START A NEW CAREER PATH NOW!

CENTER OF EXCELLENCE
for Aerospace and Advanced Manufacturing

WASHINGTON PROGRAM & RESOURCE GUIDE

for Education & Careers in Aerospace & Manufacturing

LETTER FROM THE DIRECTOR

THANK YOU FOR YOUR INTEREST IN AEROSPACE AND ADVANCED MANUFACTURING CAREERS

Washington's economy is thriving in the aerospace and advanced manufacturing sector. The production of aircraft as well as industrial and consumer products made with advanced materials is an economic foundation in our state.

This Resource Guide provides information about entering careers in aerospace and advanced manufacturing. There are many ongoing opportunities for those interested in everything from assembly to aircraft maintenance to careers in engineering airplanes.

In this Resource Guide, you can select college programs based upon your location, or find a program in a different city. You can also find out about networking and trade groups in addition to viewing videos and website resources at coeaerospace.com

The Center of Excellence for Aerospace and Advanced Manufacturing is one of 10 Centers of Excellence statewide working on the following objectives:

- Economic development
- Industry sector strategy
- Education, innovation and efficiency and workforce supply and demand.

We serve as an honest, trusted broker of information within education and industry.

We hope you find this Resource Guide helpful as you consider a new career in aerospace and advanced manufacturing.

Mary Kaye Bredeson
Executive Director

VISIT OUR ROBUST WEBSITE

OUR WEBSITE OFFERS MANY INTERACTIVE TOOLS. VISIT COEAEROSPACE.COM TO VIEW HELPFUL INFORMATION.

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WASHINGTON STATE COE LOCATIONS

VISION

Washington shall become a national model in developing partnerships among business, industry and education for the purpose of enhancing economic and workforce development initiatives to meet the current and future needs of the industries critical to the state's economic vitality.

MISSION

Washington's Centers of Excellence shall serve as the statewide liaisons to business, industry, labor and the state's educational systems for the purpose of creating a highly skilled and readily available workforce critical to the success of the industries driving the state's economy and supporting Washington families.

CORE EXPECTATIONS

Economic Development Focus: Serve as partners with various state and local agencies, regional, national, and global organizations to support economic vitality and competitiveness in Washington's driver industries.

Industry Sector Strategy Focus: Collaboratively build, expand and leverage industry, labor and community and technical college partnerships to support and promote responsive, rigorous, and relevant workforce education and training.

Education, Innovation and Efficiency Focus: Leverage resources and educational partnerships to create efficiencies and support development of curriculum and innovative delivery of educational strategies to build a diverse and competitive workforce.

Workforce Supply/Demand Focus: Research, analyze and disseminate information related to training capacity, skill gaps, trends, and best practices within each industry sector to support a viable new and incumbent workforce.

WASHINGTON STATE CENTERS OF EXCELLENCE

A. AEROSPACE AND ADVANCED MANUFACTURING: EVERETT

B. AGRICULTURE: WALLA WALLA

C. ALLIED HEALTH: YAKIMA

D. CAREERS IN EDUCATION: KENT

E. CONSTRUCTION: RENTON

F. CLEAN ENERGY: CENTRALIA

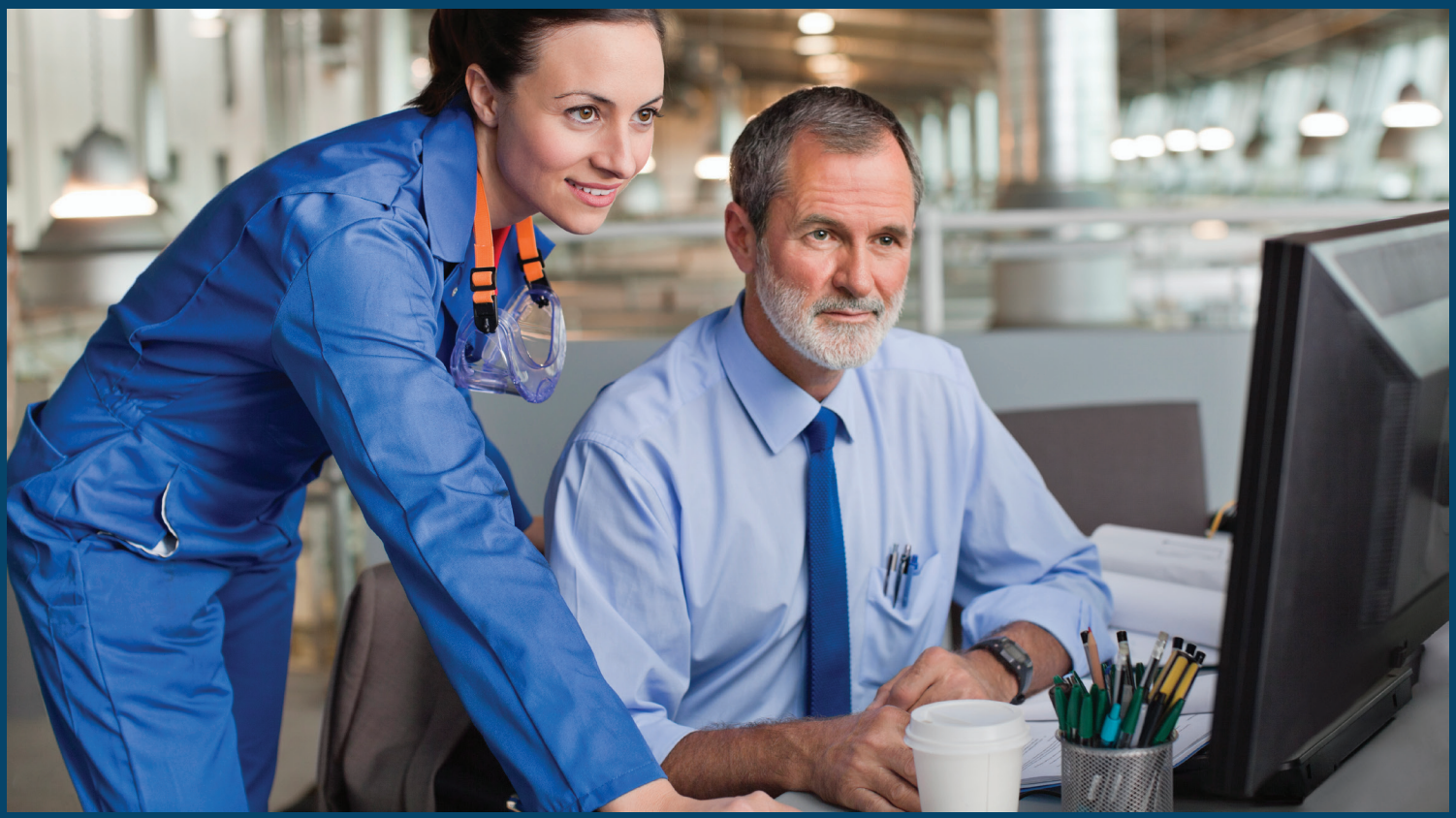
G. HOMELAND SECURITY-EMERGENCY MANAGEMENT: LAKEWOOD

H. INFORMATION AND COMPUTING TECHNOLOGY: BELLEVUE

I. GLOBAL TRADE AND SUPPLY CHAIN MANAGEMENT: DES MOINES

J. MARINE MANUFACTURING AND TECHNOLOGY: ANACORTES

CONNECTING EDUCATION & INDUSTRY FOR JOBS



At the Center of Excellence for Aerospace and Advanced Manufacturing, we are invested in creating a better skilled labor workforce in aerospace and manufacturing jobs in Washington. We actively work with aerospace and manufacturing to drive employment into the manufacturing industry via the following:

- Outreach, communication, and curriculum development with statewide community & technical colleges
- Engagement and assessment as to what is needed in today's manufacturing companies
- Developing resources for job seekers and industry

INDUSTRY OUTREACH

- Build relationships with industry leaders to determine their employment, production and growth goals.
- Drive business to Washington via international trade shows, national and regional engagement.

EDUCATIONAL OUTREACH

- Directly engage with industry and broker the flow of information as needed to share with K-12 and post-secondary education.
- Routinely meet with community and technical college partners and curriculum development groups to guide programs that provide necessary education such as soft skills and direct job skills.

POST & FIND JOBS ON COEAEROSPACE.COM

The Center of Excellence publishes aerospace and manufacturing industry related positions in Washington. This offers job seekers a unique filter to find jobs that meet their training or experience and provides employers with a more directed workforce.

POST YOUR JOBS AND FIND INDUSTRY-QUALIFIED CANDIDATES

WE HANDLE THE POSTING AND MAKE IT EASY FOR YOU!

To post your company positions on coeaerospace.com/jobs, please contact Sue Bradshaw, 425-388-9196 or Kelsey Marinoni, 425-388-9454.

VISIT COEAEROSPACE.COM FOR MORE GREAT RESOURCES!

ADVISORY BOARD

ROLES & RESPONSIBILITIES OF ADVISORY MEMBERS

- Working toward common goals such as maintaining and growing a highly skilled and technically proficient aerospace and advanced materials manufacturing labor force.
- Sharing ideas about education and training related to aerospace and advanced materials manufacturing issues.
- Knowledge, skills and expertise regarding the industry.
- Guidance, advice, time and leadership allowing the work of the Center of Excellence to move forward.
- Energy and leadership ensuring that the activities of the Center of Excellence will reflect industry needs and concerns at a regional and state level.

ADVISORY BOARD MEMBERS

BAGWELL, STEVE
Warm Industrial Nonwoven

BEYER, DAVID
Everett Community College

BROWN, LARRY
IAM-751

BURRESON, MICHELLE
The Boeing Company

CONNELL, SEAN
Snohomish County Government

DOUGHTY, TOM
Janicki Industries

GOERTZ, AMANDA
Future of Flight

GREENWOOD, MICHAEL
Workforce Development Amazon NA

HATFIELD, AMY
Olympic College

HODGMAN, ROBERT
Washington State Department of Transportation

KIDD, STEVE (CHAIRMAN)
Cimtech, Inc.

LARSEN, MARCI
Mukilteo School District

LASATER, LIZ
Red Arrow Logistics

MCALEER, COLLEEN
Port of Port Angeles

MCLAUGHLIN, TOM
The Center for Advanced Manufacturing Puget Sound (CAMPS)

MYERS, ROGER
Aerojet Rocketdyne

NICHOLS, FRANK
Silicon Forest Electronics

OREMUS, DONNETA
Marysville School District

ORVELLA, CHELSEA
Society of Prof. Engineering Employees in Aerospace (SPEEA)

PERSELL, AMY
Triple R Solutions

PIERCE, KAIRIE
Washington State Labor Council, AFL-CIO

SCHANCHE, MIKE
Congressman Rick Larsen

SCHMIDT, JAY
Silicon Forest Electronics

STRICKLAND, LYNN
Aerospace Joint Apprenticeship Committee (AJAC)

TAKAHASHI, CURTIS
Workforce Snohomish

TATE, MONICA
Consulate General of Canada

THOMAS, PENNY
Washington State Department of Commerce

UPTAGRAFFT, BOB
Pacific Northwest Aerospace Alliance (PNAA)

VAN DYCK, JEFFERY
The Boeing Company

WEAVER, MATTHEW
Fiberglass Supply

WERNER, MICHAEL
Granite Falls High School

WOOD, GEOFF
Profile Composites

WHY A CAREER IN AEROSPACE & MANUFACTURING?

Aerospace and manufacturing careers offer diversity and job security in Washington. Top employers include companies like Boeing, Microsoft and Amazon.com along with the military and thousands of manufacturing companies. Each of these organizations are creating innovative products every day. From airplane wings to unmanned aerial vehicles to window products, the volume of products made in Washington is astounding!

In Washington, over 94,000 jobs were posted within the aerospace and manufacturing sector for 2013-14. Jobs included maintenance and repair; mechanical engineers; production workers; welders, cutters and welder fitters; manufacturing engineers; electricians; installation, maintenance and repair; team assemblers; machinists; and supervisors. One thing is definite, within aerospace and manufacturing, there are many good-to-great paying jobs available right now.

Additionally, there are many educational options in Washington. From career and technical education programs in high school to community & technical colleges and 4-year college programs there are a number of ways to obtain skills-based training.

