



# NORTHERN ARIZONA UNIVERSITY

College of Engineering, Forestry, and Natural Sciences  
Electrical Engineering Bachelor of Science in Engineering

Computer Engineering - Emphasis

**2014-2015** 2013-2014 Undergraduate Catalog

## Four Year Progression Plan

Sample Progression Plans are for planning purposes only. see the catalog for official details

Year 1 - Fall		
EE 110	Intro To Digital Logic	4
EGR 186	Intro To Engineering Design	3
MAT 136	Calculus I	4
CS 122	Programming For Eng & Sci	2
CS 122L	Prog For Egr & Sci Lab	1
NAU 100	Transition To College	1

Year 1 - Spring		
EE 188	Electrical Engineering I	3
EE 188L	Electrical Engineering I Lab	1
MAT 137	Calculus II	4
PHY 161	University Physics I	4
ENG 105	Critical Read/Writing In Univ	4

Year 2 - Fall		
<b>Choose one of the options below:</b>		
<b>Option: A</b>		
CENE 225	Engineering Analysis	3
<b>Option: B</b>		
STA 275	Statistical Analysis	3
CS 126	Computer Science I	3
CS 126L	Computer Science I Lab	1
MAT 238	Calculus III	4
EGR 286	Engineering Design: Process	3
PHY 262	University Physics II	3

Year 2 - Spring		
EE 215	Microprocessors	4
EE 280	Introduction To Electronics	4
MAT 226	Discrete Mathematics	3
MAT 239	Differential Equations	3
PHI 105	Introduction To Ethics	3

Year 3 - Fall		
EE 325	Engineering Analysis II	3
EE 364	Fdmnts Of Electromagnetics	4
EE 380	Fdmnts Of Electronic Circuits	4
CS 136	Computer Science II	3
CS 136L	Computer Science II Lab	1
<b>Engineering program fee assessed</b>		

Year 3 - Spring		
EE 310	Fdmnts Of Computer Engineering	4
EE 348	Fdmnts Of Signals & Systems	4
<b>Choose one of the options below:</b>		
<b>Option: A</b>		
EE 386W	Engineering Design: Methods	3
<b>Option: B</b>		
EGR 386W	Eng Design: The Methods	3
CS 249	Data Structures	3
LS/DIV COURSE	Liberal Studies/Diversity Course	3
<b>Engineering program fee assessed</b>		

Year 4 - Fall		
<b>Choose one of the options below:</b>		
<b>Option: A</b>		
EE 410	Embedded Control	3
<b>Option: B</b>		
EE 412	Digital Systems Design	3
<del>EE 476C</del>	<del>Project Design Procedures</del>	<del>1</del>
MAJOR ELECTIVE	Major Elective	3
CHM 151	General Chemistry I	4
CHM 151L	General Chemistry I Lab	1
LIBST COURSE	Liberal Studies Course	3
<b>Submit graduation application this term.</b>		
<b>Engineering program fee assessed</b>		

Year 4 - Spring		
<del>EE 486C</del>	<del>Capstone Design</del>	<del>3</del>
MAJOR ELECTIVE	Major Elective	3
LS/DIV COURSE	Liberal Studies/Diversity Course	3
LIBST COURSE	Liberal Studies Course	3
LIBST COURSE	Liberal Studies Course	3
<b>Engineering program fee assessed</b>		

## University Requirements Specified by Major

Foundation Requirements: English (FNRQ:ENG)      ENG 105 (4)

Foundation Requirements: Math (FNRQ:MAT)	MAT 137 (4)
Aesthetic and Humanistic Inquiry (AHI)	PHI 105 (3)
Science/Applied Science (SAS/LAB)	CS 122 (2), PHY 161 (4)
Liberal Studies Elective	PHY 262 (3)

① EE 476C & EE 486C    Proj Design. Structures & Computer Design

(1) & (3)

or  
EGR 476C & EGR 486C    Engineering Design I & II

(2) & (3)

### **PROGRAM INFORMATION**

A minimum of 127 units are required for the Bachelors degree.

You must have a grade of C or better in all your required classes and no more than two grades of D in your major elective courses.

\* Completion of either CHM 151L OR PHY 262L is required. CHM 151L is highly recommended.

\*\* Major Electives include 6 units that may be any 400- or 500-level EE classes. Only 3 units of letter-graded individualized study (EE485 or EE497) may be used to satisfy the requirements for the Bachelors degree.

### **CONTACT INFORMATION**

Academic Services Office

College of Engineering, Forestry and Natural Sciences

Building 21, Room 132

Phone: 928-523-3842

EMAIL: [cefnsacademic@nau.edu](mailto:cefnsacademic@nau.edu)

Engineering and Professional Programs

Building 69, Room 122

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<http://nau.edu/CEFNS/Engineering/>



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MAT 136	Calculus I	4
CS 122	Programming For Eng & Sci	2
CS 122L	Prog For Egr & Sci Lab	1
HON 100	Introduction To Honors	1
HON 190	Sem Critical Reading & Writing I	3

Year 1 - Spring		
EE 188	Electrical Engineering I	3
EE 188L	Electrical Engineering I Lab	1
MAT 137	Calculus II	4
PHY 161	University Physics I	4
HON 29X	Honors Topic Seminar 29X	4

Year 2 - Fall		
Choose one of the options below:		
<b>Option: A</b>		
CENE 225	Engineering Analysis	3
<b>Option: B</b>		
STA 275	Statistical Analysis	3
EE 222	Intermediate Programming	3
EGR 286	Engineering Design: Process	3
MAT 238	Calculus III	4
PHY 262	University Physics II	3

