VALENCIA

STEM Pathway

Pre-Engineering AS (CHEM/BIOL/Environ/Material Concentration)

The Pre-Engineering degree provides the first two years of study for a student who plans to transfer to UNM-Albuquerque or another 4-year institution to pursue a bachelor's degree in Engineering. A degree in Pre-Engineering provides a foundation for further study in Chemical, Biological, Environmental, Material, Civil, Nuclear, Electrical, Computer, Mechanical, Aerospace, or Construction Engineering. The degree emphasizes a firm foundation in mathematics and science, with selections of engineering courses tailored to future, more specific fields of engineering.

Fall	Course	Credits
	ENGL 1110: Composition I	3
	Gen Ed Arts and Design: Choose a course	3
	MATH 1215: Intermediate Algebra	3
	Gen Ed Student Choice: Choose recommended course: • CSCI 1210: Computer Programming Fundamentals	3

Spring	Course	Credits
	ENGL 1120: Composition II	3
	MATH 1220: College Algebra	3
	ENG 195: Topics: Introduction to Engineering	3
	Gen Ed Social and Behavioral Sciences: Choose a course	3

Summer	Course	Credits
	MATH 1240: Pre-Calculus	3
	MATH 1230: Trigonometry	3

Fall	Course	Credits
	MATH 1512: Calculus I	4
	PHYS 1310: Physics I and PHYS 1310L: Lab	4
	CHEM 1215: General Chemistry I and CHEM1215L: Lab	4

Spring	Course	Credits
	MATH 1522: Calculus II	4
	Gen Ed Humanities: Choose a course	3
	Gen Ed Second Language: Choose a course	3
	PHYS 1320: Physics II and PHYS 1320L: Lab	4

Summer	Course	Credits
	ENGL 2210: Professional and Technical Communication	3

Fall	Course	Credits
	MATH 2531: Calculus III	4
	CHEM 1225: General Chemistry II and CHEM1225L: Lab	4

Total Program Credit Hours, including 3 prerequisite credit hours = 64

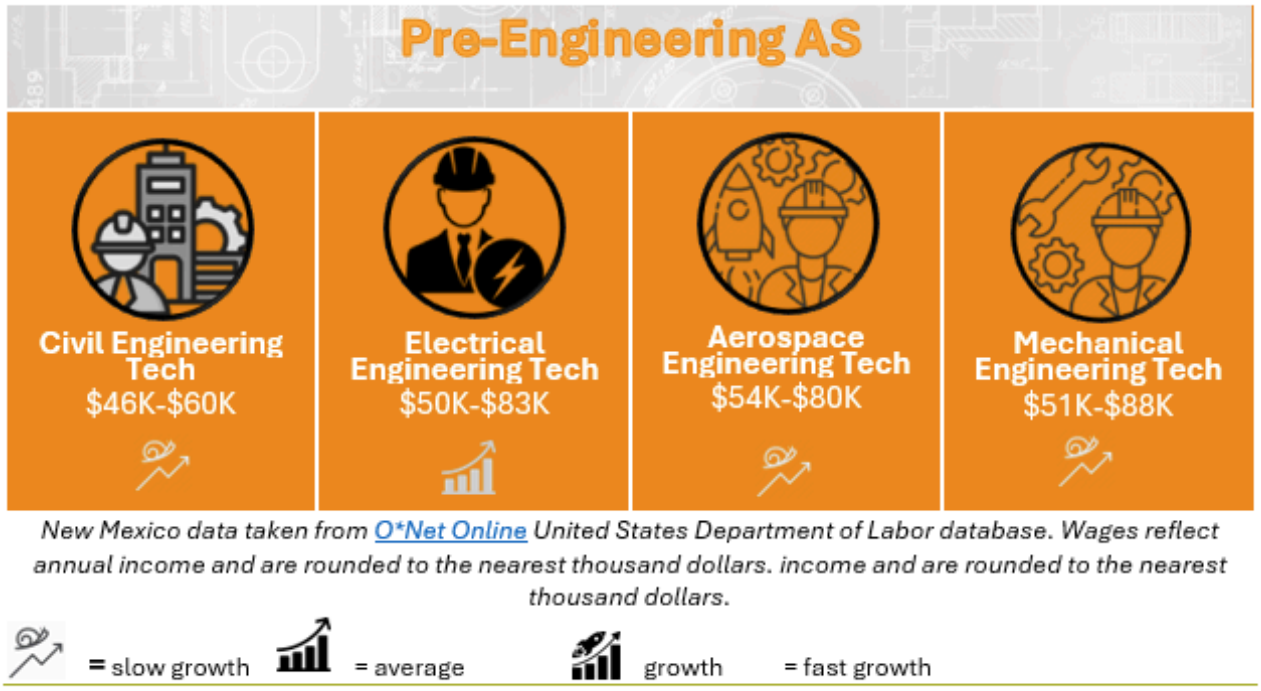
STEM Pathway

Pre-Engineering AS (CHEM/BIOL/Environ/Material Concentration)

1. Meet with your Academic Success Coach
2. Apply for FAFSA by October 1st
3. Meet with Financial Aid Apply for scholarships
4. Meet with your Faculty Mentor
5. Apply for graduation and/ or transfer

Career and Educational Advancement Opportunities

This degree program prepares students with the math and science foundation to continue their studies toward a bachelor's degree in a variety of engineering fields such as chemical, nuclear, civil, construction, mechanical, electrical, or computer engineering. Most full engineering jobs require a bachelor's or master's degree. Technician jobs may be available to those on the associate's degree level. Internships are an important part of engineering education and all engineering internships are paid.



*New Mexico data taken from O*Net Online United States Department of Labor database. Wages reflect annual income and are rounded to the nearest thousand dollars. income and are rounded to the nearest thousand dollars.*

For questions or to schedule a time to meet with an Advisor/Academic Success Coach about this program contact: Advisement at 505.925-8907. Map Current as of the 2026-2027 Academic Year.