SPECIALIZED SKILLS IN DEMAND

- REPAIR
- BLUEPRINTS
- WELDING
- POWER TOOLS
- INSPECTION
- HAND TOOLS
- MATHEMATICS
- MACHINERY
- MACHINING
- MANUFACTURING PROCESSES
- SCHEMATIC DIAGRAMS
- FORKLIFT
- COMPUTER NUMERICAL CONTROL (CNC)
- COMPUTER AIDED DRAFTING/DESIGN (CAD)
- LATHES
- DRILL PRESSES
- ELECTRICAL SYSTEMS
- CALIPERS
- ELECTRICAL WORK
- LEAN MANUFACTURING
- MICROMETERS
- DIMENSIONS
- TEST EQUIPMENT

(Source: Burning Glass: Skill Demand Reports 2014)

Aircraft Mechanics & Service Technicians (49-3011)	Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Includes helicopter and aircraft engine specialists. Excludes Avionics Technician.	Knowledge of machines and tools, including their designs, uses, repair, and maintenance. Education Level Options • FAA License • Associates Degree	$31.93
Aircraft Assemblers (51-2011)	Assemble, fit, fasten and install parts of airplanes, space vehicles, or missiles, such as tails, wings, fuselage, bulkheads, stabilizers, landing gear, rigging and control equipment, or heating and ventilating systems.	Knowledge of machines and tools, including their designs, uses, repair, and maintenance. Education Level Options • Certificate (1-3 quarters)	$26.02
Composites/Laminators & Fabricators (51-2091)	Laminate layers of fiberglass on molds to form aircraft, boat decks and hulls, automobiles, and other products.	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods. Education Level Options: • Certificate (1-3 quarters)	$15.51
ElectroMechanical Technicians (17-3024)	Operate, test, maintain, or calibrate unmanned, automated, servo-mechanical or electro-mechanical equipment. May operate unmanned submarines, aircraft, or other equipment at worksites.	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming. Education Level Options: • Certificate (1-3 quarters) • Associates Degree	$35.20
Machinists (51-4041)	Set up and operate a variety of machine tools to produce precision parts and instruments. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments.	Knowledge of mechanics, mathematics, metal properties, layout, and machining procedures. Education Level Options • Certificate (3 quarters) • Associates Degree	$23.68
Computer Controlled Machine Tool Operation (51-40t11)	Operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic work pieces.	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models. Education Level Options • Certificate (1-3 quarters)	$21.97
Aviation Inspectors (53-6051.01)	Inspect work of aircraft mechanics performing maintenance, modification, or repair and overhaul of aircraft and aircraft mechanical systems to ensure adherence to standards and procedures.	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services. Education Level Options • Certificate (1-3 quarters)	$27.52
Welders, Cutters, Solderers, & Brazers (51-4121)	Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join components or to fill holes, indentations, or seams of fabricated metal products.	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods. Education Level Options • Certificate (1-4 quarters)	$21.84

WOMEN IN MANUFACTURING

Christina Lomasney is a smart lady. She has created an innovative Nano-laminated product called Modumetal that is lighter and stronger than metal. Her products are being used in the aerospace and transportation industries. At her Seattle-based company she is able to employ scientists, technicians and production staff. She encourages women to enter careers in manufacturing because there are opportunities in development, architecting the products, science and engineering.

HTTPS://WWW.YOUTUBE.COM/WATCH?V=6YMJXWB3P-G

"In Washington State, we have a really unique opportunity to engage in manufacturing because there is so much of the manufacturing ecosystem that exists right here," said Christina Lomasney, president of Modumetal.

VETERANS IN MANUFACTURING

Regina Rollis is a former flier in the Air Force Reserves who became interested in designing aircraft interiors. She took a Composites Program at Spokane Community College and now works as a planner at AeroComposites. She hopes this career will lead her into her ultimate goal of designing a space station.

HTTPS://WWW.YOUTUBE.COM/WATCH?V=AM15G7F_1CU

"Veterans have years of experience behind them in machining as well as maintenance," said the former Veterans Coordinator for Air Washington, Bill Noland. He added, "They are a perfect match for employers in our state." Through the 20 million dollar Air Washington grant 2011-2015, they were able to work with close to 500 veterans in Washington to retrain in new careers following military service.

At the same time, there are opportunities for women in manufacturing from assembly through design, development and engineering.

HIGH SCHOOL OPTIONS & CTE SKILLS CENTERS

When entering a highly competitive workforce that is based on global knowledge and information economy, young adults must be career and college ready, equipped with the abilities to integrate and apply 21st century skills, technical knowledge and skills, and core academic knowledge. Career and Technical Education Skills Centers connect students to academics and training that will allow them to be successful in the future. The goal of these centers is to prepare students so that they are globally competitive for secondary education and prepared for life in the 21st century.

SKILLS CENTERS IN WASHINGTON STATE

Clark County Skills Center, Vancouver
http://www.ccskillscenter.com

New Market Skills Center, Tumwater
http://www.newmarketskills.com

NEWTECH Skills Center, Spokane
http://newtechskillscenter.com

North Olympic Peninsula Skills Center, Port Angeles
http://www.nopsc.org

Northwest Career and Technical Academy, La Conner
http://www.nwtech.k12.wa.

Pierce County Skills Center, Bethel
http://www.pcskillscenter.org

Puget Sound Skills Center, Burien
http://www.highlineschools.org/pssc

Seattle Public Schools Skills Center, Seattle
http://skillscenter.seattleschools.org

Sno-Isle Tech Skills Center, Everett
http://www.snoisletech.com

Tri-Tech Skills Center, Kennewick
http://school.ksd.org/tritech/

WaNIC Skills Center, Kirkland
http://wanic.org

Wenatchee Valley Technical Skills Center, Wenatchee
http://www.edlinesites.net/pages/wsd246

West Sound Technical Skills Center, Bremerton
http://www.bremertonschools.org/wstsc

Yakima Valley Technical Skills Center, Yakima
http://www.yvtech.us

RELATED CAREER & TECHNICAL EDUCATION CLASSES

MANUFACTURING

CAREER PATHWAYS

Production
Manufacturing production process development
Maintenance
Installation and repair
Quality Assurance
Logistics and inventory control
Health
Safety and environmental assurance

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS

CAREER PATHWAYS

Engineering and technology
Science and math

TRANSPORTATION, DISTRIBUTION & LOGISTICS

CAREER PATHWAYS

Facility and mobile equipment maintenance
Health, safety and environmental management
Logistics planning and management services
Sales and services
Transportation operations
Transportation systems and infrastructure
Planning, management and regulation
Warehousing and distribution center operations

APPRENTICESHIPS

Apprenticeships have always been a part of trade schools and the manufacturing industry. They are generally available to adults who are enrolled in or who have completed a training program. Now, apprenticeships are becoming more available to young adults and even high school students. A great apprenticeship resource in Washington is the Aerospace Joint Apprenticeship Committee, www.ajactraining.org.

AEROSPACE JOINT APPRENTICESHIP COMMITTEE (AJAC)

Washington State is the world leader in aerospace production and home to more than 1,350* aerospace-related companies employing more than 132,500* highly skilled aerospace workers. The increase in impending retirements, new emerging technologies and a greater production demand have created challenges for building a skilled 21st century workforce and competing in a global economy. Over the next five years, the state will need more than 7,200** additional aerospace workers to fill the increasing demand. The current workforce is composed of trades people that offer valuable knowledge and skills acquired through years of experience. It is imperative that employers have an avenue to capture the knowledge of these retiring trades people and pass that knowledge on to the next generation.

Washington State funded the creation of the Aerospace Joint Apprenticeship Committee (AJAC) in 2008 to devise this avenue. AJAC is a statewide, nonprofit 501(c)(3) aerospace and advanced manufacturing registered apprenticeship program. It is the mission of AJAC that the training of apprentices shall be without discrimination based on race, sex, color, religion, national origin, age, disability, sexual orientation, veteran status or as otherwise specified by law.

AJAC and its advisory committee, comprised of employers and employees, have developed and implemented the following registered apprenticeship programs based on employer and industry need:

- Machinist (Aircraft-Oriented)
- Aircraft Mechanic Airframe
- Precision Metal Fabricator
- Tool and Die Maker
- Industrial Maintenance Mechanic

AJAC is currently developing registered apprenticeship programs to offer in the future for Aircraft Interiors Assembly Mechanic and Composite Technician.

Apprenticeship combines supervised on-the-job training experience with college-level classroom instruction enabling:

- Employees to earn a living wage while they learn on-the-job from a mentor and attend class one night a week at a local community or technical college
- Employers to increase their workforce skills without disrupting production

Source: ajactraining.org

Contact the Aerospace Joint Apprenticeship Committee (AJAC):

SEATTLE OFFICE
6770 East Marginal Way South
Bldg A-106
Seattle, WA 98108
Phone: (206) 764-7940
FAX: (206) 764-5329

SPOKANE OFFICE
2110 N. Francher Way
Spokane, WA 99212-1331
Phone: (509) 533-8299
FAX: (509) 533-8618

WASHINGTON STATE DEPARTMENT OF LABOR & INDUSTRIES

Link to all registered Apprenticeships in Washington State
http://www.lni.wa.gov/TradesLicensing/Apprenticeship/Programs/Standards/default.asp

4 YEAR COLLEGES & RELATED AEROSPACE DEGREES

CENTRAL WASHINGTON UNIVERSITY

College of Education and Professional Studies:

- Aviation
  - Professional Pilot Four-year Plan
  - Aviation Management Four-yearn Plant
- Engineering Technologies, Safety and Construction
  - Construction Management
  - Electronics Engineering Technology
  - Technology Education
  - Industrial Technology
  - Mechanical Engineering Technology
  - MS in Engineering Technology
  - Safety and Health Management

EASTERN WASHINGTON UNIVERSITY

College of Science, Technology, Engineering & Mathematics

- Engineering
  - BS in Electrical Engineering
  - BS in Mechanical Engineering
  - BS in Mechanical Engineering Technology
  - BS in Technology/ Manufacturing
  - BS in Technology/ Construction
  - BS in Technology/Design
  - BS in Applied Technology
- Computer Science
  - BS in Computer Science
  - BS in Computer Information Systems
  - MS in Computer Science

GONZAGA UNIVERSITY

School of Engineering & Applied Science

- Engineering
  - Civil Engineering
  - Computer Engineering
  - Computer Science
  - Electrical Engineering
  - Engineering Management
  - Mechanical Engineering
  - Transmission & Distribution

WESTERN WASHINGTON UNIVERSITY

College of Science and Engineering

- Computer Science Programs
  - Computer Science, BS
  - Computer Science, MS
  - Mathematics/Computer Science, BS
  - Computer Science Minor
  - Computer Systems Minor
  - Internet Resource Creation and Management Minor
  - Computer & Information Security Systems (CISS)
  - Internet Studies Center (ISC)
- Engineering & Design
  - Electrical Engineering
  - Manufacturing Engineering

- Plastics & Composites Engineering
- Industrial Design
- Industrial Technology- Vehicle Design

ST. MARTINS UNIVERSITY

School of Engineering

- Engineering
- Civil Engineering
- Mechanical Engineering
- Master of Civil Engineering
- Master of Engineering Management
- Master of Mechanical Engineering

SEATTLE UNIVERSITY

College of Science and Engineering

- Engineering
  - BS in Civil Engineering
  - MS in Structural Engineering
- Computer Science and Software Engineering
  - BA in Computer Science
- Electrical and Computer Engineering
  - Electrical Engineering
  - Electrical Engineering with Computer Engineering Specialization
- Mechanical Engineering
  - Bachelor of Science in Mechanical Engineering

UNIVERSITY OF WASHINGTON

College of Arts and Sciences

- College of Engineering
  - Aeronautics & Astronautics
  - Engineering
  - Chemical Engineering
  - Materials Science & Engineering
  - Civil & Environmental Engineering
  - Computer Science & Engineering
  - Electrical Engineering
  - Industrial & Systems Engineering
  - Mechanical Engineering

SEATTLE PACIFIC UNIVERSITY

- Engineering
  - Electrical Engineering
  - Computer Engineering

WASHINGTON STATE UNIVERSITY

College of Engineering and Architecture

- Engineering
  - Electrical Engineering
  - Civil Engineering
  - Material Science and Engineering
  - Mechanical Engineering
  - Computer Engineering

EVERETT UNIVERSITY CENTER

- Mechanical Engineering
- Electrical Engineering

BENEFITS OF SHORT-TERM CERTIFICATION PROGRAMS

Short term certification programs allows students to study college level classes in less than 12 months, while working to earn a certificate of completion. These short-term certifications provide training for job skill development and advancement leading to employment. Students are able to complete valuable programs that will launch their careers in the areas of aerospace and advanced manufacturing.

