

MANUFACTURING-RELATED PROGRAMS AND SERVICES

Community College: Portland Community College (PCC) in Portland, Oregon

General College Description: Portland Community College is the largest institution of higher learning in Oregon, serving more than 1.3 million college-age residents in a five-county, 1,500-square-mile area in northwest region of the state. Three comprehensive campuses offer university transfer courses, professional technical career training and other student services. There are also five centers and multiple other locations throughout the community that constitute the Extended Learning Campus. Distance Education offers classes online, on television, and other distance learning methods. (See www.pcc.edu/about)

Manufacturing-Related Program Areas: PCC offers a wide range of manufacturing-related programs across a broad range of disciplines and enrolls approximately 2,800 students annually. Many of the programs listed below are offered at both the certificate and degree levels. Click on the links below to learn more.

- Bioscience Technology: www.pcc.edu/programs/bioscience
- Drafting Technology and Design: www.pcc.edu/programs/drafting-design
- Electronics Engineering Technology: www.pcc.edu/programs/electronic-engineering
- Facilities Maintenance Technology: www.pcc.edu/programs/facilities-maintenance
- Machine Manufacturing Technology: www.pcc.edu/programs/machine-manufacturing
- Mechanical Engineering Technology: www.pcc.edu/programs/mechanical-engineering
- Microelectronics Technology: www.pcc.edu/programs/microelectronics
- Welding Technology: www.pcc.edu/programs/welding
- Occupational Skills Training: www.pcc.edu/programs/occupational-skills (Worker retraining)

PCC also offers a variety of customized programs in Renewable Energy /Green, including Renewable Energy Systems, Solar Manufacturing Technician; Solar, Thermal and Electrical Systems installer, and a variety of non-credit training in areas such as Manufacturing Foundations and Advanced Manufacturing Bridge program. The college has approved classroom components for a variety of industrial apprenticeship programs, including Manufacturing Plant Electrician, Limited Maintenance Electrician, and Stationary Engineers.

Manufacturing Foundations: Portland Community College's Worksource Capital Career Center works with four local machine manufacturing companies (Precision Wire, Tosoh Quartz, Leupold and Stevens, Clear Edge Power) to help them fill their entry level positions. The six-week program prepares low skilled job seekers with necessary skills in math, reading, safety, active listening and communication, basic computer skills, machine manufacturing work culture, blueprint reading, Lean processes, ISO, Geometric Dimension & Tolerancing and more. In addition, students tour companies and learn about educational and career ladder opportunities in machine manufacturing.

Advanced Manufacturing Bridge: Portland Community College's Worksource Capital Career Center has created an intensive basic skills curriculum to develop the reading, writing, science and math skills of potential advanced manufacturing employees. The goal is to help students achieve Math 65, and Writing 121 to place into academic manufacturing certifications such as Solar Certificate of Completion, Bioscience Technician Certificate of Completion or Renewable Energy Certificate.

Special partnerships with high schools and four-year schools:

The PCC Welding program has articulation agreements with nine high schools in the area. In addition, PCC Welding is currently expanding and updating the weld shop at Newberg High School. Once completed, the Newberg H.S. weld shop will be used in the evenings to teach PCC weld classes and High School articulation classes week days when high school classes are in session.

The Renewable Energy Systems program at PCC Sylvania campus is an option of the existing Electronics Engineering Technology degree and there are already 2+2 agreements in place with various high schools in the area. The EET department is committed, however, to expand the partnerships with high schools in the near future.

Electronics Engineering Technology and all its options, including the Renewable Energy Systems option fully transfer into the 4-year Bioscience Electronics Engineering Technology (BSEET) degree of Oregon Institute of Technology. Graduates can also transfer to any BSEET degrees from other institutions.

Faculty Expertise/Specialized Knowledge/Skills:

PCC welding instructors are required to be certified in all process areas they teach. Welding Technology has Certified Welding Inspectors on staff. All PCC welding staff have a background in "real world" welding. Instructors at PCC have worked in shipyards, on commercial construction jobs, job shops and in railroad facilities.

All full time Electronics Engineering Technology (EET) faculty at PCC hold Master Degrees in the area of electrical/electronics. Great industry experience complements the academic background. Strong electromechanical skills, which are the foundation of renewable energy systems, are present through full time and part time coverage. The EET department is in the process of adding a new one year temporary position specialized specifically in renewable energy systems to accommodate the growth in enrollment in this area. There are hopes that the position becomes permanent.

Specialized Facilities/Equipment:

The PCC Rock Creek Welding Technology Program has the largest training facility on the West Coast equipped with state of the art equipment. PCC welding is currently taught not only at the Rock Creek campus but also at the Swan Island Training Center (SITC) at the Portland shipyards.

To accommodate the growth in the Electronics Engineering Technology area, a recently passed bond measure includes the addition of one new EET lab at the Southeast Center and one new EET lab at the Sylvania campus, where two EET labs are already operational. The new Sylvania lab will accommodate larger electromechanical equipment needed for the renewable energy systems and the new mechatronics/automation/robotics option. EET is also in the process of acquiring a training windmill. Plans are in place for solar projects as well.

Contract Training Capabilities: The CLIMB (Continuous Learning for Individuals, Management and Business) Center for Advancement (www.pcc.edu/business) is the one-stop contact for PCC's comprehensive training, consulting and pre-employment services. The CLIMB Center for Advancement offers onsite training, as well as Internet, interactive television, satellite transmitted programs or computer based software programs. Credit and non-credit community college courses offer the most cost-effective training available, while maintaining the highest standards of quality. Services include: pre-employment assessment and training, job profiling, customized training, open enrollment professional development courses, certification and licensure, business consulting, employee enrichment programs, organizational analysis and improvement, and comprehensive quality initiatives.

The CLIMB Center for Advancement has worked with many of the regions major manufacturers to provide programs and services, including Precision Wire Components (Performance Management system, WorkKeys™ Job Profiles and customized modularized on-site training), Integrated Device Technology (Leadership, Train-the-trainer and Lean), Gunderson (welding), and Intel International (technical English as a Second Language for Intel Maintenance Technicians worldwide) among others.