Bachelor of Science in Electrical Engineering

Sample Plan

The academic plan below is one pathway through the degree/certificate. It includes all requirements, taking into account recommendations from program faculty. Each student's plan may vary according to their initial course placement (https://catalog.uaa.alaska.edu/academicpoliciesprocesses/academicstandardsregulations/courseplacement/), intended course load, additional majors and/or minors, and their placement into required prerequisite courses. Any change in the plan below can have an unforeseen impact on the rest of the plan. **Therefore, it is very important to meet with your academic advisor to verify your personal academic plan.**

Please review the following terms, definitions, and resources associated with the sample academic plan below.

- Each course in the far left column links to a pop-up bubble with a course description, prerequisite requirements, and associations with university requirements. For example, if a course fulfills a general education requirement, you will see that in the pop-up bubble.
- **GER**: indicates a General Education Requirement (https://catalog.uaa.alaska.edu/undergraduateprograms/baccalaureaterequirements/gers/). GERs that also count toward degree/certificate requirements appear as a specific course in the plan. For these courses, "GER" is not indicated explicitly in the table, but if you click on the course, you will see the course's GER status in the pop-up bubble.
- **Program Elective**: indicates a specific course selection determined by program faculty to fulfill a degree/certificate requirement. Students should seek assistance from their academic advisor.
- **Elective**: indicates an open selection of 100-400 level university courses to fulfill elective credits needed to meet the minimum total credits toward the degree/certificate.
- **Upper Division Program Elective**: indicates a specific 300-400 level course selection determined by the program faculty to fulfill a degree/certificate requirement. Students should seek assistance from their academic advisor.
- **Upper Division Elective**: indicates an open selection of 300-400 level courses to fulfill elective credits needed to meet the minimum total credits toward the degree/certificate. These courses must be upper division in order to meet General University Requirements for the particular degree/certificate type.

First Year

Fall		**Credits**
CHEM A105 & A105L	General Chemistry I and General Chemistry I Laboratory	4
ENGR A151	Introduction to Engineering	1
MATH A251	Calculus I	4
WRTG A111	Writing Across Contexts	3
GER Social Sciences		3
	Credits	**15**
Spring		
ES A261	Introduction to Engineering Computation	3
MATH A252	Calculus II	4
WRTG A211 or WRTG A212 or WRTG A213	Writing and the Humanities or Writing and the Professions or Writing and the Sciences	3
GER Oral Communication Skills		3
GER Social Sciences, Alaska Native-Themed or Diversity & Inclusion		3
	Credits	**16**

Second Year

Fall		
CSCE A201	Computer Programming I	4
EE A203 & A203L	Fundamentals of Electrical Engineering I and Fundamentals of Electrical Engineering I Laboratory	4
MATH A253	Calculus III	4
PHYS A211 & A211L	General Physics I and General Physics I Laboratory	4
	Credits	**16**
Spring		
EE A241	Computer Hardware Concepts	4
EE A333 & A333L	Electronic Devices and Electronic Devices Laboratory	4
EE A353 & A353L	Circuit Theory and Circuit Theory Lab	4
MATH A302	Ordinary Differential Equations	3
PHYS A212 & A212L	General Physics II and General Physics II Laboratory	4
	Credits	**19**

Third Year

Fall		
ES A209	Statics	3
ES A302	Engineering Data Analysis	3
EE A307	Introduction to Power Systems	3
EE A314	Electromagnetics	3
EE A354	Engineering Signal Analysis	3
GER Humanities, Alaska Native-Themed or Diversity & Inclusion		3
	Credits	**18**
Spring		
CSCE A248	Computer Organization and Assembly Language Programming	3
ES A210	Dynamics	3
EE A308	Instrumentation and Measurement	3

EE A324 & A324L	Electromagnetics II and Electromagnetics Laboratory II	4
EE A451	Digital Signal Processing	3
	Credits	**16**
Fourth Year		
Fall		
EE A471	Automatic Control	3
ESM A450	Economic Analysis and Operations	3
Upper Division Elective (MATH)		3
Upper Division Program Elective		3
Upper Division Program Elective		3
	Credits	**15**
Spring		
EE A438	Design of Electrical Engineering Systems	3
PHIL A305	Professional Ethics	3
GER Fine Arts		3
Upper Division Program Elective		3
Upper Division Program Elective		3
	Credits	**15**
	Total Credits	**130**