



Pathway: Power, Structure & Technical Systems

Plan of Study: Agriculture Mechanical Sciences

Career Goal (O*Net Code): Ag Engineers (17-2021) Welders-Cutters (51-4121.02) Welders-Fitters (51-4121.03)

Suggested High School Courses

High School * Default includes CDHE Higher Education Admission Requirements	9 th	Core Academic Courses*:	English I, Algebra I, Earth or Environmental Science, State History/Civics	Suggested Electives: Insert Recommended Electives Here
		Career Path Courses:	Vo Ag Ed – I	
	10 th	Core Academic Courses*:	English II, Geometry, Biology, US History, Foreign Language I	Suggested Electives: Insert Recommended Electives Here
		Career Path Courses:	Vo Ag Ed - II	
	11 th	Core Academic Courses*:	English III, Algebra II/ or other, Chemistry	Suggested Electives: Animal Science
		Career Path Courses:	Ag Mechanics – Basic Skills	
	12 th	Core Academic Courses*:	English IV, Trigonometry or other Math, Botany or other lab based science	Suggested Electives: Plant Science
		Career Path Courses:	Ag Mechanics – Advanced Skills	

Secondary to Postsecondary Linkages & Certifications

Recognition for Advanced Learning	Postsecondary Credit Options: Dual Credit Classes with Lamar Community College
	Industry Recognized Certificate(s) or License(s): None at this Time

Colorado Postsecondary Programs Available

Colorado Institutions

Entrance Exams/ Requirements

Postsecondary Education Opportunities	Certificate	Associate Degree	Bachelor Degree	Graduate Degree
	Certified Welder	Welding Technology, Welding Fabrication	Agriculture Engineer	Agriculture Engineer
	Morgan Community College Trinidad State Junior College Aims Community College	Trinidad State Junior College, NJC, MCC, Aims Community College	Colorado State University	Colorado School Of Mines
	High School Diploma or GED	High School Diploma or GED	See School Admission Site	See School Admission Site

Cluster Overview: The **Agricultural, Food and Natural Resources** cluster focuses on careers in the planning, implementation, production, management, processing, and/or marketing of agricultural commodities and services.

Extended Learning Experiences

Curricular Experiences: Colorado FFA Association Ag Mechanics – CDE’s Ag Mechanics Proficiency Application	Extracurricular Experiences: County and State Fair Exhibits
Work-Based Learning Experiences: Career Preparation – Paid and Unpaid, Job Shadowing, Internships	Program Accreditation and/or Professional Association(s): Post Secondary Agriculture Students American Welders Society Association of General Contractors American Society of Agriculture & Biological Engineers
Service Learning Experiences: 4-H, Community Service, Boy Scouts	

Career Options:		Salary Range:
Certificate	Apprentice Electrician, Apprentice Plumber	\$
Associate Degree	Journeyman Electrician, Journeyman Plumber	\$\$
Bachelor Degree	Ag Engineer, Contractor, Surveyor, Project Engineer	\$\$\$
Graduate Degree	Project Developer, Risk Management Specialist	\$\$\$\$

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

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