



PROGRAM OF STUDY



Career Cluster: Architecture and Construction

Career Cluster Pathway: Operation and Maintenance

This Career Pathway Program of Study can serve as a guide along with other career planning materials as learners continue on a career path. Courses listed within this program are only recommended coursework and should be individualized to meet each learner's education and career goals. **Note:** Many items have links to external resources with more information.

REQUIRED CREDITS	GRADE	English/ Language Arts (4.0 credits)	Social Studies (2.5 credits)	Math (2.0 credits)*	Science (2.0 credits)	Fine Arts (1.0 credits)	Health/ Fitness (2.5 credits)**	Electives (6.5 credits)	Related Career & Technical/ Occupational (1.0 credits) Certificate and Tech Prep (notation on HS and TP alignment)	SAMPLE Occupations Relating To This Pathway (*indicates job in high demand) (⦿ indicates a "green" job)	
SECONDARY SAMPLE COURSE OFFERINGS	9	English 1 or Honors English 1	Pacific Northwest History (.5)	Algebra I Geometry <i>*Class of 2013 (add't 1.0 credit)</i>	Integrated Science or Adv Int Science		Health (.5)		<u>ASD CTE COURSE OPTIONS</u> Wood Technology I Wood Technology II Industrial Engineering Work Based Learning CTE Grad Project	<u>Little or No Preparation</u> <ul style="list-style-type: none">• Construction Laborers• Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters• Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons*• Septic Tank Servicers and Sewer Pipe Cleaners	
	10	English 2 or Honors English 2	US History	<u>or</u> Algebra II <u>or</u>	Biology <u>or</u> AP Biology <u>or</u> Biotechnology <u>or</u> Horticulture <u>or</u> Natural Resources I			Elective courses (6.5) and	<u>LEADERSHIP</u> Skills USA	<u>Some Preparation</u> <ul style="list-style-type: none">• Fence Erectors• Glaziers*• Hazardous Materials Removal Workers• Helpers--Carpenters• Helpers--Electricians• Helpers--Installation, Maintenance, and Repair Workers• Highway Maintenance Workers• Mechanical Door Repairers• Meter Readers, Utilities• Painters, Construction and Maintenance• Paperhangers• Paving, Surfacing, and Tamping Equipment Operators• Pile-Driver Operators• Residential Air Sealing Technician• Telecommunications Line Installers and Repairers• Water Purification Systems Technician	
	11	English Electives or Business English	World History <u>or</u> Economics <u>or</u> Economics II	Pre-Calculus <u>or</u> Calculus <u>or</u>		Credits from Art Courses or CTE Equivalent		Credits from Health and Fitness Courses	Project Me and	Wood Technology II – Grays Harbor College (5cr.) Industrial Engineering – Bates (7.5cr.)	
	12	English Electives or Business English	World History <u>or</u> Economics <u>or</u> Economics II <u>and</u> CWP	CTE Equivalent (Students must pass a math competency test or have four years of math credits.)	Science Electives			**Successfully completing two years of physical education and one semester of health is required for high school graduation.	Other CAA requirements <u>CERTIFICATION</u> Work Readiness Credential		

