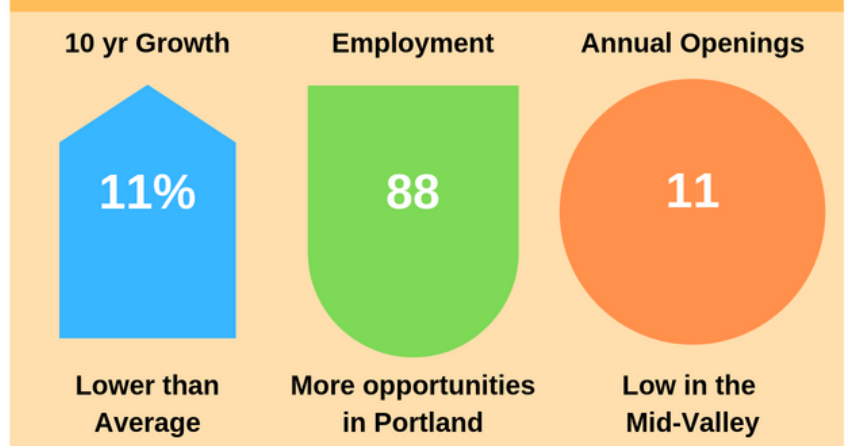
PRIMARY TASKS

- Survey land or bodies of water to measure or determine features.
- Create maps or graphical representations of structures.
- Evaluate designs or specifications to ensure quality.
- Develop software or computer applications.
- Monitor processes for compliance with standards.
- Gather physical survey data.
- Operate computer systems.
- Verify mathematical calculations.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

Notebook for
SKILLED TRADES OCCUPATIONS



CAREER
COLLEGE
COLLABORATIVE

SURVEYING TECHNICIANS

Most surveying technicians work under the direction of an engineer. Training is available at Umpqua Community College.

PREPARATION

High School Courses:

Algebra II/Geometry/Trigonometry/
Pre-Calculus
Physics
Chemistry
Drafting/CAD



TRAINING

Umpqua Community College's Civil Engineering and Surveying Technology program promotes education in the relevant theory and practice common to all branches of civil engineering and surveying. Every effort is made to relate theory to practical situations. To achieve this goal, the faculty members are selected from broad and diverse backgrounds and work experience.

ASSOCIATE OF APPLIED SCIENCE:

UCC has three options for an AAS degree in Civil Engineering and Surveying Technology. Students can transfer with the AAS + one year of additional course work. There are also two applied options (Water Quality & Surveying) for students that are interested in more hands-on training and have no plans for future transfer. The applied options include approximately 6 months of on-the-job experience through our occupational skills training program.

CERTIFICATE:

The Surveying Pathway Certificate provides an opportunity for career advancement for employees already working in the field through technical training, provides a career and educational pathway for high school students interested in surveying or engineering, and provides a career and educational pathway for people desiring a technical position in surveying and engineering. Learn more at: www.umpqua.edu/engineering-technology/surveying

CONTACT



Umpqua Community College
1140 Umpqua College Rd.
Roseburg, OR 97470
www.umpqua.edu

To apply to UCC, visit:
www.umpqua.edu/getting-started

Surveying Tech program:
<https://www.umpqua.edu/engineering-technology/civil-engineering-and-surveying-technology>

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

WATER & WASTEWATER TREATMENT OPERATOR

\$57,875
Median Salary

Water and Wastewater Treatment Plant Operators have the responsibility for operation and maintenance of treatment plants and distribution/collection systems. Treatment plant operators must have a working knowledge of plant operations, treatment equipment, chemistry, microbiology, mathematics, and computer applications.

SKILLS

Water/wastewater treatment
Repair/Maintenance
Biology/Chemistry
Math
Computer/Technology

JOB TITLES

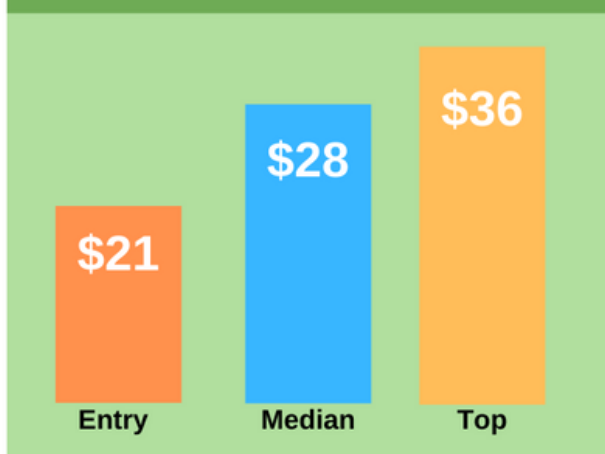
Water Treatment Specialist
Wastewater Plant Operator
Wastewater Technician
Water Resource Technician
Tank Technician



