

Welding

Clark's Welding lab was visited by U.S. Representative Marie Gluesenkamp Perez and a reporter and a photographer from The New York Times on February 26.

Congresswoman Gluesenkamp Perez visits Clark

The congresswoman and her husband visit Auto, Diesel and Welding labs

Welding Open House

About 50 people attended the welding department's open house on the evening of April 28. Students and faculty were on hand to demonstrate welding techniques and to answer questions about the program.

Free workshop for women

interested in the trades



A student in Clark College's Diesel Technology lab. Photo: Clark College/Jenny Shadley

Clark College is hosting a free workshop for women interested in advanced manufacturing and the mechanical trades on Thursday, September 9 from 6:00 p.m. to 9:30 p.m. on Clark College's main campus.

This roll-up-your-sleeves event is designed specifically for women to learn about the exciting career opportunities that are available in the mechanical and advanced-manufacturing fields. Guests will be able to tour the college's Automotive, Diesel, and Welding labs, participate in hands-on activities, and speak with professors.

Closed-toe shoes and long jeans are required; long-sleeved shirts are recommended. Safety goggles and masks are required and will be provided.

Properly trained technicians are in high demand in the advanced manufacturing and mechanical industries,

and these careers can be rewarding both financially and professionally. However, a recent study found that only 1 in 3 manufacturing professionals are women.

“We know that, even in this day and age, women can be discouraged from pursuing careers in fields like automotive technology and welding,” said Armetta Burney, Clark College Interim Dean of Workforce Professional Technical Education and STEM. “And yet for years we’ve seen our female students succeed in these programs and enter the workforce. The college is holding this event in hopes of showing women the range of career opportunities available to them.”

Two \$1,800 scholarships will be made available to students who attend this event and enroll in a Clark College Automotive, Diesel, or Welding program by fall 2022. One scholarship was made available by Madden Industrial Craftsmen, the other through an anonymous donor.

Women interested in attending the event can learn more at <https://tinyurl.com/yfb6e6qk> or contact Hernan Garzon at hgarzon@clark.edu. The event is free and open to the public, though prior registration is encouraged. Guests will meet in the Automotive Technology lab on Clark College’s main campus (near the Orange 1 parking lot), 1933 Ft. Vancouver Way. Maps and directions are available at www.clark.edu/maps. If you need accommodation due to a disability in order to fully participate in this event, you should contact Clark College’s Disability Support Services Office at 360-992-2314 or 360-992-0901 VP, as soon as possible.

Clark College expressly prohibits discrimination on the basis of race, color, national origin, age, perceived or actual physical or mental disability, pregnancy, genetic information, sex, sexual orientation, gender identity, marital status, creed, religion, honorably discharged veteran or military status, citizenship, immigration status, or use of a trained

guide dog or service animal in its programs and activities.
Learn more at www.clark.edu/nds.

Three new Career Launch programs



The welding technologies program is one of three Clark College programs to receive certification as Career Launch partnerships.

Clark College recently received certification of three new Career Launch programs at the college.

The programs join six other Career Launch at the college. Career Launch is a Washington state program that provides students with opportunities to “earn as they learn” through partnerships between public educational institutions and local employers that provide meaningful, high-quality, and paid on-the-job experience as well as classroom learning.

Clark College’s new Career Launch programs are:

- a partnership with Beaches Restaurant, Bar and Catering to provide students with paid work experience as they earn an Associate in Applied Technology (AAT) degree in Cuisine Management
- a partnership with PeaceHealth to provide students with paid work experience as they earn a Bachelor of Applied Science (BAS) degree in Cybersecurity.
- a partnership with Madden Fabrication to provide students with paid work experience as they earn a degree in Associate in Applied Technology (AAT) degree in Welding Technologies.

These two programs join Clark College’s six already-existing Career Launch partnerships:

- an AAT in Mechanical Instrumentation (part of the Mechatronics program) in partnership with SEH America, Silicon Forest Electronics, Analog Devices, Inc., and Kyocera International, Inc.;
- an AAT in Toyota T-TEN Automotive in partnership with Toyota America Corporation;
- an AAT in HiTECC Automotive in partnership with Dick Hannah Dealerships;
- an Associate in Science – Transfer Track 2 (AST2) in Engineering in partnership with SEH America.
- an AAT in Professional Baking & Pastry Arts Management with Eurobake Bakery
- an Associate in Applied Science (AAS) in Surveying & Geomatics with MacKay Sposito

About Clark College

Founded in 1933, Clark College provides residents of Southwest Washington with affordable, high-quality academic and technical education. It is a public community college offering more than 100 degree and certificate programs, including bachelor's and associate degrees; professional certificates; high school diplomas and GED preparation; and non-credit community and continuing education. Clark serves a wide range of students including high school students, displaced workers, veterans, parents, non-native English speakers, and mature learners. Approximately three-quarters of its students are in the first generation of their families to attend college.