<p>Technical Certification (instruction provided through certified training and/or testing centers)</p>	<p>Apprenticeship Opportunities</p>	<p>2-yr or ATA Degree (Find specific colleges at www.checkoutcollege.com)</p>	<p>4 –yr Degree or Advanced Training</p>	<p>Medium Preparation</p>
<p>Various branches of the military offer training opportunities. Visit Helmetts to Hardhats to learn more about transition programs.</p> <p><u>Appliance Installation and Repair Technology/Technician</u></p> <ul style="list-style-type: none"> Bellingham Technical College Renton Technical College <p><u>Building/Property Maintenance and Management</u></p> <ul style="list-style-type: none"> Bates Technical College Bellingham Technical College Grays Harbor College Walla Walla Community College <p><u>Cabinetmaking and Millwork/Millwright</u></p> <ul style="list-style-type: none"> Bates Technical College <p><u>Carpentry</u></p> <ul style="list-style-type: none"> Bates Technical College Grays Harbor College Green River Community College Peninsula College Spokane Community College Walla Walla Community College Wenatchee Valley College <p><u>Cranes & Riggers</u></p> <ul style="list-style-type: none"> West Coast Training <p><u>Communications Systems Installation and Repair Technology</u></p> <ul style="list-style-type: none"> Bates Technical College <p><u>Construction/Building Tech./Technician</u></p> <ul style="list-style-type: none"> Edmonds Community College Lower Columbia College 	<p>To learn more about Apprenticeship, visit Labor and Industries website or the Washington Building Trades.</p> <p>Follow these steps to learn about the specific apprenticeships available in this pathway:</p> <p>STEP 1: Link to Apprenticeship Registration and Tracking System</p> <p>STEP 2: Search by using key words below or the SOC code listed</p> <ul style="list-style-type: none"> Burglar Alarm Tech (49-2098) Maintenance Electrician (49-2097; 49-9012; 49-9051) Electronic Systems Technician (49-2022) Limited Energy (43-5032; 49-2098; 49-2022) Environmental Systems Control Worker (49-9098) Facilities Custodial (37-2011) Hoisting Engineer (53-7040) HVAC Service Technician (49-9021) Maintenance Pipefitter/Welder (47-2152) Maintenance Sheet Metal Worker/Welder (47-2211) Millwright (49-9044) Refrigeration Mechanic (49-2092; 49-9021) Sealant Applicator (51-9199) Sound & Communication Technician (49-2022) Stationary Engineer (51-8021) Telecommunications Technician (49-2022) Telephone Interconnect Technician (49-2022) Telephone Installer (49-9052) <p>STEP 3: Click “View” and scroll down to find contact name and program standards for qualifications and how to apply</p>	<p><u>Building/Property Maintenance and Management</u></p> <ul style="list-style-type: none"> Bates Technical College Bellingham Technical College <p><u>Cabinetmaking and Millwork/Millwright</u></p> <ul style="list-style-type: none"> Seattle Community College-Central Campus <p><u>Carpentry</u></p> <ul style="list-style-type: none"> Bates Technical College Grays Harbor College Green River Community College Seattle Community College-Central Campus Spokane Community College Walla Walla Community College <p><u>Communications Systems Installation and Repair Technology</u></p> <ul style="list-style-type: none"> Bates Technical College <p><u>Computer Aided Drafting Technology</u></p> <ul style="list-style-type: none"> South Puget Sound CC and various others <p><u>Construction Engineer/Tech</u></p> <ul style="list-style-type: none"> Clark College Edmonds Community College Lower Columbia College Spokane Community College <p><u>Construction Management</u></p> <ul style="list-style-type: none"> Bates Technical College Bellingham Technical College <p><u>Electrician</u></p> <ul style="list-style-type: none"> Bates Technical College Bellingham Technical College Big Bend Community College 	<p><u>Construction/Building Tech./Technician</u></p> <ul style="list-style-type: none"> Central Washington University Washington State University <p><u>CTE Secondary Education Teacher</u></p> <ul style="list-style-type: none"> Education Degree in a CTE program area with 2000 hours of related work experience Industry Route Certificate requires 6000 hours of work experience in the field and completion of a state approved CTE Preparation Program along with passage of Basic Skills Math and English 	<ul style="list-style-type: none"> Cabinetmakers and Bench Carpenters Construction and Building Inspectors Control and Valve Installers and Repairers, Except Mechanical Door Electrical Power-Line Installers and Repairers HVAC Installer/Repairer Electricians Green Building Maintenance (Insulation, HVAC, Carpenter, Plumber and Pipefitter, Welder, Machinist, Roofing and Skylight Installer)Home Appliance Repair Maintenance and Repair Workers, General Security and Fire Alarm Systems Installers Stationary Engineers and Boiler Operators Telecommunications Equipment Installers and Repairers, Except Line Installers <p><u>Considerable Preparation</u></p> <ul style="list-style-type: none"> CTE Teacher

*Data acquired from www.workforceexplorer.com, www.careerclusters.org, and www.edf.org/cagreenjobs

Technical Certification <i>(instruction provided through certified training and/or testing centers)</i>	Apprenticeship Opportunities	2-yr or ATA Degree	4 –yr Degree or Advanced Training
<p>Construction Trades</p> <ul style="list-style-type: none"> • Renton Technical College • Skagit Valley College • Seattle Vocational Institute • Bates Technical College • Northwest Indian College • Northwest Indian College • Seattle Vocational Institute <p>Heating/AC/Ventilation/Refrig Maint Technology/Technician</p> <ul style="list-style-type: none"> • Bates Technical College • Hvac Training School • Northwest HVAC/R Training Center • Perry Technical Institute • Renton Technical College • Seattle Community College-North Campus • Walla Walla Community College 	<p>WASHINGTON BUILDING TRADES</p> <p>Carpenters www.carpenterspnwrc.org</p> <p>Electricians www.psejadc.org www.jatc112.org www.nwejadtc.org</p> <p>Elevator constructors www.iueclocal19.homestead.com www.iuec.org</p> <p>Iron Workers www.local86.org www.ironworkers.org</p> <p>Laborers www.nwlaborerstraining.org</p> <p>Lineman www.northwestlinejadtc.org</p> <p>Marine Electrical www.ibew46.org</p> <p>Operating Engineers www.oetraining.com</p> <p>Painters, Tapers, Drywall Finishers, Glazers, Floor coverers www.apprenticeship.net</p> <p>Plumbers and Pipe fitters www.seattlepipetrades.org</p> <p>Sheet Metal www.smtt.org www.wwsmjadc.org</p>	<p>Heating/AC/Ventilation/Refrig Maint Technology/Technician</p> <ul style="list-style-type: none"> • Bates Technical College • Bellingham Technical College • Clover Park Technical College • Seattle Community College-North Campus • Spokane Community College • Walla Walla Community College • Wenatchee Valley College <p>Mechanic and Repair Technologies/Technicians</p> <ul style="list-style-type: none"> • Shoreline Community College <p>Welding</p> <ul style="list-style-type: none"> • South Puget Sound CC and various others 	

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Adapted from <http://www.nthurston.k12.wa.us/education/components/scrapbook/default.php?sectiondetailid=34988>

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