

	Pathway: Engineering & Technology
	Plan of Study: Aerospace Engineering

Career Goal (O*Net Code): Examples Are: Environmental Engineer (17-2081), Biomedical Engineer (17-2031), Aerospace Engineer (17-2011), Mechanical Engineer (17-2141).

Suggested High School Courses				
High School <small>* Default includes CDHE Higher Education Admission Requirements</small>	9th	Core Academic Courses*:	English 1/2, Algebra-Geometry 1/2, Physical Science Earth & Space 1/2, World History 1/2	Suggested Electives: Small Engine Technology
		Career Path Courses:	Introduction to Engineering Design	
	10th	Core Academic Courses*:	English 3/4, Algebra - Geometry 3/4, Biology, US History, Foreign Language I	Suggested Electives: Introduction to Business, Cisco Networking
		Career Path Courses:	Principles of Engineering	
	11th	Core Academic Courses*:	English 5/6, Algebra-Geometry 5/6 or higher, Chemistry, Foreign Language 2.	Suggested Electives: Computer Integrated Manufacturing, AP Statistics, Astronomy 1,2
		Career Path Courses:	Digital Electronics	
	12th	Core Academic Courses*:	Advanced Skills and Composition or Advanced Placement English 7/8, Math Analysis Trigonometry 1/2 or higher Math, Physics	Suggested Electives: Computer Integrated Manufacturing, AP Statistics, Astronomy 1,2
		Career Path Courses:	Aerospace Engineering	

Secondary to Postsecondary Linkages & Certifications	
Recognition for Advanced Learning	Postsecondary Credit Options: CU Gold and Articulated Credit
	Industry Recognized Certificate(s) or License(s): Many states require engineers to be licensed. Voluntary certification is available from the American Society of Mechanical Engineers (ASME).

		Postsecondary Programs Available in Colorado	Colorado Institutions	Entrance Exams/ Requirements
Postsecondary Education Opportunities	Certificate	Engineering Graphics Technology, Engineering Technology, Computer Aided Drafting & Design (CAD)	Front Range Community College, Red Rocks Community College, Aims Community College, Pueblo Community College, Trinidad State Junior College, Western Community College, Pickens Technical College, Arapahoe Community College	High School Diploma or GED
	Associate Degree	Engineering Graphics Technology, Engineering Technology, Computer Aided Drafting & Design (CAD)	Front Range Community College, Pueblo Community College, Trinidad State Junior College, Western Community College	High School Diploma or GED
	Bachelor Degree	Bioengineering and Life Sciences, Metallurgy and Materials, Engineering Physics, Biomedical Engineering, Civil Engineering, Mechanical Engineering, Environmental Engineering, Space Engineering, Industrial Engineering, Engineering/Mechatronics, Engineering Management, Aerospace Engineering	For more information about colleges that have these programs go to www.CollegeinColorado.org	See requirements from each school's website
	Graduate Degree	MS Materials Science; MS Mechanical Engineering; MS Physics (Applied); MS Bioengineering; MS Mechanical Engineering; MS Biomedical Engineering; MS Industrial & Systems Engineering; MS & PhD Aerospace Engineering; MS & PhD Civil, Environmental & Architectural Engineering; PhD Mechanical Engineering	For more information about colleges that have these programs go to www.CollegeinColorado.org	See requirements from each school's website

Cluster Overview: The **Science, Technology, Engineering and Math Career Cluster** prepares students in planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.

Extended Learning Experiences

<p>Curricular Experiences:</p> <p>Example: Technology Student Association</p>	<p>Extracurricular Experiences:</p> <p>Examples: International Bridge Building Contest Junior Engineering Technical Society National Engineering Design Competition National Engineers Week</p>
<p>Work-Based Learning Experiences:</p> <p>Career Preparation – Paid and Unpaid, Job Shadowing, Internships</p>	<p>Program Accreditation and/or Professional Association(s):</p> <p>Examples: American Chemical Society, American Institute of Aeronautics and Astronautics, American Institute of Chemical Engineering, American Society of Civil Engineers, American Society of Mechanical Engineers, Institute of Electrical and Electronic Engineers, Mathematical Association of America, National Society of Black Engineers, Society of Automotive Engineers, Society of Hispanic Professional Engineers, Society of Women Engineers</p>
<p>Service Learning Experiences:</p> <p>Example: Community Service Volunteer</p>	

Career Options:		Salary Range:
Certificate	Mechanical Drafters (CAD)	\$\$
Associate Degree	Mechanical Engineering Technician	\$\$ - \$\$\$
Bachelor Degree	Engineering Technologist, Environmental Engineer, Biomedical Engineer, Aerospace Engineer, Mechanical Engineer	\$\$\$
Graduate Degree	Corporate Engineering, Engineering Technology Analyst	\$\$\$\$

- \$ = \$15-25,000; \$\$ = \$25-55,000; \$\$\$ = \$55-90,000; \$\$\$\$ = Above \$90,000

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