Certification of Completion awarded in some professional and technical programs; usually does not include courses outside the major subject area.

Certificate of Proficiency "related instruction" requirements (related instruction is a range of courses distributed across various areas, required for a professional/technical degree in order to develop breadth of knowledge outside the major field).

DEFINITIONS OF DEGREE PROGRAMS

AAS: Associates in applied science degree
AAS-T: Associate in applied science-transfer degree
ATS: Associate in technical science
ATA: Associate of technical arts degree
AAT: Associate in applied technology

WASHINGTON CAREER BRIDGE

Washington State's one-stop source for career and education planning. Helping people find the education and training they need to get the job they want. Supply's resources for exploring careers, viewing job trends, education, finance school, and eligible training provider lists.

RESOURCES OFFERED ON WEBSITE

- Education finder: Through location and questionnaire
- Career Quiz: Connection interests with careers
- Job Trends: A way to narrow search by job titles, salaries and more
- Finance Checklist: Resources checklist for finance school
- Eligible Training Provider List: Link to search for ETP approved programs

WHAT IS THE ELIGIBLE TRAINING PROVIDER LIST?

The Washington State Eligible Training Provider(ETP) List is the official list of training programs, located in Washington State, eligible to provide training to individuals who qualify for:

- An Individual Training Account voucher funded by Title I-B of the Workforce Investment Act (WIA) or
- Additional weeks of unemployment insurance benefits through the Washington State Training Benefits Program

Training programs that are part of the list must meet minimum performance standards for employment, earnings and completion rates to remain ETP-eligible from year to year.
Learn more about worker retraining programs in Washington.

CONTACT INFORMATION

http://www.careerbridge.wa.gov/default.aspx
careerbridge@wtb.wa.gov
(360) 709-4600

Washington State Board For Community & Technical Colleges
http://www.sbctc.ctc.edu/college/e_integratedbasiceducationandskillstraining.aspx

The State Board for Community and Technical Colleges (SBCTC) is governed by a nine-member Governor-appointed board responsible for administering the Community and Technical College Act and providing leadership and coordination for Washington's system of 34 public community and technical colleges.

The SBCTC is headquartered in Olympia with offices in Spokane (eLearning) and Bellevue (IT division).

Under the direction of the Executive Director, the SBCTC deploys its services to the colleges and other stakeholders from the executive director's office and three divisions: Education, Finance, and Information Technology.

I-BEST : INTEGRATED BASIC EDUCATION AND SKILLS TRAINING

Washington's Integrated Basic Education and Skills Training Program (I-BEST) is a nationally recognized model that quickly boosts students' literacy and work skills so that students can earn credentials, get living wage jobs, and put their talents to work for employers.

I-BEST pairs two instructors in the classroom – one to teach professional and technical content and the other to teach basic skills in reading, math, writing or English language – so students can move through school and into jobs faster. As students progress through the program, they learn basic skills in real-world scenarios offered by the job-training part of the curriculum.

I-BEST challenges the traditional notion that students must complete all basic education before they can even start a job-training program. This approach often discourages students because it takes more time, and the stand-alone basic skills classes do not qualify for college credit. I-BEST students start earning college credits immediately.

I-BEST PROGRAM DETAILS

- I-BEST Program Information lets you search for I-BEST programs near you and find out when they are offered. Search criteria allow users to filter by institution, career pathway, county and quarter.
- The Comprehensive I-BEST Pathway shows how a typical I-BEST program is structured.

CONTACT INFORMATION

William Durden,
wdurden@sbctc.edu or 360-704-4368.

ACT'S (NCRC) NATIONAL CAREER READINESS CERTIFICATE

ACT's National Career Readiness Certificate (NCRC) is a portable credential that demonstrates achievement and a certain level of workplace employability skills. To earn an NCRC, an individual must successfully complete three ACT WorkKeys assessments in the following areas:

- Applied Mathematics
- Locating Information
- Reading for Information

WorkKeys assessments measure "real world" skills that employers believe are critical to job success. Test questions are based on situations in the everyday work world.

The ACT NCRC offers the efficient matching of talent with work—which helps people find great jobs, companies find skilled workers, and can help our nation's economy grow and prosper. Launched in 2006, today more than 2.3 million certificates have been issued and more than 40 states have statewide or regional certificate programs.

CONNECTING EMPLOYERS TO A SKILLED WORKFORCE

Rapid global advances in industry and technology increase the pace of change facing Washington employers. The challenge and the opportunity are the same – to build and maintain a skilled workforce that can readily adapt to market demands.

To do so, Washington employers need an objective method to measure and document essential skills related to employment.

As an employer, you know the importance of hiring the right person. You want to start by drawing from a pool of qualified applicants with assurance that they will have the skills needed for successful job performance. After all, the excellence of your organization hinges on the strength of your workforce.

WORKREADY WA AND ACT'S NATIONAL CAREER READINESS

Work Ready WA works to advocate for the use of ACT's NCRC across the state, ensuring as a state we are producing individuals who are fully prepared and skilled for their careers. ACT's National Career Readiness Certificate (NCRC) is a portable credential widely recognized throughout the country. The credential demonstrates achievement and workplace employability skills. The Washington Work Ready initiative offers a suite of assessments that measure an individual's foundational workplace skills such as applied mathematics, reading comprehension and critical thinking-skills required for a majority of today's jobs.

More information regarding test centers and other resources can be found at Work Ready WA website (workreadywa.com)

COLLEGES & TECHNICAL INSTITUTIONS BY REGION

WESTERN WASHINGTON

BATES TECHNICAL COLLEGE
1101 S Yakima Ave
Tacoma, WA 98405 253-680-7000
www.bates.ctc.edu

BELLEVUE COLLEGE
3000 Landerholm Circle SE
Bellevue, WA 98007 425-564-1000
www.bellevuecollege.edu

BELLINGHAM TECHNICAL COLLEGE
3028 Lindbergh Ave
Bellingham, WA 98225-1599 360-752-7000
www.btc.ctc.edu

CASCADIA COLLEGE
18345 Campus Way NE
Bothell, WA 98011 425-352-8000
www.cascadia.edu

CENTRALIA COLLEGE
600 Centralia College Blvd
Centralia, WA 98531 360-736-9391
www.centralia.edu

CLARK COLLEGE
1933 Fort Vancouver Way
Vancouver, WA 98663 360-994-2000
www.clark.edu

CLOVER PARK TECHNICAL COLLEGE
4500 Steilacoom Blvd SW
Lakewood, WA 98499-4004 253-589-5800
www.cptc.edu

EDMONDS COMMUNITY COLLEGE
20000 68th Ave W
Lynnwood, WA 98036 425-640-1459
www.edcc.edu

EVERETT COMMUNITY COLLEGE
2000 Tower St
Everett, WA 98201-1390 425-388-9100
www.everettcc.edu

GRAYS HARBOR COLLEGE
1620 Edward P Smith Dr
Aberdeen, WA 98520 360-532-9020
www.ghc.edu

GREEN RIVER COMMUNITY COLLEGE
12401 SE 320th St
Auburn, WA 98092-3699 253-833-9111
www.greenriver.edu

HIGHLINE COMMUNITY COLLEGE
2400 S 240th
Des Moines, WA 98198-9800 206-878-3710
www.highline.edu

LAKE WASHINGTON INSTITUTE OF TECHNOLOGY
11605 132nd Ave NE
Kirkland, WA 98034 425-739-8100
www.lwtech.edu

LOWER COLUMBIA COLLEGE
1600 Maple
Longview, WA 98632-0310 360-442-2000
www.lowercolumbia.edu

NORTH SEATTLE COLLEGE
9600 College Way North
Seattle, WA 98103 206-527-3600
www.northseattle.edu

OLYMPIC COLLEGE
1600 Chester Avenue
Bremerton, WA 98337-1699 800-259-6718
www.olympic.edu

PENINSULA COLLEGE
1502 E Lauridsen Blvd
Port Angeles, WA 98362 360-452-9277
www.pencol.edu

PIERCE COLLEGE
9401 Farwest Dr SW
Lakewood, WA 98498-1999 253-964-6500
www.pierce.ctc.edu

RENTON TECHNICAL COLLEGE
3000 NE 4th Street
Renton, WA 98056-4195 425-235-2352
www.rtc.edu

SEATTLE CENTRAL COLLEGE
1701 Broadway
Seattle, WA 98122 206-587-3800
www.seattlecentral.edu

SEATTLE VOCATIONAL INSTITUTE
2120 S Jackson Street
Seattle, WA 98144 206-587-4950
svi.seattlecolleges.edu

SHORELINE COMMUNITY COLLEGE
16101 Greenwood Ave N
Seattle, WA 98133-5696 206-546-4101
www.shoreline.edu

SKAGIT VALLEY COLLEGE
2405 E College Way
Mount Vernon, WA 98273-5899 877-385-5360
www.skagit.edu

SOUTH PUGET SOUND COMMUNITY COLLEGE
2011 Mottman Road SW
Olympia, WA 98512-6292 360-754-7711
www.spscc.ctc.edu

SOUTH SEATTLE COLLEGE
6000 16th Ave SW
Seattle, WA 98106-1499 206-764-5300
www.southseattle.edu

TACOMA COMMUNITY COLLEGE
6501 S 19th St
Tacoma, WA 98466-6100 253-566-5000
www.tacomacc.edu

WHATCOM COMMUNITY COLLEGE
237 W Kellogg Rd
Bellingham, WA 98226 360-383-3000
www.whatcom.ctc.edu

CENTRAL WASHINGTON

BIG BEND COMMUNITY COLLEGE
7662 Chanute St NE
Moses Lake, WA 98837-3299 509-793-2222
www.bigbend.edu

COLUMBIA BASIN COLLEGE
2600 N 20th
Pasco, WA 99301-3397 509-547-0511
www.columbiabasin.edu

WALLA WALLA COMMUNITY COLLEGE
500 Tausick Way
Walla Walla, WA 99362-9267 509-522-2500
www.wwcc.edu

WENATCHEE VALLEY COLLEGE
1300 Fifth Street
Wenatchee, WA 98801 509-682-6800
www.wvc.edu

YAKIMA VALLEY COMMUNITY COLLEGE
16th and Nob Hill Blvd
Yakima, WA 98907-2520 509-574-4600
www.yvcc.edu

EASTERN WASHINGTON

SPOKANE COMMUNITY COLLEGE
1810 N Greene Street
Spokane, WA 99217-5399 509-533-7000
www.scc.spokane.edu

SPOKANE FALLS COMMUNITY COLLEGE
3410 West Fort George Wright Drive
Spokane, WA 99224-5288 509-533-3500
www.spokanefalls.edu

CAREER / AREA OF STUDY

	MACHINING	ELECTRONICS	ENGINEERING	MATERIAL SCIENCE
BATES	✈	✈	✈	
BELLINGHAM	✈	✈		
BIG BEND COMMUNITY COLLEGE		✈		
CLARK COLLEGE	✈			
CLOVER PARK TECHNICAL COLLEGE				✈
EDMONDS COMMUNITY COLLEGE		✈		✈
EDMONDS COMMUNITY COLLEGE/WATR CENTER		✈		
EVERETT COMMUNITY COLLEGE	✈		✈	
GREEN RIVER COMMUNITY COLLEGE	✈			
HIGHLINE COLLEGE				
LAKE WASHINGTON INSTITUTE OF TECHNOLOGY	✈	✈	✈	
NORTH SEATTLE COLLEGE		✈		
OLYMPIC COLLEGE		✈		
PENNINSULA COLLEGE				
RENTON TECHNICAL COLLEGE	✈		✈	
SHORELINE COLLEGE	✈			
SKAGIT VALLEY COLLEGE				
SOUTH PUGET SOUND COMMUNITY COLLEGE				
SOUTH SEATTLE COLLEGE				
SPOKANE COMMUNITY COLLEGE	✈			
WENATCHEE VALLEY COLLEGE	✈	✈		
YAKIMA VALLEY COMMUNITY COLLEGE	✈			