About Career Launch

Career Launch is a program of Career Connect Washington (CCW), an organization founded to bring industry and education together to provide pathways for young people to succeed in college and career. There are already 10,000 students enrolled in Career Launch programs, including Registered Apprenticeships. The recently passed 2021-2023 biennial budget provides additional resources for Career Connect Washington to reach more young people, especially those furthest from opportunity, at a time when they are so impacted by COVID-19.

**For welding, an almost
seamless transition**



A Welding Technologies student participates in an on-campus lab, even though most Clark College classes are being offered remotely during COVID-19. Fortunately, the program had already shifted to partially online classes before the pandemic hit, and students wear personal protective equipment as part of basic welding safety. *Clark College/Tarek Kanso*

When COVID-19 switched Clark College's spring quarter classes from on-campus to online learning, Welding Technologies students were ahead of the curve—and therefore were not as affected as other programs with hands-on labs. Instructor John Kuhn already had pivoted to the hybrid model of classes (part online and part in-person) via an online Canvas shell during summer 2019. At the time, it was a good way for students to complete the bookwork portion of their course. During COVID, it has allowed students to not fall too far behind, because they'd already been working online.

"We were pretty fortunate to have gotten started a year before with hybrid," says Kuhn. "It gave students an opportunity to study more in depth at home. We got a little deeper into theory, the bookwork, utilizing more YouTube welding videos. It proved effectively that they understood the information."



Even before the pandemic, welding students needed to suit up in personal protective equipment. *Clark College/Tarek Kanso*

Because safety is paramount, students in the Welding 102 introductory class must pass a welding safety test with 100 percent. In the past, some students had to retake the test in order to pass. Hybrid learning increased students' understanding of the material and translated into a higher percentage of students who didn't have to take the test a second time.

Welding students returned to campus labs in mid-June to complete their spring quarter practical welding assignments. Because Welding is a year-round program, the students returned for hands-on welding labs during summer quarter, too.

A program made for social distancing

Even before COVID, welding students already were wearing personal protective equipment and were socially distanced. Students suit up for every lab class: heavy, flame-retardant coat; steel-toed work boots with a metal plate added to protect feet; leather gloves; goggles; and a welding helmet with built-in face shield. Students work in individual welding booths, far removed from other students.

We visited the welding lab as six first-year students were finishing their class project: a flange, a small version of the pressure vessel built by second-year students. Pressure vessels are used to store and transfer liquids and gases under high pressure. Welding on pressure vessels must be exact and meet rigorous standards to withstand working conditions.

All the students we spoke with were eager to enter their chosen field. The outlook is promising: The number of welding jobs in Washington is projected to grow about 3 percent from 2019-2029, about average for all occupations, according to U.S. Bureau of Labor Statistics. In the Vancouver-Portland metro area, the average wage for a welder is \$23.98 per hour or \$49,887 annually. That's about \$8,000 higher than the median wage nationally.



Jessica Pellham. Clark College/Susan Parrish

Student story: Jessica Pellham

Jessica Pellham, 26, had no welding experience—and even lacked any experience with tools—when she started the Welding program in fall 2019.

“I kind of started out as a baby,” Pellham laughs. “I wanted to get into a trade. I tried machining. It wasn’t my thing.

Then I watched my fiancé's grandpa welding."

It intrigued her. She tried welding, and she discovered she had an aptitude for it.

Pellham says, "It's hard, physical work, but for me, it's so worth it to do something I love to do."

"She has excelled fantastically," says Kuhn.

Pellham works fulltime at a packing warehouse and goes to Clark fulltime, too. When her cohort began, she was one of three women. Now, a year later, she's the only woman left in her cohort, but there are more women in the second-year cohort.

"I'm hoping to see more women in trades," she says. "We can do it, too."

Pellham's eventual goal is to be hired on a union or government job.

She adds, "I'd love to weld on submarines or ships."



Jeff White. Clark College/Tarek Kanso

Student Story: Jeff White

At 60, Jeff White of Washougal is the oldest student in the cohort. Two years ago, he was laid off from his job as a boiler operator at Georgia Pacific in Camas, a job he'd held for 30 years. White qualified for the Trade Adjustment Assistance Program, a federal program to retrain displaced workers due to overseas competition. The program has paid for all his college expenses. He is living on unemployment while he attends Clark.

White's goal is a job in construction welding. He is a fourth-generation Washougal resident, and hopes he does not have to move to find work after he completes the program.

Student story: Ben Barton

Ben Barton, 29, has worked in restaurants since he was 16. A year ago, when he was working as a server at La Bottega in Uptown Village, he was considering making a career change when a co-worker told him about Clark's welding program.