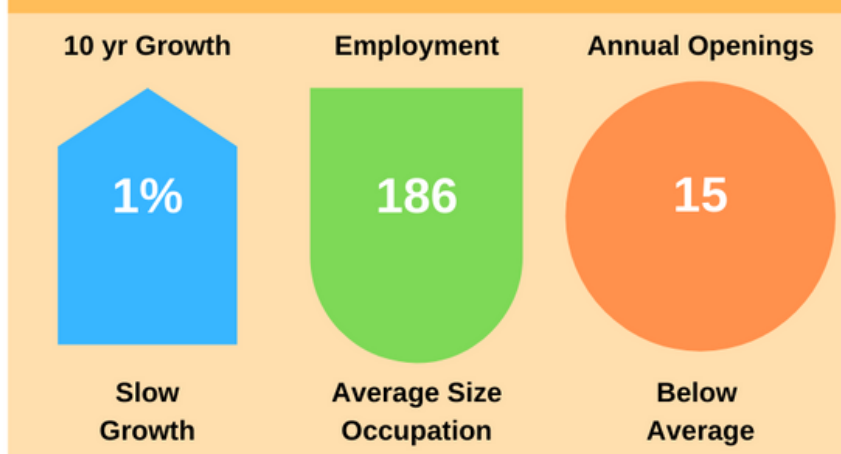
PRIMARY TASKS

- Test chemical or physical characteristics of materials or products.
- Collect samples of materials or products for testing.
- Record operational or production data.
- Operate chemical processing or water treatment systems or equipment.
- Inspect production equipment.
- Lubricate production equipment.
- Repair production equipment or tools.
- Maintain production or processing equipment.
- Direct operational or production activities.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

Notebook for
SKILLED TRADES OCCUPATIONS



**CAREER
COLLEGE
COLLABORATIVE**

WATER & WASTEWATER TREATMENT OPERATOR

Training is available at Clackamas Community College in the Water, Environment, and Technology (WET) program. Their 2-year Associates program provides training for operators, utility workers, environmental technicians, laboratory technicians, and other workers that make up the field of Public Works.

PREPARATION

High School or College Courses:

- Mathematics (Algebra I/II, Geometry and Trigonometry)
- Science classes: Biology/Chemistry/Environmental Science
- Industrial Arts (Electronics - if available)
- Computer Science Applications

EDUCATION

Clackamas Community College's Water and Environmental Technology, or WET program, prepares students for in-demand jobs in the water industry, including wastewater and backflow opportunities.

Clackamas Community College offers a one-year certificate and a two-year Associate of Applied Science Degree in Water and Environmental Technology. The WET program also provides students with the skills and knowledge necessary to take the state certification exams for wastewater treatment and collections, water treatment and distribution, backflow tester and cross-connection control specialist.

New skills you will learn in this program:

- Successfully pass state level 1 certification exams for Water Treatment, Water Distribution, Wastewater Treatment and Wastewater Collections
- Understand the basics of both water and wastewater operations
- Conduct laboratory analysis for wastewater and water-quality parameters

Learn more at: www.clackamas.edu/academics/departments-programs/water-and-environmental-technology-aas



CONTACT



19600 Molalla Avenue
Oregon City, Oregon 97045
www.clackamas.edu/

To apply to CCC, visit:
<https://onlineapplication.clackamas.edu/>



Scan the QR code
to learn more:

Water, Environment and
Technology, Associate of
Applied Science

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org

State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx

Women in Trades: www.tradeswomen.net

Build Oregon: www.build-oregon.com

American Water Works Association: www.awwa.org

WELDER

\$45,192
Median Salary

Welders join objects together by applying heat or pressure. Skilled welders have a thorough knowledge of welding principles and metals. They use blueprints and drawings to build anything from ships to cars to bridges. Welders play a crucial role in maintaining a variety of power and manufacturing plants and have the opportunity to travel throughout the year.

