

MANUFACTURING-RELATED PROGRAMS AND SERVICES

Community College: Clark College (CC)

General College Description: Established in 1933, Clark College is the second largest community or technical college in Washington state, serving nearly 13,000 full-time and part-time students each quarter. Clark College is The Next Step on pathways leading to certificates and degrees in technical fields, classes in Adult Basic Education and English as a Second Language, two-year degrees for students intending to transfer to bachelor's degree and classes, certificates and customized training for businesses and workers and activities for personal enrichment. The college offers multiple credentials in technical fields including industry certification, two-year associate degrees, and certificate programs ranging from 10 weeks to one year. A majority of the Washington residents attending Clark -- 93% of the student body -- come from the college's service area which includes Clark, Skamania and west Klickitat counties. Clark's beautiful main campus is located on 101 acres in Vancouver's historic Central Park. Classes are also offered at Clark College at Columbia Tech Center, Clark College at Town Plaza, and Clark College at Washington State University Vancouver. For additional information, visit www.clark.edu.

Manufacturing-Related Program Areas: The college enrolls approximately 400 students annually in manufacturing-related technical areas including welding, machining, CADD and electronics. In response to changing needs in the marketplace, Clark is revamping its electronics pathway to include a broader range of options including Power Utilities, Environmental Controls/ HVAC, Home/Business Electronics and Mechatronics – the integration of electronics, hydraulics, pneumatics, PLCs, robotics and automation.

- **Computer Aided Design and Drafting Technology (CADD):**
http://www.clark.edu/academics/programs/manufacturing_technologies/cad.php
- **Machining Technology:**
<http://www.clark.edu/academics/programs/machining/index.php>
- **Welding Technology:**
<http://www.clark.edu/academics/programs/welding/index.php>
- **Electronics:**
<http://www.clark.edu/academics/programs/electronics/index.php>

Through the support of a Washington State Skill Panel grant, and in partnership with the Southwest Washington Workforce Development Council, Clark and Lower Columbia College have collected extensive information from local manufacturers to identify their specific workforce skill needs. Based on identified gaps, the colleges are creating a common core manufacturing curriculum that articulates with existing and new manufacturing career pathways. The core curriculum and shorter courses for specialty training will enable individuals to pursue a stackable, articulated pathway of training that meets the needs of regional employers.

Special partnerships with high schools and four-year schools: Clark provides seamless pathways to manufacturing training via its partnerships with high schools and universities. Through the Tech Prep program students earn college credit while taking classes in high school, speeding their completion of college certificates and degrees. The college has such articulation agreements for courses in CADD, Machining and Welding at several local high schools. Clark College continues to work with high school manufacturing programs to establish additional articulation agreements with particular focus on articulating courses that comprise the common manufacturing core curriculum and the new electronics pathways. College faculty serve on the advisory committees of high school manufacturing programs, provide schools with donations of materials and equipment and host Skills USA contests.

Graduates of Clark's Electronics programs (and similar programs at other colleges) can earn the Bachelor of Science in Technology degree offered by Eastern Washington University at the Clark College campus. The BST degree offers a path to higher skills and wages and is popular with manufacturing workers and their employers.

Faculty Expertise/Specialized Knowledge/Skills:

All Clark College manufacturing faculty are experts in their fields with combined experience of more than 125 years in business, industry and education. They hold a variety of industry credentials including AWS welding, AWS educator and AWS and ASNT inspector certification. Clark College faculty are leaders in workforce development initiatives including the development of stackable certifications that lead to degrees and the integration of basic education with technical training.

Specialized Facilities/Equipment: The College's Machining and Welding facilities are among the largest and most up to date in Washington and Oregon. The new Electronics program will feature Lab Volt modules and computer based training that enable students to customize their learning, work at their own pace and access the training from home. Other specialized processes and equipment include:

- Wire EDM
- CNC Lathes and Mills
- Plasma welding
- Submerged arc welding
- CNC Plasma cutting
- Plasma Gouging
- 5/8x10ft hydraulic shear
- 110 ton iron worker
- English Wheel
- Pipe welding
- Layout and Fabrication training

Contract Training Capabilities: Customized training is the college's primary link for providing services to the business community in Southwest Washington. The department's large pool of talented Clark faculty, along with adjunct instructors and pre-qualified service providers, enables the offering of flexible, competitively-priced training options to almost any type of business, association or institution. See www.clark.edu/corporate_continuing_education/customized_training/.

Customized Training staff work one-on-one with clients to identify needs and tailor programs accordingly. Most classes take place on-site at the workplace, which increases convenience and cost-effectiveness. If space or equipment is an issue, the department can provide any variety of classrooms and training venues to suit the client's particular needs. Customized Training also coordinates a variety of industry-wide training workshops, seminars, certificate programs and grant-funded projects. These learning opportunities bolster Clark's ability to provide high-quality, effective solutions to both the public and private sector throughout the region.

The college has a long history of working with area manufacturers to address their workforce needs. Manufacturing programs include: Six Sigma Black Belt and Green Belt Certification, Lean Principles and Methodology, ISO 9001 Audit Preparation, Project Management, Shift to Shift Communications, Team Building, Root Cause Analysis, Change Management, and Leadership Development, Welding, Manual and CNC machining, Master Cam programming, EDM, Metallurgy, Safety, and Blue print Reading.