

Pre-Engineering

Career Cluster Description: The Engineering and Technology career pathway prepares learners for planning, managing and providing scientific research and professional and technical services including laboratory and testing services, and research and development services.							
Major Options							
Aerospace Engineer Civil Engineer Communications Engineer		Electrical Engineer Environmental Engineer Drafter		Electrical Technician Facilities Technician Hazardous Waste Engineer		Manufacturing Engineer/Technician Mining Engineer Network Technician	
Grade 9		Grade 10		Grade 11		Grade 12	
S1	S2	S1	S2	S1	S2	S1	S2
English 1	English 1	English 2	English 2	English Elective	English Elective	English Elective	English Elective
Physical Science	Physical Science	Biology	Biology	Chemistry	Chemistry	Physics	Physics
Civics	Health	World History	World History	U.S. History	U.S. History	U.S. Govern.	AK History
Algebra I	Algebra I	Geometry	Geometry	Algebra 2	Algebra 2	Advanced Math	Advanced Math
P.E.	P.E.	Technology Applications 1*	Technology Applications 2*	Elective or Robotics	Elective or Competition Robotics	Elective or Advanced Robotics	Elective
Intro to Career Pathways	Customer Service	Tech Drafting 1	Tech Drafting 2	Tech Drafting 3*	Tech Drafting 4*	Elective	Elective
Principles of Engineering	Principles of Engineering	Intro to Engineering Design	Intro to Engineering Design	Digital Electronics 3-D Solid Modeling	Digital Electronics 3-D Solid Modeling	Civil Engineering and Architecture	Civil Engineering and Architecture
Work-Based Learning Opportunities				Career-Technical Student Organizations (CTSO)		Certifications	
<ul style="list-style-type: none"> Apprenticeship Cooperative Education Job Shadowing 		<ul style="list-style-type: none"> Paid/Unpaid Internship School-Based Enterprise Service Learning 		<ul style="list-style-type: none"> Skills USA 		AutoDesk: AutoCAD, Inventor, Revit SolidWorks (CSWA)	

POSTSECONDARY OPTIONS

Two-Year College or Proprietary Programs	Adult Registered Apprenticeships	Four-Year College and University Programs	Certifications	Licenses, On The Job Training, Training Certificates, etc.
	Department of Labor and Workforce Development, Office of Apprenticeship, email apprenticeship@alaska.gov or your local Alaska Job Center staff who will help you identify apprenticeable occupations and help you prepare for your future. You may also call (877) 724-2539		AutoDesk: AutoCAD, Inventor, Revit SolidWorks (CSWA)	AutoDesk: AutoCAD, Inventor, Revit SolidWorks (CSWA)

*College Credits may be available. [Click here for details.](#)