FIND YOUR AEROSPACE OR MANUFACTURING SCHOOL

	AVIATION/ AEROSPACE	COMPOSITES	DESIGN	MECHANICAL	MANUFACTURING
BATES					✓
BELLINGHAM				✓	
BIG BEND COMMUNITY COLLEGE	✓				
CLARK COLLEGE				✓	
CLOVER PARK TECHNICAL COLLEGE	✓	✓			✓
EDMONDS COMMUNITY COLLEGE					✓
EDMONDS COMMUNITY COLLEGE/WATR CENTER		✓			✓
EVERETT COMMUNITY COLLEGE	✓	✓	✓		
GREEN RIVER COMMUNITY COLLEGE	✓				
HIGHLINE COLLEGE			✓		
LAKE WASHINGTON INSTITUTE OF TECHNOLOGY					
NORTH SEATTLE COLLEGE					
OLYMPIC COLLEGE		✓	✓		✓
PENNINSULA COLLEGE		✓			✓
RENTON TECHNICAL COLLEGE	✓				
SHORELINE COLLEGE					✓
SKAGIT VALLEY COLLEGE		✓			
SOUTH PUGET SOUND COMMUNITY COLLEGE			✓	✓	
SOUTH SEATTLE COLLEGE	✓	✓	✓		
SPOKANE COMMUNITY COLLEGE	✓		✓	✓	
WENATCHEE VALLEY COLLEGE			✓		
YAKIMA VALLEY COMMUNITY COLLEGE	✓				

BATES TECHNICAL COLLEGE

www.bates.ctc.edu
1101 South Yakima Ave
Tacoma, WA 98405
253-680-7000
www.bates.ctc.edu/GetStarted

CNC MACHINIST

This program prepares students for employment in the machinist/manufacturing field. Using a variety of machine tools, including computer numeric control (CNC) equipment, students learn to make metal parts to precise specifications. Knowledge of the working properties of metal, capabilities of machine tools and equipment, and standard shop practices prepare students for employment in all types of factories, industries, and maintenance shops.

CERTIFICATES/DEGREES OFFERED

- CNC Operator (2 quarters)
- CNC Machining Certificate (3 quarters)
- Associate of Technology

INDUSTRIAL ELECTRONICS AND ROBOTICS TECHNICIAN

Learn electronics, robotics, and industrial automation from top instructors using the latest equipment from Tektronix, Agilent, Fluke, FANUC Robotics, Allen Bradley, Rockwell Automation, Bosch Rexroth, and Microchip. The focus on the intelligent control of machines leads to exciting careers in aerospace, robotics, process automation, programming, and electrical power distribution. Multiple credentials open doors for numerous apprenticeships and high-paying technical careers.

CERTIFICATES/DEGREES OFFERED

- Certificate of Competency – Electrical Technician
- Certificate of Training – Basic Electricity
- Associate of Technology Degree – Industrial Technology




MACHINIST

Instruction contains a balance of extensive hands-on training with precision manual machines, and the state-of-the-art technology, including CNC lathes, CNC milling machines, and industry-specific software for design and programming. The Machinist Program prepares students for entry into the industry with foundational skills. The curriculum exceeds the minimum requirement for students entering apprenticeship programs through Boeing, AJAC, etc. The program also provides advanced classes for persons from industry upgrading their skills.

CERTIFICATES/DEGREES OFFERED

- Manual Machining Certificate 4 quarters
- Associate of Technology 6 Quarters

SHEET METAL TECHNOLOGY

Bates offers the only program in the region that prepares students for apprenticeship employment in the sheet metal industry. Projects completed in the classroom, shop, and the field, provide students with the necessary foundational skills to succeed in this high demand and rewarding occupation. This is a pre-apprenticeship program for the Western Washington Sheet Metal Joint Apprenticeship Training Committee. Students who complete all required elements of the selected Sheet Metal Technology course offerings will be awarded direct entry into the Western Washington Sheet Metal JATC Local 66 building trades or residential apprenticeship program. Students will be placed at the end of the out-of-work list. Prior educational credits are recognized upon entrance into the apprenticeship.

CERTIFICATES/DEGREES OFFERED

- Sheet Metal Technology Certificate (six quarters)
- Sheet Metal Technician Certificate (five quarters)
- Sheet Metal Production Support Certificate (three quarters)
- Associate of Applied Science




BATES TECHNICAL COLLEGE

ENGINEERING PROGRAM

Engineering professionals apply math and science principles to develop solutions to building and construction projects. Using computers, engineering technicians produce and analyze designs, formulate specifications and generate simulations.

CIVIL ENGINEERING TECHNOLOGY

Students prepare for careers as civil engineering technicians who typically work under the direct supervision of a project engineer. The program environment emulates a civil engineering/surveying firm, giving students practice in many aspects of the profession, including defining project requirements, conducting survey/field work, field engineering, construction staking, designing, estimating, modeling and client presentations.

CERTIFICATES/DEGREES OFFERED

- Certificate of Competency
- AAS Degree

ELECTRICAL ENGINEERING TECHNICIAN

Students prepare for careers in electrical code application, interior and exterior lighting design, and all aspects of electrical design. Instruction includes all phases of electrical engineering, CAD drafting, and design for commercial buildings.

CERTIFICATES/DEGREES OFFERED

- AAS Degree

FIRE PROTECTION ENGINEERING TECHNOLOGY

Fire protection engineering technicians design and service fire sprinklers, fire alarms, and other types of in-place detection and suppression systems. The program is supplemented by preparation for NICET examinations, enabling students to choose from three career paths: Automatic Sprinkler Layout, Fire Alarm/ Suppression Systems Layout, and Inspection, Testing, and Maintenance.

CERTIFICATES/DEGREES OFFERED

- Certificate of Competency
- Certificate of Training
- AAS Degree
- AAS Transfer Degree

MECHANICAL ENGINEERING

Students prepare for careers as engineering technicians with an emphasis on mechanical systems. Instruction focuses on computer-aided drafting and design (CADD). Students have opportunities to work on community and college projects that may include patent application drawings and detailed machine shop production drawings.

CERTIFICATES/DEGREES OFFERED

- Certificate of Competency Mechanical Engineering
- Certificate of Training: Basic Autocad Drafting
- Certificate of Training: Intermediate Autocad Drafting
- AAS Degree




BELLINGHAM TECHNICAL COLLEGE

Bellingham TECHNICAL COLLEGE

ELECTRICIAN

The electricians program prepares students for the Electrical Industry, including residential, commercial, industrial, and renewable energy jobs. The program emphasizes the development of electrician skills along with communication and interpersonal skills to be successful in the workplace. Classroom instruction and practical / hands on lab instruction and projects provide opportunities for students to achieve the competencies they need to maintain existing electrical systems, perform new construction, trouble shooting, and problem solving according to industry standards and the National Electrical Code. Graduates can be credited with up to 1472 electrical trainee supervised work experience hours per RCW 19.28.191 and WAC 296-46B-940.

3028 Lindbergh Ave.
Bellingham, WA 98225
360-752-700
www.btc.ctc.edu

CERTIFICATES/DEGREES OFFERED

- Associate in Applied Science Electrician




BELLINGHAM TECHNICAL COLLEGE

INDUSTRIAL MAINTENANCE & MECHATRONICS

The Industrial Maintenance & Mechatronics Program prepares students with the knowledge and skills required for success as an Industrial Maintenance Technician (often referred to as Millwrights or Stationary Engineers). This Program will appeal especially to students who want a broad knowledge about various industrial processes including electricity, hydraulics, pneumatics, engineering graphics, welding, boilers, etc. The Industrial Maintenance & Mechatronics Program uses hybrid online instruction, classroom lectures and labs. Graduates will have the opportunity to work in a variety of industrial settings including advanced manufacturing operations—particularly petrochemical, refining, pharmaceuticals, chemical, value-added wood products, pulp and paper, power generation, utilities, and wastewater treatment facilities, as well as the opportunity to work in smaller facility maintenance.

CERTIFICATES/DEGREES OFFERED

- Machine Maintenance Certificate
- Associate in Applied Science Industrial Maintenance & Mechatronics

CERTIFICATES/DEGREES OFFERED

- Machine Maintenance Certificate
- Associate in Applied Science Electro Mechanical Technology

ELECTRONICS

Graduates of this program work primarily as electronics technicians or associate electronic engineers in a variety of industries including: consumer and industrial electronics industries, electronic and opto-electronic equipment development and maintenance, manufacturing, computer systems, cable or satellite TV, and broadcasting technology. Our training emphasizes modern electronic engineering design, circuit and system simulations and computer programming. Practical experience in computer aided electronics design, simulation and interfacing with microprocessors, microcontrollers, robotics, sensors and controls, programmable logic controls, circuits design and simulation, field-programmable gate array circuits, telecommunication, wireless technology, and an exposure to solar and fuel cell and nanotechnology. Typical tasks include electronics design and development work in the electronic industries; installing, maintaining, and repairing electronic equipment such as communications equipment, industrial equipment controls, computers, telephone systems, and fiber optic equipment. Some courses are designed for higher education pathway.

CERTIFICATES/DEGREES OFFERED

- Electronics Technician Certificates
- Associate in Applied Science Electronics – Transfer
- Associate in Applied Science Electronics




INSTRUMENTATION AND CONTROL TECHNOLOGY

The degree in Instrumentation & Control Technology prepares students for employment to maintain, repair, and troubleshoot instrumentation and control systems in such industries as petroleum refining, pulp and paper, pharmaceuticals, aluminum, food processing, chemical manufacturing, semiconductor manufacturing, and power generation. A combination of theory and hands-on training offers a variety of modern process measurement and control instrumentation with actual working processes and computer simulations. The program applies math and physics and duplicates conditions and industry standards that technician's experience.

CERTIFICATES/DEGREES OFFERED

- Associate in Applied Instrumentation & Control

PRECISION MACHINING

The Precision Machining Program provides students with employment skills in the computerized machining industry. The degree includes CAD/CAM, theory, and related academic skills for continued success in the machine trades. In addition to the degree, the Program offers a Machining Operator certificate (imbedded in the program). BTC is a Mastercam training site with state-of-the-art Computer Numerical Control (CNC) machining equipment.

CERTIFICATES/DEGREES OFFERED

- Principles of Precision Machining Certificate
- Associate in Applied Science Precision Machining




BIG BEND COMMUNITY COLLEGE

www.bigbend.edu

7662 Chanute ST.
Moses Lake, WA 98837
amt@bigbend.edu
509-793-2253 Erik
509-793-2254 Dan

AVIATION MAINTENANCE TECHNOLOGY

Upon completion of the AMT program course of study, the student will have earned a minimum 400 hours of classroom and laboratory training in the AMT general section, 750 hours in airframe and 750 hours in powerplant. The FAA recognizes these time allotments as sufficient to meet testing requirements. Upon successful completion of the FAA written tests for certified aviation maintenance technician, the student is then eligible to take the oral and practical tests, all of which may be taken at BBCC.
The BBCC Aviation Maintenance Technology program is approved by the Washington State Aeronautics Commission and the Federal Aviation Administration.

CERTIFICATES/DEGREES OFFERED

- Airframe Maintenance Technician Certificate (1 year)
- Powerplant Maintenance Technician Certificate (1 year)
- Associate in Applied Science

INDUSTRIAL ELECTRICAL

To prepare students for entry-level employment as maintenance mechanics in several industries, the Industrial Systems Technology (IST) program provides a foundation in safety, fabrication, welding, refrigeration, machining, power transmission, industrial electricity, fluid power, programmable logic controllers, and instrumentation. Maintenance mechanics install new industrial machinery and systems, maintain and repair equipment, and perform tests on machinery and equipment to ensure safe operation.

CERTIFICATES/DEGREES OFFERED

- Associate of Applied Science




CLARK COLLEGE
EST. 1933

www.clark.edu
1933 Fort Vancouver Way
Vancouver, WA 98663
360-992-2000

MACHINE TECHNOLOGY

The machinist's craft is basic to all American industrial production. It is the machinist's task to interpret the engineer's drawings in order to fabricate new machines and products. Machinists operate various types of material-removing equipment such as lathes, milling machines, grinders, and computerized numerical control (CNC) machines. Some machinists specialize in the operation of one type of machine while others work in a shop where they are required to perform equally well on several different machines. Clark College's program offers instruction in numerous machine processes including the set-up and operation of the engine lathe, surface grinders, cylindrical grinder, and vertical mill, CNC lathes, EDM and CNC milling machines. All shop theory subjects have a direct bearing on the student's skill, safety, and attitude. In addition to shop theory and practice, the student studies math, blueprint reading, metallurgy, safety, and computer-aided manufacturing (CAM) programming. MasterCAM programming classes teach basic CAM programming for mills, lathe, EDM, etc. The basic CNC class involves writing programs and learning to safely operate the HAAS and ProtoTRAK CNC mills as well as HAAS TL and Okuma Lathes.

