VALENCIA

# STEM Pathway

## Pre-Engineering AS (Civil/Nuclear 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 one course | 3 |
| | MATH 1215: Intermediate Algebra | 3 |
| | Gen Ed Student Choice: Choose the recommended course:<br>• 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 ECON 2110 or 2120 | 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 one course | 3 |
| | Gen Ed Second Language: Choose one course | 3 |
| | PHYS 1320: Physics II and PHYS 1320L: Lab | 4 |

| Summer | Course | Credits |
|---|---|---|
| | ENGL 2210: Professional and Technical Communication | 3 |
| | Elective option: choose BIOL 1110 or GEOL 1110 (no lab) | 3 |

| Fall | Course | Credits |
|---|---|---|
| | MATH 2531: Calculus III | 4 |
| | ENG 130L: Introduction to Engineering Computing | 3 |
| | CHEM 1225: General Chemistry II and CHEM1225L: Lab | 4 |

**Total Program Credit Hours, including 3 prerequisite credit hours = 70**

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## Pre-Engineering AS (Civil/Nuclear Concentration)

Meet with your Academic Success Coach

Apply for FAFSA by October 1st

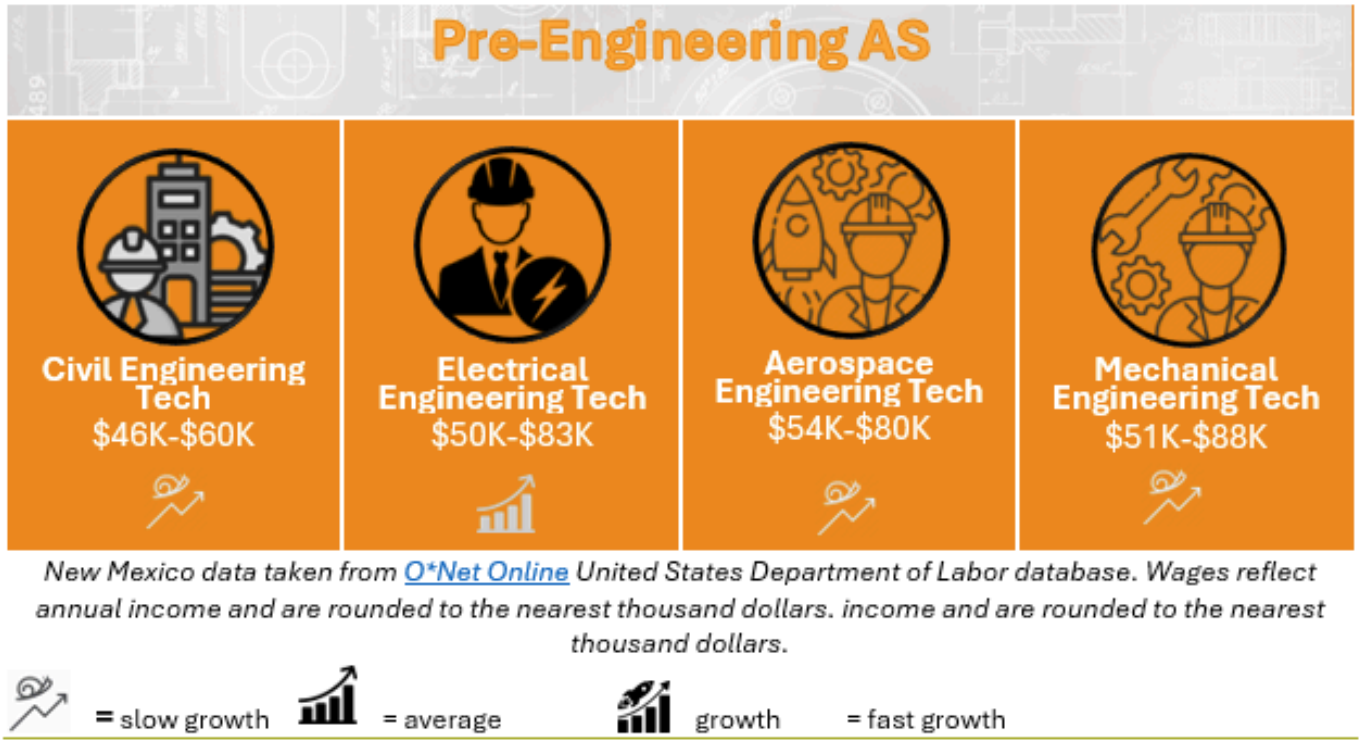
Meet with Financial Aid Apply for scholarships

Meet with your Faculty Mentor

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.**