"I was ready to do something that was stable," Barton says.

He researched the welding program and applied in summer 2019, but the fall cohort was full. There was so much interest that a second section was opened beginning winter 2020. He started the welding program full-time in January while he continued working at the restaurant 30 hours a week. Then COVID-19 closed restaurants in March, and he was laid off. To make up for the lost income, he applied for unemployment benefits.

"I'm thankful for unemployment," Barton says. "I'm going to school to further myself so hopefully I'll never have to be on unemployment again. Financially I've been okay. Obviously, you cut back your spending and you end up making your own meals again. Groceries are cheaper than eating out. My girlfriend

and I are both in the restaurant industry and are good cooks.”



Not only does the Clark College Welding Technologies lab offer hands-on experience with industrial equipment, it's well set up for social distancing. Most work stations are at least 6 feet apart. *Clark College/Tarek Kanso*

During spring quarter no hands-on labs were offered at Clark. Students kept up with their online bookwork, but they could not get into the labs to practice what they were learning.

“I was really thankful that Clark opened our shop back up for us,” he says. “The welders out there working in the industry are still working during COVID. I was at a stalemate. In limbo. I couldn’t work. I couldn’t do my welding [studies] to further my career.”

“I was one of the few COVID affected positively,” Barton says. “I was juggling school and working. Now I can focus on school.”

Visit www.clark.edu/cc/welding to learn more about the Welding Technologies program.

Clark named national welding testing center



Clark's welding technologies program allows students – and now professional welders seeking national certifications – to demonstrate their skills.

The Clark College welding technologies program is proud to announce its accreditation as an American Welding Society (AWS) testing center. This accreditation makes national certifications available to both students and professional welders in the region who are seeking to advance their careers.

Beginning May 1, Clark will make a number of certifications available for testing. The most common is the Certified Welder (CW), which tests welders on procedures used in the structural steel, petroleum pipelines, sheet metal, and

chemical refinery
welding industries. Certifications available include Steel,
Stainless steel and
Aluminum. In conjunction with the AWS certification, Clark
College also offers
the Washington Association Building Officials (WABO) welding
certification at
the Clark facilities.

Fees for certifications
will start at \$300, with more-complex testing requiring up to
\$600. All testing
will be completed at the Clark welding lab located on the main
campus, at 1933
Ft. Vancouver Way in Building AA2. The college will provide
all the needed
steel, stainless steel, and aluminum materials required for
completing the
certification examination.

Professionals
interested in testing for either AWS or WABO certifications at
Clark College
may contact welding faculty member Brian McVay at 360-992-2359
or bmcvay@clark.edu
to discuss their certification requirements, the costs, and
testing schedules. For
more information about Clark College's welding technologies
program visit www.clark.edu/cc/welding.

"We are excited to be
able to serve our community by providing this unique testing,
which will help
expand the opportunities for career advancement in the
industry and support
this region's economy," said McVay, noting that the next-
closest AWS Accredited
Testing Facility is in Tacoma, Washington.

Photo: Clark College/Jenny Shadley

Welding program sells student-built boat



This 14-foot skiff, which was built by Clark welding students in 2017, is being auctioned off to raise funds for the program's 2018 student project.

For three months this spring, students from Clark College's welding classes worked tirelessly to create a 14-foot aluminum skiff from scratch. Now the welding program is selling the skiff online to raise funds for future class projects.

As part of the college's commitment to hands-on learning,

welding students complete a completely functional welding project before graduation in the spring. Three years ago, it was a pressure vessel; last year, it was an aluminum skiff. That project proved so popular with students that Professor Caleb White decided to bring it back for 2017, albeit with many improvements over the original design.

This year's boat is 14 feet long and features storage under each seat, an anchor locker, a drain plug, fore and aft tie-downs, handles for lifting the aft end, and a bow tie-down for anchoring to a trailer. The boat was tested this spring on Lake Lacamas and found to be completely sealed and usable.

"It's a small boat that is versatile enough to be used on lakes or rivers, and is very stable for a boat of this size," said White, who worked at Christensen Shipyards for a decade before coming to Clark to teach. "It doesn't currently have an outboard motor, but it is designed to use up to a 25-horsepower outboard."

Anyone interested in purchasing the boat may bid for it online at

<https://www.publicsurplus.com/sms/all,wa/auction/view?auc=1977227>. Proceeds from the sale will go toward purchasing raw materials for the welding program's 2018 spring project. Materials for this year's boat cost approximately \$1,500, and some 20 students contributed more than 1,000 hours of labor to complete it.

Photo: Clark College/Jenny Shadley

Clark Gets Technical



High school students visit Clark's Automotive Technology program for a quick lesson under the hood during the 2015 Professional Technical Day.

