

MANUFACTURING-RELATED PROGRAMS AND SERVICES

Community College: Mt. Hood Community College (MHCC)

General College Description: Mt. Hood Community College is proud of its highly skilled faculty members who provide the best in educational opportunities. The college offers over 60 profession and technical programs, as well as a variety of university transfer possibilities, at three campus locations: Gresham, Maywood Park and the Bruning Center. (See www.mhcc.edu/pages/107.asp)

Manufacturing-Related Program Areas: Mt. Hood offers numerous manufacturing-related programs at both the certificate and degree levels designed specifically to meet the workforce needs of area manufacturers. The recently launched Integrated Metals Program is unique to the region and was developed in direct response to requests from area employers for a cross-discipline approach to training.

Mt. Hood has also been a pioneer in offering VESL (Vocational English as a Second Language) programs to immigrant constituents over the past 10 years. Several of the “bridge” programs below include language instruction and industrial vocabulary, as well as contextualized math and extensive hands-on learning that integrate theory and lab-based instruction.

Mt. Hood enrolls approximately 1400 students in manufacturing-related programs annually. Follow the links below to learn more about the manufacturing program areas offered at Mt. Hood:

- Mechanical Engineering Technology: www.mhcc.edu/pages/1216.asp
- Pre-Engineering: www.mhcc.edu/pages/1271.asp
- Integrated Metals: www.mhcc.edu/pages/3041.asp
 - Machine Tool Technology: www.mhcc.edu/pages/1221.asp
 - Machine Tool Operations: www.mhcc.edu/pages/3042.asp
 - CNC/CAD/CAM (Career Pathways Certificate): www.mhcc.edu/pages/3043.asp
 - Welding Technology: www.mhcc.edu/pages/1253.asp
 - Welding Technology (Career Pathway Certificate): www.mhcc.edu/pages/3044.asp
 - VESL Accelerated Professional Skills Training: www.mhcc.edu/pages/3045.asp
 - VESL Accelerated Welding Technology (Career Pathways Certificate): www.mhcc.edu/pages/3046.asp
 - VESL Accelerated CNC Operations (Career Pathways Certificate): www.mhcc.edu/pages/3047.asp

Mt. Hood also offers a certificate and degree program in Sustainability, Health and Safety, which has application to the manufacturing environment, as well as a non-credit Manufacturing Foundations program.

Special partnerships with high schools and four-year schools: A critical component of building Career Pathways is strengthening connections with high schools by identifying existing relationships and aligning curriculum. Mt. Hood has articulation agreements with all area high schools in their district, as well as with Portland State, OIT, OSU, and Eastern Oregon.

Faculty Expertise/Specialized Knowledge/Skills:

The MHCC Integrated Metals program has faculty who come to the college with extensive backgrounds in manual and/or CNC machining, welding applications in most processes, and a working knowledge of manufacturing processes and procedures. In support of our full time faculty, there are several adjunct faculty persons who are practitioners working in the varied metals manufacturing environments found in local industry. Together, the MHCC faculty provides comprehensive, relevant, and up-to-date instruction that prepares students completing the variety of certificate and degree program offerings for successful entry into the metals industry.

The MHCC Engineer Transfer and Engineering Technology faculty are professionals straight from industry with design experience in heavy equipment, automation, paper handling equipment, construction/design, remodeling, land development, surveying, copying/printing design, and large and small business management. The faculty is uniquely experienced and skilled in engineering and the delivery of information to new students from face to face, to hybrid, to online learning. The department faculty believe that education through experience and “hands-on project-based learning” will position the student with the most valuable knowledge base to succeed in the workforce.

Specialized Facilities/Equipment:

The facilities at MHCC contain a variety of machines and equipment that are very similar to the same types students will encounter as they enter the workplace. In the Machine Tool lab, there is equipment for instruction in manual milling, turning, drilling, sawing and cutting, surface grinding, and cylindrical grinding. In addition to this equipment, there is a variety of CNC milling and turning machine tools, a comprehensive measurement lab, and supporting foundry where elementary heat treating processes and procedures can be taught. In our Welding Lab, we have equipment to teach SMAW (Shielded Metal Arc Welding - Stick), GTAW (Gas Tungsten Arc Welding - TIG), GMAW/FCAW (Gas Metal and Flux Core Metal Arc Welding) as well as CNC Burning, Oxy-fuel processes, and other fabrication equipment typical to the welding environment. In addition to these lab facilities is a state-of-the-art computer lab where metal students are taught the basics of CAD (Computer Assisted Design) and CAM (Computer Assisted Manufacturing) using software such as AutoCAD, MasterCAM, and Sigma Nest.

MHCC Engineering department works with many current engineering software applications such as Solidworks, Autocad, Revit, and other common PC based software applications that 2 year and 4 year engineers utilize in the workplace. Additionally, MHCC offers students real time design support with large format color plotting and state-of-the-art PCV rapid prototype machine.

Contract Training Capabilities:

As part of the college's commitment to support local economic development efforts, MHCC Business & Industry Workforce Training (BIWT) offers a full range of training, developmental and assessment services to assist local manufacturing employers compete successfully in the global marketplace. The custom trainings BIWT provides to regional employers strengthen the workforce, enhance leadership effectiveness, improve productivity, and increase profitability.

For over 20 years, MHCC has partnered with Boeing Corporation to offer the machining apprenticeship degree program, customized computer classes and employee counseling and career advising. In addition, BIWT provides various customized trainings for manufacturing companies such as: Leadership training (NACCO Materials Handling Group), Computer Skills (Microchip), Workplace ESL (Danner-LaCrosse), Shop Math (Leatherman Tool Group), Metallurgy (Metals Industry Consortium), Machining/Welding Safety and Operations (Owens Corning), Lean ESL (Triad Speakers) along with other industry-specific training.

BIWT works seamlessly to design and assist businesses in developing a most cost-effective, targeted solution to achieve their company's development and training goals. MHCC conducts a detailed needs analysis that may include employee interviews, focus groups, WorkKeys job profiles, job shadows, employee skill assessments, and/or site visits to determine appropriate next steps. MHCC partners with the business to establish company-specific criteria for measuring success.

Trainings are practical in design, led by subject-matter experts, and integrate company-specific information. This enables participants to immediately apply critical skill to their work settings. MHCC evaluates each training in partnership with the company, to ensure the investment in employee training is sound.

BIWT training programs at Mt. Hood are delivered at times and in locations which meet your organization's scheduling needs. This can take place on site at the facility, at MHCC, online or by CD-ROM.