CERTIFICATES/DEGREES OFFERED

- Certificate of Proficiency
- Associate of Applied Science
- Associate of Applied Technology




CLARK COLLEGE

MECHATRONICS

Mechatronics technology is a complex interdisciplinary field that combines the study of mechanics, electronics, automation and computers. Students in a Mechatronics technology degree program will be prepared to work with electromechanical and automated equipment to create industrial and commercial products. The most popular Mechatronics technology degree program is an associate's degree, but bachelor's degrees in Mechatronics engineering technology are also common. An AAT in Mechatronics technology program teaches students the latest technologies and skills required by manufacturers. Students receive instruction in the installation, troubleshooting and maintenance of electromechanical equipment and manufacturing machinery. The curriculum focuses on the technical aspects of the profession in addition to incorporating technical writing, critical path analysis and advanced mathematics classes.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion
- Certificate of Proficiency
- Associated of Applied Technology




CLOVER PARK TECHNICAL COLLEGE

CLOVER PARK
TECHNICAL COLLEGE

www.cptc.edu
Lakewood Campus
4500 Steilacoom Blvd SW
Lakewood, WA 98499-4004
(253) 589-5800

South Hill Campus
17214 110th Ave E
Puyallup, WA 98374-9509
(253) 583-8904

AEROSPACE COMPOSITE TECHNICIAN

The Aerospace Composite Technician certificate is a two-quarter program designed to prepare the students to fabricate, assemble, and repair composite materials on aircraft. The knowledge and skills gained through this program are those required for entry-level positions as composite technicians.

CERTIFICATES/DEGREES OFFERED

Short-term Certificate - 20 weeks/29 credits

AVIATION MAINTENANCE TECHNICIAN

This FAA approved program is designed to prepare students for entry-level positions in the aircraft maintenance industry. Graduates will meet FAA requirements for the issuance of Airframe and Powerplant certificates. Aviation Maintenance Technicians are qualified to perform service or make repairs on all types and sizes of private and commercial aircraft including airplanes, helicopters, and their propulsion systems.

CERTIFICATES/DEGREES OFFERED

- Airframe Maintenance Tech. Cert (1 year)
- Powerplant Maintenance Tech. Cert (1 year)
- Associate of Applied Technology (AAT)
- Associate of Applied Science –T (AAS-T)




CLOVER PARK TECHNICAL COLLEGE

MANUFACTURING TECHNOLOGIES

This program provides students with the knowledge and skills necessary for employment in the manufacturing/metalworking industry. Graduates may enter industry as a machinist, machinist apprentice or machinist helper. Students are responsible for setting up and operating conventional machine tools and CNC (Computer Numerical Control) machine tools.

CERTIFICATES/DEGREES OFFERED

- Machinist Helper (11 weeks)
- CNC Programmer/CATIA (30 weeks)
- Machinist Apprentice (1 year)
- Associate of Applied Technology (AAT)

MATERIAL SCIENCE: NONDESTRUCTIVE TESTING AND MATERIAL SCIENCE: COMPOSITES

The program is designed to prepare students for careers in areas such as nondestructive testing technician, nondestructive testing specialist, composite technician, material engineering technician, or engineering support technician. Students already working in the materials science field can select electives and a study path designed to expand their skills and further their employment potential. The Materials Science degree is designed to provide hands-on technical training that will prepare students for careers, as well as prepare graduates for further study in the field. This program also provides opportunity for the incorporation of credit from prior learning in industry or government.

CERTIFICATES/DEGREES OFFERED

- Advanced Composite Manufacturing Technician Certificate (22 Weeks)
- Associate of Applied Technology-T (AAT-T) in Material Science Nondestructive Testing or Material Science Composites

PROFESSIONAL PILOT

The professional pilot program prepares students to meet the requirements for a commercial pilot certificate issued by the Federal Aviation Administration (FAA).

CERTIFICATES/DEGREES OFFERED

- Private Pilot (20 weeks)
- Instrument Pilot (20 weeks)
- Commercial Pilot (1 year)
- Flight Instructor (10 weeks)
- Associate of Applied Technology (AAT)
- Associate of Applied Science – T (AAS-T)




EDMONDS COMMUNITY COLLEGE

www.edcc.edu
20000 68th Ave. W
Lynnwood, WA 98036
425-640-1980

BASIC ELECTRONICS

This certificate is awarded after satisfactory completion of the first year requirement of the Associate of Technical Arts Degree in Robotics and Electronic Technology. It signifies that the holder has been trained in basic electronics skills and has been introduced to more advanced topics such as digital electronics and microprocessor systems.

CERTIFICATES/DEGREES OFFERED

- Basic Electronics Certificate (3quarters)

MANUFACTURING & MATERIALS TECHNOLOGY

This ATA degree is designed for students who want to gain a solid, hands-on knowledge and understanding of composite manufacturing procedures and processes. Students with this degree would be competitive for entry-level jobs in a several manufacturing industry environments, including aerospace. Many students are offered internships with Boeing after they complete some of the core curriculum. Students who earn this degree will have a strong foundation to continue with our AAS-T degree in Materials Science should they wish to advance further.

CERTIFICATES/DEGREES OFFERED

- ATA




EDMONDS COMMUNITY COLLEGE

MATERIALS SCIENCE TECHNOLOGY

This Associate in Applied Science-T (AAS-T) in Materials Science Technology is a professional technical degree with a core of general education courses commonly accepted in transfer. It is designed to prepare graduates to enter into industry or to prepare students who wish to transfer to other colleges or universities having specific bachelor's degree programs that accept the AAS-T degree.

CERTIFICATES/DEGREES OFFERED

- Associate in Applied Science – T (AAS-T)

ROBOTICS & ELECTRONICS TECHNOLOGY

The Robotics and Electronics Associate of Technical Arts (ATA) degree program trains students to enter the job market for a variety of companies as Electronics Technicians. This program trains students in electronic circuit analysis, functional testing and troubleshooting of complex linear, digital, and microprocessor-based circuits. This training makes extensive use of practical, hands on learning. Whenever possible, we model real-world applications so our graduates are prepared for the work they will find.

CERTIFICATES/DEGREES OFFERED

- ATA




EDMONDS COMMUNITY COLLEGE/WATR CENTER

EDMONDS COMMUNITY COLLEGE

washingtonaerospace.com
3008 100th St. SW
Everett, WA 98204
425.640.1840

AEROSPACE MANUFACTURING CORE CERTIFICATE

The Certificate in Basic Aviation Manufacturing fulfills a critical and complex role within aviation manufacturing. The student will be introduced to valuable skills in aviation technology needed for a precision aerospace technologist. This certificate will provide a basic understanding of general aviation manufacturing procedures. Topics covered include basic aircraft familiarization, sealing, electrical bond and ground, aircraft drawings and work instructions, assembly hand tools, precision measuring and aviation materials and processes. Other areas covered are aircraft cleaning and corrosion control. The certificate includes 9 modules of theory and practical application. The Aerospace Manufacturing Core is the prerequisite and must be completed prior to registering for one of the specialization certificates. The National Career Readiness Certification Plus is included as part of the core for non-incumbent workers.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (4 weeks)

AEROSPACE MANUFACTURING ASSEMBLY

Certificate in Aerospace Assembly Mechanic provides an advanced understanding of aviation manufacturing procedures. The certificate includes 13 modules (Mechanic Orientation, Power Island, Basic Drilling and Riveting, Advanced Fasteners, Countersinking and Flush Riveting, 90 Degree Drilling, Reaming and Permanent Fasteners, Wing Structure, Fuselage Skin, Drilling Titanium, Drilling Composite, Sealant Application, Electrical Bond and Ground Composite Manufacturing). Graduates of this program qualify for entry-level positions as assembly mechanics performing jobs ranging from processing and fabrication to assembly.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (8 weeks)




EDMONDS COMMUNITY COLLEGE/WATR CENTER

AEROSPACE ELECTRICAL ASSEMBLER

Certificate in Aerospace Electrical Assembly provides an advanced understanding of aviation electrical procedures. The certificate includes 11 modules (Electrical Orientation, Hand & Power Tools, Basic Drilling & Riveting, Wire Bundle Basics, Wire Installation Drawings, Wire Bundle Installation, Electrical Ground Jumpers, Electrical Ground Studs & Wire Grounding, Crimping Terminals & Splices, Assembly of Coaxial Connectors and Fiber Optics for Aerospace). This program provides an overview of the electrical knowledge and skills necessary to qualify for employment in the aerospace industry as an electrical assembler.

Graduates of this program qualify for entry-level positions installing wiring bundles and electronic components on aircraft.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (8 weeks)

AEROSPACE MANUFACTURING COMPOSITES

Certificate in Aerospace Composites provides an introduction to manufacturing safety and composites used in aerospace. The certificate includes 10 modules (Introduction to Safety, Personal Protective Equipment, Electrical and Fire Safety, Workplace Safety, tool and Machine Safety, Material Handling Safety, Hazardous Material Safety, Composite Manufacturing, and Composites Repair I & II.)

Graduates of this program qualify for entry-level positions as composite and fiberglass assemblers/ technicians.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (8 weeks)




EDMONDS COMMUNITY COLLEGE/WATR CENTER

AEROSPACE MANUFACTURING TOOLING

Students who complete this program will be able to demonstrate their knowledge of the following equipment and standards used in the manufacturing of aerospace tooling projects: the safe use of hand, power, and floor mounted tools; application of precision measuring tools; acceptable tolerance applications and general dimensioning; tooling drawing interpretations; competency with deciphering and interpretation of general dimensioning and tooling (GD&T) symbols; manufacturing and quality standards documentation; and production tooling layout. In addition, students should be able to demonstrate team building techniques, including how the importance of working in a manufacturing team environment affects overall production and quality.

Graduates of this program qualify for entry-level positions as toolmakers.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (8 weeks)

AEROSPACE MANUFACTURING QUALITY ASSURANCE

The Quality Assurance Certificate curriculum provides education to students in several areas critical to the manufacturing and aerospace assembly arena in respect to quality control, quality assurance, quality team dynamics, conflict resolution, and processes and statistical process control. The student will experience actual hands-on activities such as drilling, fastener installation, wire bundle installation, torque, dimensioning and tolerance.

In addition to the skills and knowledge listed above, students will gain experience in overall quality inspection, precision measurements, manufacturing documentation, specifications and standards that are applied in the working world of manufacturing and aerospace assembly.

Graduates of this program qualify for entry-level positions as quality inspectors.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (8 weeks)




EVERETT COMMUNITY COLLEGE

EVERETT COMMUNITY COLLEGE

www.everettccc.edu/mfg
2000 Tower St.
Everett, WA 98201
425-388-9533

AVIATION MAINTENANCE TECHNICIAN

Aviation Maintenance Technicians, also known as aircraft (A&P) mechanics, are responsible for keeping aircraft in peak condition.

- FAA inspections and maintenance
- Repairs
- Replacement of parts
- Use of precision tools
- Troubleshooting problems
- Testing equipment
- Preventative maintenance
- Work on all types of aircraft and engines

Typically, technicians are FAA certified, which requires a combination of hands-on hours as well as classroom hours in a program offered within the EvCC program.

CERTIFICATES/DEGREES OFFERED

- Airframe and Powerplant License Preparation
- Aviation Maintenance Technology Certificate
- Associate in Technical Arts (ATA) – Aviation Maintenance Technology
- Associate in Arts & Sciences

COMPOSITES

Gain a broad foundation of composites as a material: tooling; fabrication; machining; assembly; quality assurance; repair; lay-up; vacuum bagging; cure processing of wet laminating; lab-based projects.