Year 2 - Spring		
EE 215	Microprocessors	4
EE 280	Introduction To Electronics	4
MAT 239	Differential Equations	3
PHY 263	University Physics III	3
PHI 105	Introduction To Ethics	3

Year 3 - Fall		
EE 325	Engineering Analysis II	3
EE 364	Fdmnts Of Electromagnetics	4
EE 380	Fdmnts Of Electronic Circuits	4
CHM 151	General Chemistry I	4
CHM 151L	General Chemistry I Lab	1
Engineering program fee assessed		

Year 3 - Spring		
EE 310	Fdmnts Of Computer Engineering	4
EE 348	Fdmnts Of Signals & Systems	4
Choose one of the options below:		
<b>Option: A</b>		
EE 386W	Engineering Design: Methods	3
<b>Option: B</b>		
EGR 386W	Eng Design: The Methods	3
MAJOR ELECTIVE	Major Elective	3
HON 39X	Honors Advanced Seminar 39X	3
Engineering program fee assessed		

Year 4 - Fall		
<del>EE 476C</del>	<del>Project Design Procedures</del>	<del>1</del>
MAJOR ELECTIVE	Major Elective	3
MAJOR ELECTIVE	Major Elective	3
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LS/DIV COURSE	Liberal Studies/Diversity Course	3
LIBST COURSE	Liberal Studies Course	3
Submit graduation application this term.		
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Year 4 - Spring		
<del>EE 486C</del>	<del>Capstone Design</del>	<del>3</del>
MAJOR ELECTIVE	Major Elective	3
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LS/DIV COURSE	Liberal Studies/Diversity Course	3
LIBST COURSE	Liberal Studies Course	3
Engineering program fee assessed		

University Requirements Specified by Major	
Foundation Requirements: Math (FNRO:MAT)	MAT 137 (4)
Aesthetic and Humanistic Inquiry (AHI)	PHI 105 (3)
Science/Applied Science (SAS/LAB)	CS 122 (2), PHY 161 (4)
Liberal Studies Elective	PHY 262 (3)

**University Honors Program**

1124 S Knoles Dr  
PO Box: 5689  
Flagstaff AZ 86011-5689

Cowden Hall - (Bldg #38)  
Email: [Honors@nau.edu](mailto:Honors@nau.edu)  
Phone: 928-523-3334  
Fax: 928-523-6558  
<http://nau.edu/Honors>

**College of Engineering, Forestry, and Natural Sciences**

2112 S Huffer Ln  
PO Box: 5621  
Flagstaff AZ 86011

Engineering and Technology - (Bldg #69)  
Email: [cefnsacademic@nau.edu](mailto:cefnsacademic@nau.edu)  
Phone: 928-523-2408  
Fax: 928-523-2300  
<http://nau.edu/CEFNS/Welcome/>

U { EE 476C & EE 486C Proj Design - Procedures & Capstone Design (1) = (3)  
or  
EGR 476C & EGR 480C Engineering Design I & II (2) = (3)



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EE 380	Fdmtns Of Electronic Circuits	4
CHM 151	General Chemistry I	4
CHM 151L	General Chemistry I Lab	1
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<b>Choose one of the options below:</b>		
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LS/DIV COURSE	Liberal Studies/Diversity Course	3
<b>Engineering program fee assessed</b>		

Year 4 - Fall		
EE 476C	Project Design Procedures	1
MAJOR ELECTIVE	Major Elective	3
MAJOR ELECTIVE	Major Elective	3
MAJOR ELECTIVE	Major Elective	3
LS/DIV COURSE	Liberal Studies/Diversity Course	3
LIBST COURSE	Liberal Studies Course	3
<b>Submit graduation application this term.</b>		
<b>Engineering program fee assessed</b>		

Year 4 - Spring		
EE 486C	Capstone Design	3
MAJOR ELECTIVE	Major Elective	3
MAJOR ELECTIVE	Major Elective	3
LIBST COURSE	Liberal Studies Course	3
LIBST COURSE	Liberal Studies Course	3
<b>Engineering program fee assessed</b>		

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Foundation Requirements:English (FNRQ:ENG)	ENG 105 (4)
Foundation Requirements:Math (FNRQ:MAT)	MAT 137 (4)
Aesthetic and Humanistic Inquiry (AHI)	PHI 105 (3)
Science/Applied Science (SAS/LAB)	CS 122 (2), PHY 161 (4)
Liberal Studies Elective	PHY 262 (3)

## PROGRAM INFORMATION

A minimum of 127 units are required for the Bachelors degree.

You must have a C or better in all your required classes and no more than two grades of D in your major elective courses.

\* Completion of either CHM 151L OR PHY 262L is required. CHM 151L is highly recommended.

\*\* Major Electives include the following 18 units:

- 3 units from any course with the following prefixes: AST, BIO, CENE, CENS, CHM, CM, CS, EGR, ENV, FOR, GLG, MAT, ME, PHY, PHS, or STA (except for any Recitations, BIO 100/100L, CS 110, EGR 101 or 102, ENV 101/101L, FOR 101, GLG 100/100L, PHY 101/101L, PHY 103, PHS 101/101L and MAT classes numbered lower than MAT 136).
- 9 units from any 400-level EE courses.
- 6 units from any 400 or 500 level EE courses.
- Only 3 units of letter-graded individualized study (EE 485 or EE 497) may be used to satisfy the requirements for the Bachelors degree.

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<http://nau.edu/CEFNS/Engineering/>

(1) { EE 47C → EE 486C Proj Design: Procedure & Capstone Design  
or  
EGR 47C → EGR 486C Engineering Design I → II

(1) = (3)

(2) = (3)