SKILLS

Welding
Machine Tools
Repair/Maintenance
Quality Control
Material Handling

JOB TITLES

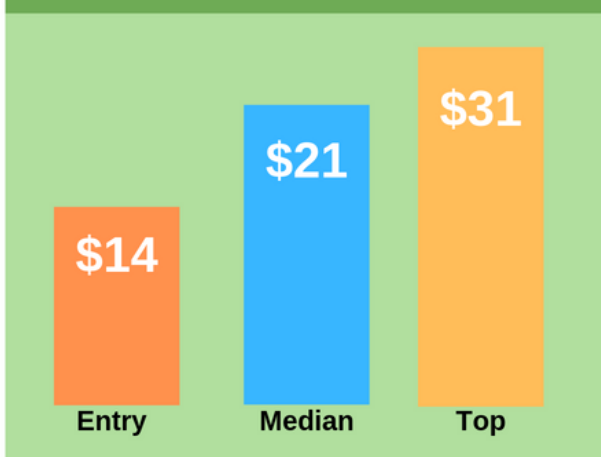
Structural Welder
Production Welder
Aluminum Welder
Soldering Technician
Mig/Tig Welder
Certified Welding Inspector



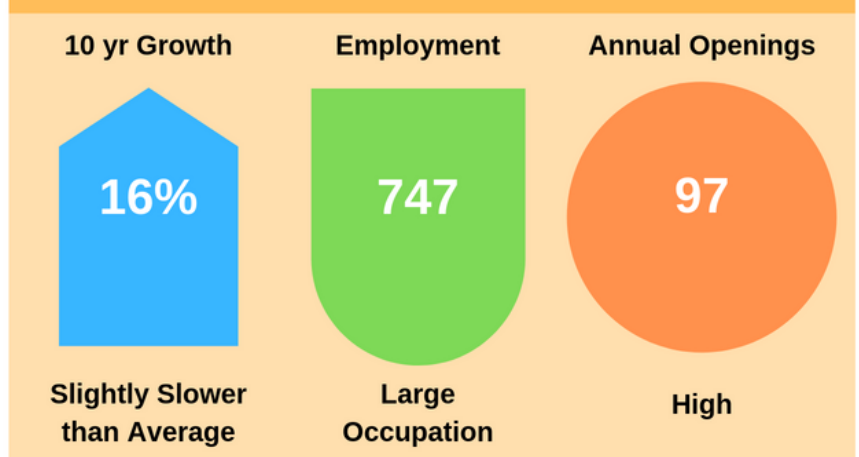
PRIMARY TASKS

- Braze metal parts or components.
- Align parts or workpieces to ensure proper assembly.
- Lay out parts to prepare for assembly.
- Measure dimensions of completed products or workpieces to verify conformance to specifications.
- Assemble metal or plastic parts or products.
- Select production equipment according to product specifications.

HOURLY WAGES



REGIONAL JOB MARKET



Data specific to Mid-Valley area

Source: www.qualityinfo.org

WELDER

Training in Welding and Fabrication is available locally at Linn-Benton Community College. You can get a one-year certification or take the two-year program and earn an Associate of Applied Science.

PREPARATION

High School or College Course:

- Algebra I & II, Geometry
- Industrial Arts/Shop classes
- Drafting & Blueprint Reading
- Physics & Chemistry



PIPELINE TO JOBS

Pipeline is a program available for high school students to learn about careers in Welding, Non-Destructive Testing, Computer Aided-Drafting & Design, Mechatronics, and Machine Tool Technology. Talk to your teachers and counselors about upcoming Pipeline events where you can actually try out welding for yourself to see if it might be something you are interested in. Learn more at www.pipelinetojobs.com.



LBCC'S PROGRAM

LBCC's Associate of Applied Sciences degree curriculum includes training with all of the commonly-used welding and cutting processes. This includes Stick (SMAW), TIG, wire-feed welding, oxy-fuel cutting, and plasma arc cutting. You'll also receive training in blueprint reading, layout, fabrication skills, structural welding, and pipe welding, along with many other welding-related subject areas.

Programs:

- NEW! --- Industrial Pipe Trades; Fitting and Welding, Associate of Applied Science.
- NEW! --- Industrial Pipe Trades; Fitting and Welding, One Year Certificate.
- Welding and Fabrication Technology, Associate of Applied Science
- Welding Fabrication Technology One-year Certificate

Learn more at: www.linnbenton.edu/welding

CONTACT



6500 Pacific Blvd. SW
Albany, Oregon 97321
541-917-4999
admissions@linnbenton.edu
www.linnbenton.edu

To apply to LBCC, visit:
www.linnbenton.edu/futures-start-here/index.php



Scan the QR code to learn more
about the Welding Program

FOR MORE INFORMATION

Labor Market Information: www.qualityinfo.org
State of Oregon Apprenticeship & Training Division: www.oregon.gov/BOLI/ATD/pages/index.aspx
Women in Trades: www.tradeswomen.net
Build Oregon: www.build-oregon.com
American Welding Society: www.aws.org

NOTES