CERTIFICATES/DEGREES OFFERED

- Composites Foundation Certificate (10 weeks)
- Composites Technician Certificate (20 weeks)
- Associate in Technical Arts (ATA) – Advanced Manufacturing Technician - Composites




COMPUTER AIDED DESIGN

Classes in AutoCAD – 2D applications including basic and intermediate level AutoCAD software lessons. Classes in Solid Works– 3D applications exploring dimensions, tolerances, and geometric tolerances, and examining certain industry specific protocols like flat patterns, weldments, and incorporating a module creating 3D models to build something on a 3-axis bench mill available at the college. Classes in CATIA, version 5 – 3D application exploring the software's various workbenches; includes surfacing and reverse engineering activities.

CERTIFICATES/DEGREES OFFERED

- Certificate in Technical Design - CAD (43 credits)
- Associate in Technical Arts (ATA) degree – Advanced Manufacturing Technician – CAD (90 credits)

ENGINEERING TRANSFER DEGREE

The Engineering Transfer Degree program earns either: Engineering Transfer Associate of Science Degree, which is designed to prepare students for transfer to a four-year program. Engineering Technology Degree, designed for those intent upon transfer into an Engineering Technology Program at Central Washington University, Eastern Washington University, or Western Washington University. The program covers the first- and second-year engineering, math and science courses that form this degree, and which serve as preparation for a variety of engineering majors, including aeronautical, biological, civil, chemical, electrical, mechanical and materials science.

CERTIFICATES/DEGREES OFFERED

- Engineering Transfer Associate of Science Degree
- Engineering Technology Degree

PRINCIPLES OF PRECISION MACHINING

The Precision Machining program is designed to provide the skills and knowledge required for entry-level positions as CNC (Computer Numerical Control) machine operators. The Precision Machining certificate is a two-quarter, 40 credit sequence of technical core classes. The core classes are designed to prepare students to safely set up, operate and program CNC and conventional/manual machine tools to industry standards of accuracy and efficiency.

Instruction covers programming and basic set up and operation of CNC machines, blueprint reading, shop mathematics, machine tool theory, inspection, surface plate techniques, and Statistical Process Control (SPC). Students will be involved in the production and machining of industry parts. Instruction will also include the use and care of a wide variety of measuring devices used in the machining profession.

CERTIFICATES/DEGREES OFFERED

- Principles of Precision Machining Certificate (20 weeks)
- Associate in Technical Arts (ATA) – Advanced Manufacturing Technology- Precision Machining (90 credits)




GREEN RIVER COLLEGE

www.greenriver.edu
12401 SE 320th ST
Auburn, WA 98092
253-833-9111 ext. 4336 (Aviation Technology)
253-833-9111 ext. 4261 (Machining)

AVIATION TECHNOLOGY

Green River designed its Aviation Technology program to provide students with a real-world education and competitive advantages in the job market with a variety of industry Associate Degrees and Professional Certificate Programs.

Advanced technology, exceptional instructors, and specialized FAA-approved programs prepare students of every experience level with a foundation in aviation weather, air transportation, air traffic control, English and math.

State of the art equipment, high quality faculty and Green River's strong partnerships with the top Aviation related employers in the area make Green River Aviation Technology an exceptional program for students who desire a successful career in the Aviation industry.

CERTIFICATES/DEGREES OFFERED

- Certificate of Proficiency (3 quarters):
- Advanced Aviation Knowledge
- Aircraft Dispatcher
- Airliner Dispatcher Completion
- International Flight Planning
- Basic Aviation Knowledge
- Airport & Air Transportation Management
- Basic Aviation Terminology
- Basic Weather Observer
- Associate in Applied Science
- Unmanned Aerial Systems
- Air Traffic Control
- Air Transportation
- Airline Dispatch
- Airport Management
- Commercial Pilot




MACHINING AND MANUFACTURING TECHNOLOGY

Green River College's Manufacturing Technology Program is designed to meet the needs of those entering or working in the manufacturing industry. The industry is undergoing change, with advances in machine and computer technology, creating job opportunities for skilled employees.

Green River College offers a two-year Associate in Applied Science degree as well as a certificate of proficiency that can be completed in one year. Both are designed to prepare students for immediate employment in the manufacturing industry

CERTIFICATES/DEGREES OFFERED

- Certificate of Proficiency – Machining & Manufacturing Technology (3 quarters)
- Associate in Applied Science – Machining & Manufacturing Technology

MECHATRONICS

This growing technical field of study deals with the integration of mechanical and electronic components managed by a control system. Mechatronics technicians troubleshoot, maintain and repair mechanical equipment controlled by electrical, electronic and computer systems. The systems are increasingly used in a wide variety of manufacturing and related technical applications requiring a high degree of technical knowledge and skill.

Green River's high quality faculty has developed this program in partnership with area industry leaders to prepare students for immediate entry into the job market after completing the program.

CERTIFICATES/DEGREES OFFERED

- Machine Maintenance 1
- Machine Maintenance 2




HIGHLINE COLLEGE

DRAFTING DESIGN

Highline Community College's program prepares students for entry-level employment focusing on three drafting disciplines: architectural, civil, and mechanical. Students are introduced to each of disciplines in the coursework. The above disciplines are taught using, SolidWorks, AutoCAD and AutoCAD Land Development Desktop. The College also boasts an excellent teaching lab with wide screen monitors, a full-scale plotter, and an 11"x17" printer.

CERTIFICATES/DEGREES OFFERED

- Drafting Design (30 weeks)
- Associates of Applied Science – Drafting Design

www.highline.edu
2400 S 240th ST.
Des Moines, WA 98198
206-592-3976




LAKE WASHINGTON INSTITUTE OF TECHNOLOGY

Lake Washington Institute of Technology
Practical. Purposeful. Promising.

www.lwtech.edu
11605 132nd Ave NE
Kirkland, WA 98034
425-739-8146

AUTO COLLISION REPAIR TECHNOLOGY

The Auto Collision Repair Technician AAS degree prepares students with entry-level skills to compete in the auto collision repair industry and provides an option for specializing in restoration or custom painting.

CERTIFICATES/DEGREES OFFERED

- Certificate of Proficiency
- Associates of Applied Science

ELECTRONICS TECHNOLOGY

The program prepares its graduates for entry-level positions in the rapidly growing high-tech industries of the 21st century. Graduates will be able to utilize the skills learned in this program to enter into either the electronics manufacturing industry as assemblers, inspectors, managers and testers, or into any high-tech industry maintaining one of the many multi-million dollar machines and devices utilized in almost all high-tech fields today.

CERTIFICATES/DEGREES OFFERED

- Electronics Technician (55 weeks)
- Digital Electronics (22 weeks)
- Electronics Automation (22 weeks)
- Electronics Manufacturing Specialist (22 weeks)
- Associates of Applied Science




LAKE WASHINGTON INSTITUTE OF TECHNOLOGY

ENGINEERING GRAPHICS

The Engineering Graphics – Mechanical Design Emphasis AAS degree prepares students to be technicians specializing in translating the rough sketches, layouts, CAD designs, and written specifications of the engineer or designer into drawings and CAD databases showing the complete details and specifications for the finished product.

CERTIFICATES/DEGREES OFFERED

- Tool Design Graphics (33 weeks)
- Auto CAD (11 weeks)
- CATIA (11 weeks)
- SolidWorks (11 weeks)
- Associates of Applied Science

MACHINE TECHNOLOGY

Machine Technology AAS degree students will be well positioned to begin a career in the machine trades by gaining basic machining competencies through their work on projects along with a thorough grounding in shop theory, applied math, and a special emphasis on CAD/CAM programming and CNC machining.

CERTIFICATES/DEGREES OFFERED

- Machine Technology (44 weeks)
- Associates of Applied Science

WELDING TECHNOLOGY

The Welding Technology AAS degree provides students with skills to weld and fabricate complex projects. Students receive in-depth knowledge of the nature of metals as it relates to welding, fabricating, and the application of heat. Students also prepare to take the Washington Association of Building Officials (WABO) certification test.

CERTIFICATES/DEGREES OFFERED

- Welding Fabrication & Maintenance Technology (44 weeks)
- Associates of Applied Science




NORTH SEATTLE COLLEGE
One of the Seattle Colleges

ELECTRONICS

Electronics and associated technologies prepare students for careers in this diverse, expanding and high demand field. North's electronic curriculum is adapted on an on-going basis to reflect the ever-changing nature of the industry. The emphasis is on hands-on learning, using sophisticated test equipment unique to each discipline and providing a solid base of fundamental and current knowledge and information. Programs include Avionics, Electronics Technology, Electronics Engineering Technology, IT-Controlled Electronics, Sustainable and Conventional Energy and Control Technology, Industrial Power and Control, CAD and CATIA (Advanced Design for Manufacturing).

www.northseattle.edu
9600 College Way North
Seattle, WA 98103-3599
206-934-4532

CERTIFICATES/DEGREES OFFERED

- Avionics Electronics I: Wire Assembly Certificate (6 months)
- Avionics Electronics II: Electronics Technician (1 year)
- Electronics Technology Certificate (1 year)
- Electronics Technology - Associate of Applied Science
- Electronics Engineering Technology - Associate of Applied Science
- IT-Controlled Electronic Systems – Certificate (1 year)
- IT-Controlled Electronic Systems - Associate of Applied Science
- Sustainable and Conventional Energy and Control Technology – Certificate (1 year)
- Industrial Power and Control - Associate of Applied Science
- CAD Certificate (1 year)
- Advanced Design for Manufacturing – Certificate (6 months)




OLYMPIC COLLEGE

www.olympic.edu
1600 Chester Ave
Bremerton, WA 98337
360.475.7363

COMPOSITES MANUFACTURING TECHNOLOGY

Prepares students for entry into the field of composites; also helps prepare for other certificates and other two year degrees.

CERTIFICATES/DEGREES OFFERED

- Composites Manufacturing Technology – Certificate of Completion
- (20 weeks)
- Advanced Composites Manufacturing Technology – Certificate of Specialization (1 year)
- Engineering Technology – Associate in Applied Science – (2 years)

ELECTRONICS TECHNOLOGY

Prepares students for entry into the field of electronics technology; also helps prepare for transfer to an electronics engineering program.

CERTIFICATES/DEGREES OFFERED

- Electronics – Certificate of Proficiency (1 year)
- Electronics – Associate in Technical Arts – (2 years)




MANUFACTURING TECHNOLOGY

Prepares students for entry level positions in manufacturing and precision machining.

CERTIFICATES/DEGREES OFFERED

- Manufacturing Technology – Certificate of Completion (20-30 weeks)
- Manufacturing Technology – Certificate of Recognition (20 weeks)
- Engineering Technology – Associate of Applied Science (2 years)

TECHNICAL DESIGN

Prepare students for entry-level positions in industry as a technical designer and computer aided design operator.

CERTIFICATES/DEGREES OFFERED

- Technical Design – Certificate of Proficiency (30-36 weeks)
- Technical Design – Associate in Technical Arts (2 years)
- Engineering Technology – Associate of Applied Science (2 years)




PENINSULA COLLEGE

PENINSULA COLLEGE

www.pencol.edu
1502 E. Lauridsen Blvd
Port Angeles, WA 98362
360-417-6336

ADVANCED MANUFACTURING/COMPOSITE TECHNOLOGY

This program prepares students for the wide ranging field of composite structure, construction and repair. Additionally, this program provides training on catalyzed coating and paints, the use of CAD software, and the operation and programming of CNC machining and robotics technologies. This occupational field includes aerospace parts fabrication and repair, yacht and boat construction and repair, specialized vintage automobile parts, building construction materials, marine pier construction materials, sport-related construction and equipment, and many others.

The year of the program will focus on advanced composites technology skills especially targeted to the aerospace industry. These skills will included vacuum bagging, resin infusion, clean room techniques, the use of the autoclave, material use data entry and material resources procurement.

CERTIFICATIONS/DEGREES OFFERED

- Short Term Composites Entry Level Manufacturing Certificate
- Short Term CNC Machining and Programming Certificate
- Advanced Manufacturing - Composites Technology Advanced Materials Certificate




RENTON TECHNICAL COLLEGE

www.rtc.edu
3000 NE Fourth St
Renton, WA 98056
425-235-7863

BASIC MACHINING

This program prepares students to be manual machinists. Students learn to use conventional lathes and milling machines, as well as grinders and other equipment commonly found in manufacturing facilities. Students learn manufacturing theory and practical skills, as well as blueprint reading, math, communications, and human relations. The program lab includes many brands of machining equipment, so students will become comfortable using a variety of controls and displays.

