

# Riverview School District Program of Study

## Career Cluster Pathway: Manufacturing and Fabrication

This program of study should serve as a partner to our registration guide, and help learners clearly define their career and college readiness pathways. Courses listed within this program of study are recommended only, and should be individualized to meet each learner's education and career and college goals.

LEVEL	GRADE	English/ Language Arts (4.0 credits)	Social Studies (3.0 credits)	Math (3.0 credits)	Science (2.0 credits)	Visual or Performing Arts (1.0 credits)	Health/ Fitness (2.0 credits) Health = .5 PE = 1.5	World Language (2.0 credits)	Career & Technical or Occupational Education (1.5 credits)
Visit the OSPJ website or Washington Student Achievement Council for more information on state graduation requirements. <b>Note:</b> Riverview School District offers a Personalized Pathway. See the Registration Guide and contact your school counselor.									
SECONDARY GRADUATION REQUIREMENTS	7	Language Arts	Social Studies	Math or Algebra I	Science	Elective	PE	NA	7 <sup>th</sup> Tech/Engineering
	8	Language Arts	Washington State History	Math, Algebra I, Geometry	Science	Elective	PE	NA	8 <sup>th</sup> Tech/Engineering
	9	English 9 Honors English 9	None	Algebra I Algebra II Geometry	Physical Science Honors Physical Science Agriscience A and B	<b>Recommend:</b> Public Speaking Yearbook  2 Credits from Visual and Performing Arts Courses <b>or</b> Occ. Ed. Equivalent	One Semester Health <b>and</b> One Semester Physical Ed	Elective or Spanish 1 French 1	IT Academy Manufact & Fab 1 Small Engine Repair FFA, FIRST Robotics
	10	English 10 Honors English 10	<b>Required:</b> Modern World History and Geography or Honors Modern World History and Geography	Geometry Algebra II Pre-Calculus Honors Pre-Calculus, AP Calculus	Agriscience A and B Biology Honors Biology		World Lang. Spanish 1 or 2 French 1 or 2	Manufacturing & Fabrication 2 Small Engine Repair FFA, FIRST Robotics	
	11	English 11 Honors English 11 AP Language and Composition	<b>Required:</b> US History and Government or AP US History  <b>Electives for 11<sup>th</sup> &amp; 12<sup>th</sup> Grades:</b> Law and Business Ethics 1 & 2, Economics, Global Issues, Psychology	Algebra II Pre-Calculus Honors Pre-Calculus, AP Calculus, AP Statistics, Accounting, Financial Planning, Business Math, AP Computer Science	<b>Choose:</b> Agriscience A and B, Animal Science 1 and 2, Horticulture 1 and 2, AP Biology, Anatomy and Physiology, Chemistry, AP Chemistry, Physics, AP Physics, AP Computer Science		<b>One Semester of the following:</b> Sports Medicine 1 and 2, Sports Medicine Lab, Advanced Health, Aerobic Fitness, Walk Fit, Strength and Conditioning, Team Sports	Manufacturing & Fabrication 3 Small Engine Repair Architecture & Engr Design I STEM Guitar Building <b>Future Proposal</b>  FFA, FIRST Robotics	
	12	English 12 Honors English 12 AP Language and Composition	<b>Required:</b> Civics or AP US Gov. and Politics  <b>See Electives Available Above for 12<sup>th</sup> grade required .5 credit</b>	<b>Choose:</b> Algebra II Pre-Calculus Honors Pre-Calculus, AP Calculus, AP Statistics, Accounting, Financial Planning, Business Math, AP Computer Science	<b>Choose:</b> Agriscience A and B, Animal Science 1 and 2, Horticulture 1 and 2, AP Biology, Anatomy and Physiology, Chemistry, AP Chemistry, Physics, AP Physics, AP Computer Science		World Lang. Spanish 2 French 2	Manufact & Fab 4 Small Engine Repair Residential Carpentry <b>Future Proposal</b> Architecture & Engr Design II  FFA, FIRST Robotics	

