

Electrical Engineering, BS

F.M. Long Bioengineering Option



University of Wyoming, 2015-16

Freshman Fall Semester			Hrs	Min	Grade	Notes
		USP First-Year Seminar	3		C	FY
CHEM	1020	General Chemistry I *	4			PN
ENGL	1010	College Composition and Rhetoric	3		C	C1
ES	1060	Intro to Engineering Problem Solving **	3		C	
MATH	2200	Calculus I ***	4		C	Q
Credit hours subtotal:			17			

Freshman Spring Semester			Hrs	Min	Grade	Notes
CHEM	2300	Introductory Organic Chemistry	4		C	
EE	1010	Intro/Elec & Computer Engineering ****	1		C	Offered spring only.
ES	2110	Statics	3		C	
MATH	2205	Calculus II	4		C	
PHYS	1210	Engineering Physics I	4		C	PN; no credit can be earned in PHYS 1210 if taken after ES 2120.
Credit hours subtotal:			16			

Sophomore Fall Semester			Hrs	Min	Grade	Notes
		USP Human Culture	3			H
ES	2120	Dynamics	3		^	
ES	2210	Electric Circuit Analysis	3		C	
MATH	2210	Calculus III	4		C	
PHYS	1220	Engineering Physics II	4		C	Should be taken before or concurrently with ES 2210.
Credit hours subtotal:			17			

Sophomore Spring Semester			Hrs	Min	Grade	Notes
EE	2220	Circuits and Signals	4		C	Offered spring only.
EE	2390	Digital Systems Design	4		C	
LIFE	1010	General Biology	4		C	
MATH	2250	Elementary Linear Algebra	3		C	
MATH	2310	Applied Differential Equations I	3		C	
Credit hours subtotal:			18			

This is a guide for course work in the major; actual course sequence may vary by student. Please refer to the online student degree evaluation, and consult with an academic advisor. • Not all courses are offered every semester and some electives may have prerequisites. Students should review the course descriptions in the *University Catalog* and consult with their academic advisor to plan accordingly.

University of Wyoming requirements:

Students must have a minimum cumulative GPA of 2.0 to graduate. • Students must complete 42 hours of upper division (3000-level or above) coursework, 30 of which must be from the University of Wyoming. • Courses must be taken for a letter grade unless offered only for S/U. • University Studies Program (USP) Human Culture (H) and Physical & Natural World (PN) courses must be taken outside of the major subject, but can be cross-listed with the major.

College of Engineering and Applied Science requirements:

Students must have a minimum cumulative GPA of 2.0 in all Engineering courses for graduation. • A grade of C or higher is required for all prerequisite courses. Students must also achieve a grade of C or better in all required mathematics courses.

Electrical Engineering - Bioengineering Option Program Notes:

^ Students must have a minimum cumulative GPA of 2.0 in all Engineering courses for graduation.

* Requires MATH ACT ≥ 23 , MATH SAT ≥ 600 , Math Placement Exam ≥ 3 , or concurrent enrollment in MATH 1400, 1405, or 1450. (University standard)

** Requires MATH 2200 or concurrent enrollment.

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Junior Fall Semester

			Hrs	Min	Grade	Notes
USP Communication 2			3		C	C2
USP Human Culture			3			H
EE	3220	Signals and Systems	3		C	Offered fall only.
EE	3310	Electronics I	4		C	Offered fall only.
EE	3510	Electromechanics	4		C	Offered fall only.
Credit hours subtotal:			17			

Junior Spring Semester

			Hrs	Min	Grade	Notes
EE	3330	Electronics II	4		C	Offered spring only.
EE	4075	C++ with Numerical Methods for Engineers	4		^	Offered spring only.
EE	4390	Microprocessors	3		^	Offered spring only.
ENGL	4010	Technical Writing in the Professions	3		C	C3
MOLB	2021	General Microbiology	4		C	
Credit hours subtotal:			18			

Senior Fall Semester

			Hrs	Min	Grade	Notes
USP US & Wyoming Constitutions			3		^	V
BE	4810	Bioinstrumentation	3		^	Offered fall semester only; can substitute EE 4330 (Electronic Systems Design).
EE	3150	Electromagnetics	3		C	Offered fall only.
EE	4820	Senior Design I	2		C	Offered fall only.
Elec Eng Elective or Technical Elective *****			4		^	
Credit hours subtotal:			15			

Senior Spring Semester

			Hrs	Min	Grade	Notes
BE	4820	Biodata Systems	3		^	Offered spring only; can substitute EE 4620 (Automatic Control Systems).
EE	4220	Probabilistic Signals and Systems	3		^	Offered spring only.
EE	4620	Automatic Control Systemts	3		^	Offered spring only.
EE	4830	Senior Design II	2		^	Offered spring only.
MOLB	3610	Principles of Biochemistry	4		C	
Elec Eng Elective or Technical Elective *****			3		^	
Credit hours subtotal:			18			

TOTAL CREDIT HOURS: 136

Electrical Engineering - Bioengineering Option Program Notes con't:

*** Requires MATH ACT ≥ 27 , MATH SAT ≥ 600 , Math Placement Exam ≥ 5 , or $\geq C$ in MATH 1405 or 1450. (University standard)

**** EE 1010 may be replaced with technical elective (see definition below) if transfer credits > 30 hrs.

***** **Electrical Engineering Elective:** Any non-required Electrical Engineering course.

Technical Elective: Any course in Engineering, Computer Science, or those marked as technical electives in the ECE Math/Science Elective List (found at www.uwyo.edu/electrical/undergraduate/)

Notes for Students Considering Medical School (pre-med) or Related Programs

- Students should be prepared that the total hours for the program may exceed 132 hours.
- Students interested in medical school or other professional schools (i.e. dental school, physical therapy school, etc.) should contact the Preprofessional Health Advisory Office in the College of Health Sciences early for appropriate advising.
- Students should be prepared for the following changes to the curriculum, at a minimum:
 - Substitute CHEM 1030 (General Chemistry II) for CHEM 2300 (Introductory Organic Chemistry).
 - Add CHEM 2420 (Organic Chemistry I), CHEM 2440 (Organic Chemistry II), MOLB 4100 (Inorganic Chemistry Lab) and MOLB 4110 (Introductory Inorganic Chemistry). ZOO 3115 (Human Systems Physiology) is also recommended.