

# Electrical Engineering, BS

## F.M. Long Bio-Engineering International Option



### University of Wyoming, 2015-16

Freshman Fall Semester			Hrs	Min	Grade	Notes
		USP First-Year Seminar	3		C	FYS
		USP Human Culture (Language *)	4			H
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:			<u>17</u>			

Freshman Spring Semester			Hrs	Min	Grade	Notes
		USP Human Culture (Language *)	4			H
CHEM	1020	General Chemistry I	4		C	PN
EE	1010	Intro/Elec & Computer Engineering ****	1		C	Offered spring only.
MATH	2205	Calculus II	4		C	
PHYS	1210	Engineering Physics I	4		C	PN
Credit hours subtotal:			<u>17</u>			

Freshman Summer Session			Hrs	Min	Grade	Notes
ES	2110	Statics	3		C	
MATH	2250	Elementary Linear Algebra	3		C	
Credit hours subtotal:			<u>6</u>			

Sophomore Fall Semester			Hrs	Min	Grade	Notes
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.
		Language *	4			
Credit hours subtotal:			<u>18</u>			

Sophomore Spring Semester			Hrs	Min	Grade	Notes
CHEM	2300	Introductory Organic Chemistry	4		C	
EE	2220	Circuits and Signals	4		C	Offered spring only.
EE	2390	Digital Systems Design	4		C	
MATH	2310	Applied Differential Equations I	3		C	
		Language *	3			
Credit hours subtotal:			<u>18</u>			

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.

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#### Junior Fall Semester

	Hrs	Min	Grade	Notes
USP Communication 2	3	C	C2	
EE 3220 Signals and Systems	3	C		Offered fall only.
EE 3310 Electronics I	4	^		Offered fall only.
EE 3510 Electromechanics	4	C		Offered fall only.
LIFE 1010 General Biology	4	C		
Credit hours subtotal:	<b>18</b>			

#### Junior Spring Semester

	Hrs	Min	Grade	Notes
ENGL 4010 Technical Writing in the Professions	3	C	C3	
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.
MOLB 2021 General Microbiology	4	C		
Credit hours subtotal:	<b>18</b>			

#### 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:	<b>15</b>			

#### 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 4830 Senior Design II	2	^		Offered spring only.
MOLB 3610 Principles of Biochemistry	4	C		
Elec Eng Elective or Technical Elective *****	4	^		
Credit hours subtotal:	<b>16</b>			

**TOTAL CREDIT HOURS: 143**

#### Electrical Engineering - Bioengineering International Option Program Notes:

This option includes at least one semester of study abroad. In addition, students may participate in a four-to-five month international internship. Coursework taken during the study abroad semester(s) will be determined with the student's advisor on an individual basis based on availability, time, and remaining course load.

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

\* A **single language** must be taken for four (4) semesters to fulfill the 15 hour foreign language requirement for the program. • Students taking American Sign Language to fulfill the language requirement of the major will have to take other courses to fulfill the USP H requirements.

\*\* Requires MATH 2200 or concurrent enrollment.

\*\*\* Requires MATH ACT  $\geq 27$ , MATH SAT  $\geq 600$ , Math Placement Exam  $\geq 5$ , 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/](http://www.uwyo.edu/electrical/undergraduate/))