<b>Technical Certification</b> <i>(Instruction provided through certified training and/or testing centers)</i>	<b>Apprenticeship Opportunities</b> <i>(To learn more about Apprenticeship, visit <a href="#">Labor and Industries</a> website.)</i>	<b>2-yr Degree or Certification</b> <i>(Find specific colleges at <a href="http://www.checkoutcollege.com">www.checkoutcollege.com</a>)</i>	<b>4 –yr Degree or Adv Training</b> <i>(Find specific colleges at <a href="#">Washington Student Achievement Council</a>)</i>	<b>Some Preparation</b>	<b>Medium Prep (cont.)</b>
<p><b><u>Dental Laboratory Technology</u></b></p> <ul style="list-style-type: none"> <li>Bates Technical College</li> </ul> <p><b><u>Machine Tool Technology/Machinist</u></b></p> <p>Bates Technical College</p> <p>Bellingham Technical College Green River Community College Lower Columbia College</p> <p>Perry Technical Institute</p> <p>Renton Technical College Shoreline Community College Spokane Community College</p> <p><b><u>Manufacturing Technology</u></b></p> <p>Bates Technical College</p> <p>Lower Columbia College</p> <p>Spokane Community College</p> <p><b><u>Optometric/Ophthalmic Technician</u></b></p> <ul style="list-style-type: none"> <li>Pima Medical Institute</li> <li>Spokane Community College</li> </ul>	<p>Follow these steps to learn about the specific apprenticeships available in this pathway:</p> <p><b>STEP 1:</b> Link to <a href="#">Apprenticeship Registration and Tracking System</a></p> <p><b>STEP 2:</b> Search by “Occupation” using key words below or the SOC code listed</p> <p>Assembly Machinist (51-2031) Electronics Technician (17-3023) Engineer Technician (17-3027) Estimator (17-2071) Industrial Instrument Technician (17-3023) Industrial Predictive/Preventive Mechanic (49-9041) Jig and Fixture Tool Maker (51-4111) Model Maker (51-7031) Moldmaker (51-9041) Saw &amp; Knife Maker (51-4041) Soft Tooler (51-4061) Technical Engineer (17-1022) Tool and Cutter Grinder (51-4194) Tool and Die Maker (51-4111)</p> <p><b>STEP 3:</b> Click “View” and scroll down to find contact name and program standards for qualifications and how to apply</p>	<p><b><u>Civil Engineering Technology</u></b> Various technical and community colleges</p> <p><b><u>Computerized Numerical Control Mfg</u></b> Lower Columbia College Renton Technical College</p> <p><b><u>Construction Engineer/Tech</u></b> Clark College Edmonds Community College Lower Columbia College Spokane Community College</p> <p><b><u>Dental Laboratory Technology</u></b> Bates Technical College</p> <p><b><u>Electro-Mechanic Tech</u></b> Spokane Community College</p> <p><b><u>Industrial Mfg Technology</u></b> Everett Community College Lake Washington Technical College Lower Columbia Community College Olympic Community College Renton Technical College Shoreline Community College</p> <p><b><u>Machine Tool Technology/Machinist</u></b> Bates Technical College Bellingham Technical College Clark College Clover Park Technical College Columbia Basin College Everett Community College Green River Community College Lake Washington Technical College Lower Columbia College Renton Technical College South Seattle Community College Shoreline Community College Spokane Community College Walla Walla Community College</p> <p><b><u>Optometric/Ophthalmic Technician</u></b> Spokane Community College</p> <p><b><u>Orthotics/Prosthetics</u></b> Spokane Falls Community College</p>	<p><b><u>Construction Engineering Tech</u></b> Central Washington University Washington State University</p> <p><b><u>Engineering/Industrial Management</u></b> Washington State University</p> <p><b><u>Industrial Production Technologies</u></b> Central Washington University Walla Walla College Western Washington University</p> <p><b><u>Mechanical Engineering</u></b> Central Washington University Eastern Washington University Henry Cogswell College Walla Walla College</p> <p><b><u>Manufacturing Technology</u></b> Western Washington University</p> <p><b><u>Orthotics/Prosthetics</u></b> University of Washington</p> <p><b><u>CTE Secondary Education Teacher</u></b> 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</p>	<p><b><u>Some Preparation</u></b></p> <ul style="list-style-type: none"> <li>Dental Laboratory Technicians</li> <li>Geothermal Engineering Intern</li> <li>Manufacturing Technician</li> <li>Ophthalmic Laboratory Technicians</li> <li>Solar Fabrication Technician</li> <li>Wind Turbine Engineering Intern</li> </ul> <p><b><u>Medium Preparation</u></b></p> <ul style="list-style-type: none"> <li>Battery Manufacturing Technician</li> <li>Battery Testing Technician</li> <li>Biofuel Plant Field Technician</li> <li>Civil Engineering Technicians*</li> <li>Electric Vehicle Electrician</li> <li>Electro-Mechanical Technicians</li> <li>Electro-Mechanical Technicians</li> <li>Geothermal Heat Pump Machinist</li> <li>Geothermal Sheet Metal Worker</li> <li>Hydro-Electric Component Machinist</li> <li>Hydro-Electric Construction Sheet Metal Worker</li> <li>Industrial Engineering Technicians</li> <li>Machinists</li> <li>Manufacturing Technician</li> <li>Mechanical Engineering Technicians*</li> <li>Medical Appliance Technicians</li> <li>Numerical Tool and Process Control Programmers Labor Relations Manager</li> <li>Power Generating and Reactor, Plant Operator</li> <li>Precision Inspector, Tester and Grader Process Improvement Technician</li> </ul>	<p><b><u>Medium Prep (cont.)</u></b></p> <ul style="list-style-type: none"> <li>Purchasing Agents, Except Wholesale, Retail, and Farm Products</li> <li>Solar Hot Water Heater</li> <li>Solar Lab Technician</li> <li>Wind Turbine Machinist</li> <li>Wind Turbine Sheet Metal Worker</li> </ul> <p><b><u>Considerable Preparation</u></b></p> <ul style="list-style-type: none"> <li>Automotive Power Electronics Engineer</li> <li>Battery Design Engineer</li> <li>Biodiesel/Biofuel Technology &amp; Product Development Manager</li> <li>CTE Teacher</li> <li>Design Engineer</li> <li>Electronics Engineer</li> <li>Geothermal Electrical Engineer</li> <li>Hybrid Powertrain Development Engineer</li> <li>Industrial Engineer</li> <li>Landfill Gas to Energy Installation, Operations, Engineering &amp; Management</li> <li>Manufacturing Engineer</li> <li>Powertrain Control Systems &amp; Software Engineer</li> <li>Wind Farm Electrical Systems Designer</li> <li>Wind Turbine Electrical Engineer</li> <li>Wind Turbine Mechanical Engineer</li> </ul> <p><b><u>Extensive Preparation</u></b></p> <ul style="list-style-type: none"> <li>Diesel Retrofit Designer</li> </ul>