This program articulates with Tech Prep programs through the South King County Tech Prep Consortium.

CERTIFICATES/DEGREES OFFERED

- Aerospace Assembly Mechanic (12 weeks)

COMPUTER NUMERICAL CONTROL

This two-quarter program is designed for students who have experience in machine operation, feeds and speeds, and an understanding of basic shop math. Instruction is both theoretical and practical, and includes manual and computer programming using the latest CNC/CAM software. This program is taught in a machine shop facility equipped with industrial size 3- and 4-axis vertical and horizontal milling machines and 3-axis turning center with conversational control and live tooling.

In this program, students are introduced to microcomputer hardware, the Windows operating system, the basics of Computer Numerical Control (CNC) machines, and programming CNC machines using MasterCAM software. Students also learn information literacy, hazardous material processes, and manufacturing trends.

CERTIFICATES/DEGREES OFFERED

- Computer Numerical Control (24 weeks)




RENTON TECHNICAL COLLEGE

ENGINEERING DESIGN TECHNOLOGY

This program is designed to provide entry-level skills for students seeking employment in the drafting profession as a mechanical or architectural drafter. Students receive substantial training in mechanical drafting and industrial practices using both manual (board) and CAD (Computer-Aided Drafting) techniques. Application of ANSI, ISO, and AIA standards is presented, with emphasis on standards used in the aircraft and aerospace industries. Advanced instruction in mechanical drafting, geometric dimensioning and tolerance, and flat pattern development is provided in the latter part of the program.

Students become familiar with electronic schematics, document control procedures, and pictorial drawing. Related instruction in mathematics, oral and written communications, human relations/business leadership and employment skills, and basic computer and word processing applications are also provided. Ample time is devoted to hands-on instruction throughout the program.

CERTIFICATES/DEGREES OFFERED

- Certificate
- Associate of Applied Science

PRECISION MACHINING TECHNOLOGIES

This two-year program is designed to help students acquire and develop skills necessary to work in the manufacturing industry. The course integrates theory and practical applications in a fully equipped machine shop facility. Students study machining processes and procedures, properties of metals, blueprint reading, applied math, inspection techniques, computer-aided manufacturing utilizing MasterCAM software, and the operation of Computer Numerical Control (CNC) machines. The CNC equipment includes vertical and horizontal machining centers as well as CNC lathes with live tooling. When appropriate, students may be assigned to a cooperative workstation in industry.
To earn an Associate of Applied Science Degree, the student must complete all requirements for the certificate program plus 20 credits of General Education.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion
- Associate of Applied Science




AEROSPACE MANUFACTURING CORE CERTIFICATE

Certificate in Basic Aviation Manufacturing is important in the critical and complex technical field of aviation manufacturing. The student will be introduced to valuable skills in aviation technology needed for a precision aerospace technologist. This certificate will provide a basic understanding of general aviation manufacturing procedures.

Topics covered include basic aircraft familiarization, sealing, electrical bond and ground, aircraft drawings and work instructions, assembly hand tools, precision measuring and aviation materials and processes. Other areas covered are aircraft cleaning and corrosion control. The certificate includes 9 modules of theory and practical application.

The Aerospace Manufacturing Core is the prerequisite and must be completed prior to registering for one of the specialization certificates.

The National Career Readiness Certification Plus is included as part of the Core for non-incumbent workers.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (4 weeks)
- 8.0 Credits

AEROSPACE MANUFACTURING ASSEMBLY

Certificate in Aerospace Assembly Mechanic provides advanced understanding of aviation manufacturing procedures. The certificate includes 13 modules (Mechanic Orientation, Power Island, Basic Drilling and Riveting, Advanced Fasteners, Countersinking and Flush Riveting, 90 Degree Drilling, Reaming and Permanent Fasteners, Wing Structure, Fuselage Skin, Drilling Titanium, Drilling Composite, Sealant Application, Electrical Bond and Ground Composite Manufacturing).

Graduates of this program qualify for entry-level positions as assembly mechanics performing jobs ranging from processing and fabrication to assembly.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (8 weeks)
- 18.5 Credits




RENTON TECHNICAL COLLEGE

AEROSPACE MANUFACTURING TOOLING

Students who complete this program will be able to demonstrate their knowledge of the following equipment and standards used in the manufacturing of aerospace tooling projects: the safe use of hand, power, and floor mounted tools; application of precision measuring tools; acceptable tolerance applications and general dimensioning; tooling drawing interpretations; competency with deciphering and interpretation of general dimensioning and tooling (GD&T) symbols; manufacturing and quality standards documentation; and production tooling layout. In addition, students should be able to demonstrate team-building techniques, including how the importance of working in a manufacturing team environment affects overall production and quality.

Graduates of this program qualify for entry-level positions as toolmakers.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (4 weeks)
- 17.0 Credits

AEROSPACE MANUFACTURING QUALITY ASSURANCE

The Quality Assurance Certificate curriculum provide education to students in several areas critical to the manufacturing and aerospace assembly arena in respect to quality control, quality assurance, quality team dynamics, conflict resolution, and processes and statistical process control. The student will experience actual hands-on activities such as drilling, fastener installation, wire bundle installation, torque, and geometric dimensioning and tolerance.

In addition to the skills and knowledge listed above, students will gain experience in overall quality inspection, precision measurements, manufacturing documentation, specifications and standards that are applied in the working world of manufacturing and aerospace assembly.

Graduates of this program qualify for entry-level positions as quality inspectors.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (8 weeks)
- 16.5 Credits




SHORELINE COLLEGE

Shoreline COMMUNITY COLLEGE

www.shoreline.edu
16101 Greenwood Ave North
Seattle, WA 98133
206-546-6969

CERTIFICATION IN BASIC MANUFACTURING

The Certificate in Basic Manufacturing is a 21 credit, one-quarter course of study that provides students with entry-level manufacturing skills and a foundation to pursue other certificates and two-year degrees in other manufacturing specialty areas.

CERTIFICATES/DEGREES OFFERED

- Basic Manufacturing – Certificate of Completion (11 weeks)
- NIMS Certification

CERTIFICATE OF MANUFACTURING/MACHINIST

This is an intensive program designed to prepare qualified individuals for entry into the job market as a CNC Machinist (Computer Numerical Control). Instruction covers programming and basic set-up and operation of CNC machines, blueprint reading, shop mathematics, machine tool theory, inspection, surface plate techniques, and Statistical Process Control (SPC). Students will be involved in the production and machining of industry parts. Instruction will also include the use and care of a wide variety of measuring devices used in the machining profession.

CERTIFICATES/DEGREES OFFERED

- Certificate in Principles of Precision Machining (22 weeks)
- Certificate of Proficiency (33 weeks)
- NIMS Certifications (Materials Safety & Measurement, CNC Mill Operator, CNC Lathe Operator)




SHORELINE COLLEGE

PRINCIPLES OF PRECISION MACHINING

This is an intensive program designed to prepare qualified individuals for entry into the job market as a CNC Machinist (Computer Numerical Control). Instruction covers programming and basic set up and operation of CNC machines, blueprint reading, shop mathematics, machine tool theory, inspection, surface plate techniques, and Statistical Process Control (SPC). Students will be involved in the production and machining of industry parts. Instruction will also include the use and care of a wide variety of measuring devices used in the machining profession.

CERTIFICATES/DEGREES OFFERED

- Certificate in Principles of Precision Machining (22 weeks)
- NIMS Certification

MACHINING TECHNOLOGY

This is an intensive program designed to prepare qualified individuals for entry into the job market as a CNC Technician (Computer Numerical Control). Instruction covers basic set up and operation of CNC machines, blueprint reading, shop mathematics, machine tool theory, inspection, surface plate techniques, and Statistical Process Control (SPC). Specialist courses include Computer Aided Manufacturing (CAM), Computer Numerical Control Programming (CNC), Preventive Maintenance, Machine Motive Maintenance, Quality Assurance I and Quality Assurance II. Students will be involved in the production and machining of industry parts. Instruction will also include the use and care of a wide variety of measuring devices used in the machining profession.

CERTIFICATES/DEGREES OFFERED

- Associate of Applied Arts & Sciences – Machining Technology
- Certificate in Principles of Precision Machining (22 weeks)
- Certificate of Completion (33 weeks)
- NIMS Certifications (Materials Safety & Measurement, CNC Mill Operator, CNC Lathe Operator




Skagit Valley College
Where Learning Comes to Life

www.skagit.edu
2405 E College Way
Mount Vernon, WA 98273
Or
1606 R Avenue
Anacortes, WA 98221
360-766-6282

MARINE MAINTENANCE TECHNOLOGY

The Marine Maintenance Technology (MT) program prepares students for marine trades employment in three major program areas: marine composites, marine propulsion, and marine vessel systems. MT offers a one-year certificate, which serves as the core for the two-year ATA degree. Marine manufacturing and repair-refit companies in recreational, military, commercial and seafood processing sectors are driving demand for skilled marine technicians. In response to this demand, Skagit Valley College is a charter member of the Marine League of Schools, a national consortium of marine technology educators providing standards-based, and leading edge training meeting industry standards. Through onsite testing, students will work toward earning nationally recognized credentials with: American Boat & Yacht Council, national Marine electronics Association and the American Composites Manufacturers Association.

CERTIFICATES/DEGREES OFFERED

- Marine Technician Certificate
- Marine Maintenance Technology – ATA Degree




SKAGIT VALLEY COLLEGE

COMPOSITES TECHNOLOGY

Composite manufacturing and repair has evolved into a diverse industry and can be found in the marine, aerospace, automotive, high impact sports equipment, construction, energy, consumer goods and medical device industries; creating a growing well of opportunity for talented technicians. The Composites program at Skagit Valley College is designed to provide a comprehensive education for the next generation of composite technicians. Advanced technologies in materials and production processes ensure that modern composite manufacturing and repair is safer for the employee and the environment. The technical skill competencies required to meet the demands of new and emerging applications will continue to grow, further emphasizing the importance of training and certification. Students will work toward an industry recognized certification from the American Composites Manufacturers Association (ACMA).

CERTIFICATES/DEGREES OFFERED

- Composites Repair Technician Certificate – 3 qtrs.
- Advanced Composites Manufacturing Technician Certificate – 3 qtrs.




SOUTH PUGET SOUND COMMUNITY COLLEGE

South Puget Sound
COMMUNITY COLLEGE

www.spscc.edu
2011 Mottman Road SW
Olympia, WA 98512-6292
360-596-5253

COMPUTER AIDED DRAFTING & DESIGN

The Program is designed to meet entry-level employment requirements for Computer Aided Drafting (CAD) and Building Information Modeling (BIM) related occupations. Students will have access to industry standard hardware, software applications and a broad range of skill building projects in Architectural, Civil, Mechanical and BIM drafting technologies. In addition, students may elect a Certificate of Completion in a specific area of concentration to meet their personal needs or occupational requirements.

CERTIFICATES/DEGREES OFFERED

- Architectural Certificate
- Civil Certificate
- Building Information Modeling (BIM) Certificate
- Mechanical Certificate
- Associate of Applied Science – Computer Aided Drafting Technology

BUILDING INFORMATION MODELING

Building Information Modeling (BIM) is the process of generating and managing building data during its life cycle. Typically it uses three-dimensional, real-time, dynamic building modeling software to increase productivity in building design and construction. The process produces the Building Information Model (also abbreviated BIM), which encompasses building geometry, spatial relationships, geographic information, and quantities and properties of building components.

CERTIFICATES/DEGREES OFFERED

- Building Information Modeling (BIM) Certificate
- Associate of Applied Science - CAD




SOUTH PUGET SOUND COMMUNITY COLLEGE

MECHANICAL DRAFTING

The program offers advanced applications in 3D solid modeling utilizing industry standard hardware and software. Includes part modeling, assembly modeling, working and assembly drawing related to a variety of mechanical and sheet metal parts. Dimension and constraint driven designs, advanced editing and automated orthographic solutions. Creation of A.V.I. files allowing motion driven assembly drawings.