Last Thursday 375 high school students visited Clark during its 24th annual Professional Technical Day, visiting with instructors in 18 different programs and finding out more about how to enter these fields themselves.

"Professional Technical Day is fantastic way to introduce local high school students, career counselors, teachers and administrators to the career technical educational opportunities that are available here at Clark College," says Genevieve Howard,



Students in Clark's Bakery program share their experiences with high school students during the 2015 Professional Technical Day.

Clark College Dean of Workforce, Career & Technical Education. "With the reduction of career technical education programs in the high schools, this is often the first exposure many students have to these career opportunities, and I think Clark faculty and staff do a great job of getting students excited and engaged around these opportunities."

The students came from 15 different high schools from the Vancouver and Portland area, including Mountain View, Ft. Vancouver, Union, and Grant. Each student could pick two different program presentations during the half-day event. Popular programs included Automotive (and its highly regarded Toyoto T-TEN program), Welding, Bakery, Nursing/Dental Hygiene, Early Childhood Education, Business Technology, and Medical Office.



Area high school counselors and educators had a chance to hear about the future of technical careers from industry experts during Clark's 2015 Professional Technical Day.

In addition to the students, 45 counselors, teachers, and principals attended the event. They were given a full tour of the available programs, as well as the opportunity to hear a panel discussion with industry experts about job prospects and educational requirements for today's professional technical careers. Panelists were: Jim Lucey, human resources director of Linear Technology; Matt Houghton, general manager of Schurman Machine; Natalie Pacholl, training program specialist at SEH America; and Craig Baldwin, head of worldwide operations at nLight.

"At Professional Technical Day, high school students get a rare opportunity to interact with Clark College instructors and professors in hands-on learning environments that demonstrate the academic rigor and technical skill involved in career pathways such as: Welding Technology, Automotive Technology, Mechatronics, and Computer Networking, Science and Engineering," says Clark College Student Recruitment Specialist Jami Fordyce, who helped organize the event. "We hope that students leave inspired and more confident than ever that college is part of their future, and that Clark College

is a wonderful place to start.”

Photos: Clark College/Jenny Shadley

Training Tomorrow's Workforce



Welding instructor Caleb White, *left*, shows students Grant Gwilliam and Cody Cook how to use a CNC plasma table, which is used in the computer-assisted cutting of metals. White has been active in developing new curriculum that teaches Clark students fabrication, a skill many local employers are seeking.

This summer, Clark is taking the next step in boosting our region's economy by introducing a new technical program and adjusting some existing programs to better meet the needs of

today's employers.

Highlights of these changes include:

- A new Industrial Maintenance Technician (IMT) program that combines a selection of Clark's existing Mechatronics, Machining, and Welding courses to train students on how to provide preventive maintenance and repair support to manufacturing and other mechanical industries. Leaders from regional industry have indicated a strong need for qualified IMTs, and labor surveys show that the average annual wage for IMTs is \$43,000.
- Clark's Welding program is introducing all-new curriculum that not only expands the variety of welding processes taught but teaches students how to use those processes in fabrication, a skill many local employers are seeking.
- Starting fall quarter 2014, Clark's Mechatronics and Machining programs will begin offering night classes to help accommodate the schedules of current industrial workers who need to expand their skill sets to meet the changing needs of modern industry.

Anyone interested in enrolling in these programs can visit www.clark.edu/gotech to learn more.

All these changes were made in direct consultation with local employers.



Damond Batties looks on while Nicole Doyle works in an argon purge chamber, which is used in welding air-sensitive materials like stainless steel and titanium that are common in modern industry.

“As the largest workforce training provider in Southwest Washington, Clark College continually meets the needs of the business community and ensures that students are equipped with high-demand, relevant skills, whether they are full-time students entering the workforce or incumbent workers developing new skills to improve the productivity of their employers,” said Michelle Giovannozzi, Director of Corporate & Community Partnerships for Clark College Corporate & Continuing Education. “Over the last year, we partnered with regional manufacturers to develop the new Industrial Maintenance Technician program and the revised Welding curriculum in order to support growth through the economic recovery and beyond.”

“The underlying driver for all of Clark College’s Career and Technical Education programs is to provide students with relevant and rigorous educational opportunities that give them the skills that meet the workforce demands for our local and regional industries,” said Genevieve Howard, who as Clark’s Dean of Workforce, Career & Technical Education oversees the college’s Mechatronics, Machining, and Welding programs, as well as such well-regarded programs as Computer-Aided Drafting & Design and Automotive Technology.

Clark College has long served as the premier resource for training skilled technicians who meet the needs of this region’s industry. Through advisory committees and regular outreach, the college has developed partnerships that allow it

to respond quickly to the needs of local employers. These new changes are part of that practice—a practice that has made the college Southwest Washington's best source for career and technical training.

Photos: Clark College/Jenny Shadley