

Associate in Engineering PRE-ENGINEERING/2014-2016

This program will prepare you for a bachelor's degree in engineering. You will obtain both a general background in mathematics and the physical sciences, and an introduction to the concepts and methods of engineering. This program is not a professional degree and does not prepare you for specific job opportunities. It does, however, provide a broad educational foundation on which to build a career through additional education or work experience.

The program objectives are the following:

1. Graduates will have demonstrated knowledge and skills to pursue an engineering bachelor program.
2. Graduates will have demonstrated involvement in high-level technical roles.

Completion of this program should result in the following student outcomes:

1. An ability to apply knowledge of mathematics, science, and engineering
2. An ability to function on multidisciplinary teams
3. An ability to communicate effectively
4. The broad education necessary for understanding the impact of engineering solutions in a global, economic, environmental, and societal context
5. Knowledge of contemporary issues
6. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

GENERAL EDUCATION (43 CR)

Area I. Communications (9 cr)

ENG	111	English Composition I (3)
ENG	116	Technical Writing (3)
SPCH	130	Public Speaking (3)

Area II. Mathematics (15 cr)

MATH	145	Introduction to Probability & Statistics (3)
MATH	162E	Calculus I (4)
MATH	163E	Calculus II (4)
MATH	264	Calculus III (4)

Area III. Laboratory Sciences (12 cr)

CHEM	121/L	General Chemistry with lab (4)
PHYS	215/L	Engineering Physics I with lab (4)
PHYS	216/L	Engineering Physics II with lab (4)

Area IV. Social/Behavioral Sciences (3 cr)

ECON	201	Microeconomics (3)
------	-----	--------------------

Area V. Humanities and Fine Arts (3 cr)

HUM	100	FYE: History and Culture of Northern New Mexico (3)
-----	-----	---

Area VI. Library Technology, Library Research Skills (1 cr)

LT	101	Library Research Skills (1)
----	-----	-----------------------------

PROGRAM REQUIREMENTS (23 CR)

Business (3)

BA		Lower-Division Elective (3)
----	--	-----------------------------

Engineering (20 cr)

ENGR	110L	Introduction to Engineering (2)
------	------	---------------------------------

ENGR	120L	Introductory Mathematics for Engineering Applications (4)
EECE	152L	Computer Programming I (4)
EECE	203L	Circuit Analysis I (4)
ME	160L	General Engineering Design I (3)
ME	202	Engineering Statics (3)

TOTAL CREDITS: 66

SUGGESTED SEQUENCE OF COURSES

First Semester (14 cr)

ENGR	120L	Introductory Mathematics for Engineering Applications (4)
EECE	152	Computer Programming I (4)
ENGR	110L	Introduction to Engineering (2)
LT	101	Library Research Skills (1)
HUM	100	FYE: History and Culture of Northern New Mexico (3)

Second Semester (17 cr)

ENG	111	English Composition I (3)
MATH	162E	Calculus I (4)
PHYS	215/L	Engineering Physics I with Lab (4)
ME	160L	Gen. Engineering Design I (3)
MATH	145	Introduction to Probability and Statistics (3)

Third Semester (18 cr)

MATH	163E	Calculus II (4)
PHYS	216/L	Engineering Physics II with Lab (4)
ME	202	Engineering Statics (3)
SPCH	130	Public Speaking (3)
CHEM	121/L	General Chemistry I/L (4)

Fourth Semester (17 cr)

MATH	264	Calculus III (4)
ECON	201	Microeconomics (3)
EECE	203L	Circuit Analysis I (4)
BA		Elective (3)
ENG	116	Technical Writing (3)