CERTIFICATES/DEGREES OFFERED

- Mechanical Drafting Certificate
- Associate of Applied Science – Computer Aided Drafting




SOUTH SEATTLE COLLEGE

One of the Seattle Colleges

www.southseattle.edu
6000 16th Ave SW
Seattle, WA 98006
206-934-5300

AVIATION

Student technicians are trained in an industry-like setting on our main campus and in a hangar facility at King County Airport (Boeing Field). Students learn how to keep aircraft in peak operating condition by performing maintenance and inspections required by the Federal Aviation Administration (FAA). Our classes consist of a hands-on approach and focus on experiential learning. Their small size ensures personalized one-on-one education from our experienced instructors.

The Aviation Maintenance certificates program offers a preparatory program in airframe and powerplant (A&P) mechanics. The two-year (8 quarters) curriculum provides training on current aviation airframes and powerplants.

Students who successfully complete the curriculum are awarded a certificate of completion qualifying them to take the Federal Aviation Administration examination for the airframe and powerplant mechanic license. Either the airframe or the powerplant component may be taken separately. Completion of both components is highly recommended for increased employment opportunities.

The aviation maintenance airframe and powerplant curriculum is approved by the F.A.A. (Air Agency Certificate #HQ6T596N).

CERTIFICATES/DEGREES OFFERED

- Airframe Mechanic Certificate
- Power Plant Mechanic Certificate
- Associate of Applied Science – Aeronautical Technology
- Associate of Applied Science – Transfer Aeronautical Technology




SOUTH SEATTLE COLLEGE

COMPUTER AIDED DRAFTING & DESIGN

This program provides training for employment in civil, architectural, and mechanical drafting positions. Instruction includes a combination of technical knowledge and skill development in areas such as orthographic projection, descriptive geometry, sections, dimensions, auxiliaries, materials and processes, presentation graphics, design models, and surveying, culminating in a comprehensive design/drafting project. Training in Computer-Aided Design (CAD) is an integral part of the program.

CERTIFICATES/DEGREES OFFERED

- Computer Aided Drafting (3 quarters)
- Associate of Applied Science
- Associate of Applied Science - Transfer

AEROSPACE COMPOSITE TECHNICIAN

This program consists of two short-term training (STT) certificates. The General Aviation SST certificate provides foundational instruction in the field of aviation maintenance. The Composite Aviation SST certificate prepares technicians to fabricate, assemble and repair composite materials on aircraft at an entry level.

CERTIFICATES/DEGREES OFFERED

- General Aviation Short Term Training Certificate
- Composites Aviation Short Term Training Certificate




SPOKANE COMMUNITY COLLEGE

Community Colleges of Spokane

Spokane Community College
Spokane Falls Community College

www.scc.spokane.edu
1810 N Greene St
Spokane, WA 99217
509-533-7000
800-248-5644

AVIATION MAINTENANCE TECHNOLOGY

Spokane Community College's Aviation Maintenance Program prepares students to be entry-level technicians in the aviation industry.

Students learn basics of electricity, hydraulics, air conditioning, and other aircraft systems. They also gain a well-rounded education working with a variety of aircraft, including a Beechcraft King Air, a Piper Cherokee, Cessna 150, 310, 337, and 421 and a turbine-powered North American T-39A Sabreliner.

CERTIFICATES/DEGREES OFFERED

- General Aircraft Maintenance Certificate
- Airframe Maintenance Certificate
- Powerplant Maintenance Certificate
- Associate of Applied Science

COMPUTER AIDED DESIGN & DRAFTING (CAD)

The CAD certificate program prepares students with the skills necessary for drafting and design using both CAD drafting and Solid Modeling techniques.
Students learn correct drafting and computer techniques and apply their knowledge to develop CAD skills in several areas: including mechanical, architectural, structural, electronics, and fluid power drafting.

CERTIFICATES/DEGREES OFFERED

- Associate of Applied Science




SPOKANE COMMUNITY COLLEGE

ELECTRONICS ENGINEERING TECHNICIAN

The graduate of SCC's Electronics Engineering Program earns an associate in an applied science (A.A.S.) degree with a special emphasis on one of five areas.

1. Avionics
2. Biomedical Equipment
3. Communications
4. Computer Service
5. Manufacturing

State-of-the art concepts are taught, as well as practical laboratory techniques which provide the circuit analysis skills necessary for electronic technicians.

CERTIFICATES/DEGREES OFFERED

- Associate of Applied Science

HYDRAULIC & PNEUMATIC AUTOMATION TECHNOLOGY

Students learn about individual hydraulic and pneumatic components, the application and proper installation of each, preventative maintenance procedures and potential service problems. Read and understand hydraulic and pneumatic schematics as they relate to machine operation. Have hands-on experience in hydraulic systems including fluid line layout and installation. Read and interpret electrical schematics as they relate to machine sequence of operation. Working knowledge of the use of electrical control to sequence solenoid valves and control machine functions.

CERTIFICATES/DEGREES OFFERED

- Associate of Applied Science

CAD DRAFTING & MECHANICAL DESIGN

A comprehensive, well-balanced study of applied sciences and computer aided drafting as they relate to mechanical engineering.

CERTIFICATES/DEGREES OFFERED

- Associate of Applied Science

MACHINIST/CNC TECHNOLOGY

Computer numerical control (CNC) machinists use computers to run high-tech equipment that makes tools, dies and machine parts necessary for manufacturing. CNC skills are in demand throughout Spokane and the USA.

Students learn blueprint reading, shop mathematics, machine tool theory, inspection, statistical process control (SPC), Quality Assurance (QA) and CNC programming using state of the art software.

CERTIFICATES/DEGREES OFFERED

- Associate of Applied Science




WENATCHEE VALLEY COLLEGE

www.wvc.edu
1300 Fifth Street
Wenatchee, WA 98801
509-682-6847
509-682-6636

INDUSTRIAL TECHNOLOGY - ELECTRONICS

The industrial technology – electronics associate of technical science (ATS) program provides training for electronics technicians and maintenance electricians within industrial facilities such as manufacturing plants, wood processing plants, agricultural food storage and processing warehouses, and power generation facilities. It also provides advanced-level training and skill improvement for plant electricians and other employees seeking to improve their work classification within their company on modern electronic circuits, programmable logic controllers (PLCs) and control systems.

CERTIFICATES/DEGREES OFFERED

- Industrial Technology – Drafting Technology (20 weeks)
- Industrial Technology – Welding & Fabrication (20 weeks)
- Associate of Technical Science

DIGITAL DESIGN

Developed in concert with local and regional advisers, the digital design program combines industrial technology and art to create a training program for students interested in careers in advanced manufacturing and entertainment design. The program also provides students with technical and transfer options. Digital design provides students with a strong fine art and technical foundation in both 2D and 3D design. With an emphasis on computer graphics with multiple software platforms, graduates will be equipped for entry-level positions in entertainment design and for visualization positions in architecture, engineering and medical fields.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion (65 credits)




WENATCHEE VALLEY COLLEGE

INDUSTRIAL TECHNOLOGY – AEROSPACE ELECTRONICS

The Aerospace Electronics programs provide a broad foundation in electronics training. Instruction emphasizes a hands-on approach, use of sophisticated test equipment, and a solid base of information concerning the hardware and software of control systems for technical applications. These programs offer preparation for multiple nationally recognized industry certifications that may lead directly to employment and opportunities for future advancements with companies specializing in manufacturing or servicing all types of electronic equipment, including manufacturing and servicing of aerospace electronics.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion- Aerospace Electronics Technician
- Associate of Technical Science–Industrial Technology–Aerospace Electronics

INDUSTRIAL TECHNOLOGY – MACHINING

The machining program will provide students with fundamental machining skills and experiences using current machining technologies and techniques. A graduate of the program will be prepared for entry into the machining industry as a conventional (manual) or CNC (Computer Numerical Control) machinist. Instruction covers conventional turning, milling and grinding, as well as basic programming, set up and operation of CNC machine tools. Other subjects include shop safety, reading engineering drawings, shop mathematics, etc. In addition, students will be required to complete a job shadowing experience and a program culmination capstone project.

CERTIFICATES/DEGREES OFFERED

- Certificate of Completion – Conventional (Manual) Machining – 1 year
- Associate of Technical Science – Industrial Technology – Machining




YAKIMA VALLEY COMMUNITY COLLEGE

AEROSPACE MACHINING TECHNOLOGY

Yakima Valley Community College Aerospace Machining Technology degree and certificates prepare students for entry-level positions in the manufacturing industry. Students learn the skills required to plan and carry out the operations needed to make aerospace machined products that meet precise specifications. Course instruction covers blueprint reading, manual machining, computerized machining, metrology, quality control, engineering drawing, Computer Aided Design & Drafting (CADD) and Computer Aided Manufacturing (CAM) software, as well as Coordinate Measuring Machine (CMM) programming.

www.yvcc.edu
South 16th Ave. & Nob Hill Blvd.
P.O. Box 22520
Yakima, WA 98907-2520
Mike Melton 509-574-6810
mmelton@yvcc.edu

CERTIFICATES OFFERED

- Computer Numerically Controlled (CNC) Operator Certificate
- Certificate in Machining Technology

DEGREE OFFERED

- AAS-Aerospace Machining Technology




AEROSPACE AND ADVANCED MATERIALS MANUFACTURING PIPELINE ADVISORY COMMITTEE

The Pipeline Committee further supports the development of driving aerospace work in Washington. View the supporting documentation. In 2012, Governor Christine Gregoire through SSHB 2156 established the Aerospace and Advanced Materials Manufacturing Pipeline Advisory Committee to study the skills gap in aerospace workers production. As part of the Pipeline Committee responsibilities the SBCTC will survey employees in collaboration with the Workforce Training and Education Coordinating Board and plan strategies to close the gap.
http://www.sbctc.ctc.edu/college/_e-workforce-aerospace.aspx

AIR WASHINGTON

Air Washington is a $20 million Department of Labor grant dedicated to expanding and strengthening the aerospace industry in Washington. Center of Excellence was instrumental in the solicitation and receipt of this grant. The primary goal of the grant was to develop a skilled labor force including training for 2,600 individuals by September 2014. Learn more at Air Washington.
http://www.airwashington.org

CTE ADVISORY COUNCILS

Career and Technical Education (CTE) are courses for high school students to receive hands-on training and college credit while in high school. CTE training covers a broad spectrum of programs statewide. There are

Advisory Councils statewide consisting of CTE Directors for school districts, community and business members, and CTE teachers. Learn more about this affiliation.

PNAA, PACIFIC NORTHWEST AEROSPACE ALLIANCE

PNAA promotes the growth of the Pacific Northwest Aerospace Industry. They assist members to be globally competitive through education, access to business opportunities, information on emerging markets and facilitation of key relationships.
http://www.pnaa.net

AUVSI, ASSOCIATION FOR UNMANNED VEHICLE SYSTEMS INTERNATIONAL: CASCADE CHAPTER

The Cascade Chapter is the branch of the Association for Unmanned Vehicle Systems International representing the states of Oregon and Washington. The northwest Chapter of AUVSI aims to provide an organization for individuals who have a common interest in Unmanned Vehicle Systems, and who wish to foster and expand the domain of Unmanned Vehicle Systems. The organization also works to advance technology, exchange ideas and information, promote education in the field of interest, and document the history or Unmanned Vehicle Systems.
http://cascade.auvsi.org/home

INWAC

The Inland Northwest Aerospace Consortium (INWAC) is uniquely focused on providing business development services for companies pursuing aerospace opportunities in the Inland Northwest. The organization is represented by a core membership composed primarily of contract manufacturers possessing AS 9100 and/or NADCAP certification. If you are interested in learning more about how your business might benefit from involvement or membership, please contact us.
http://inwac.org/about/

CENTER FOR ADVANCED MANUFACTURING IN THE PUGET SOUND: CAMPS

CAMPS is a resource center bringing together manufacturers, supply chain partners, pre-qualified business development specialists, and strategic partners as an Advanced Manufacturing Consortium. CAMPS works to provide the connections to establish business relationships among members, share in a culture of innovation, and create supply chain development opportunities in emerging industries, technologies, and processes.
http://www.camps-us.com

USA AEROSPACE DIRECTORY

The USA Aerospace Directory formerly called the Washington State Aerospace Directory provides a platform where organizations can showcase quality products and services produced and used by the aerospace industry.
http://www.usaaerospacedirectory.com

LABOR ORGANIZATIONS

International Machinists Union – IAM 751
http://iam751.org
Department of Labor and Industries
http://lni.wa.gov
Washington State Labor Council – AFL CIO
http://wslc.org

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