Electrical Engineering, BS (2015-2016)

F.M. Long Bio-Engineering Option

University of Wyoming

Freshman Fall Semester			Hrs	Min Grade	Notes
CHEM	1020	General Chemistry I	4	D	PN#1; Prerequistie-ACT Math score of 23 or above, or concurrent enrollment in Math 1400, or 1405 or 1450.
ENGL	1010	College Composition & Rhetoric	3	C	COM 1
ES	1060	Introduction to Engineering Problem Solving	3	C	Prerequisite: MATH 2200 or concurrent enrollment
FYS		First Year Seminar Course	3	C	FYS
MATH	2200	Calculus I	4	C	Q; Prerequisite: grade of C or better in MATH 1405 or 1450 or Level 5 on the MPE or Math ACT of 27 or Math SAT of 600.
		Credit hours subtotal:	**17**		

Freshman Spring Semester			Hrs	Min Grade	Notes
CHEM	2300	Introductory Organic Chemistry	4	C	Prerequisite: CHEM 1020, 1050, 1000 or equivalent.
EE	1010	Intro. to Electrical and Computer Engineering	1	C	(S.O.)
ES	2110	Statics	3	C	Prerequisite: grade of C or better in MATH 2200 or AP credit in MATH 2200.
MATH	2205	Calculus II	4	C	Prerequisite: grade of C or better in MATH 2200 or AP credit in MATH 2200.
PHYS	1210	Engineering Physics I	4	C	PN#2; Prerequisites: a grade of C or higher in MATH 2200 & concurrent enrollment in MATH 2205.
		Credit hours subtotal:	**16**		

Sophomore Fall Semester			Hrs	Min Grade	Notes
ES	2120	Dynamics	3	C	Prerequisites: ES 2110 and MATH 2205; PHYS 1210 or concurrent enrollment.
ES	2210	Electric Circuit Analysis	3	C	Corequisite: MATH 2205.
MATH	2210	Calculus III	4	C	Prerequisite: grade of C or better in MATH 2205 or AP credit in MATH 2205.
PHYS	1220	Engineering Physics II	4	C	Prerequisites: grades of C or higher in MATH 2200, 2205 and concurrent enrollment in MATH 2210.
		Human Culture course	3	D	H#1
		Credit hours subtotal:	**17**		

Sophomore Spring Semester			Hrs	Min Grade	Notes
EE	2220	Circuits and Signals	4	C	(S.O.) Prerequisite: ES 2210
EE	2390	Digital Systems Design	4	C	Prerequisite: MATH 2205.
LIFE	1010	General Biology	4	C	Prerequisites: grade of C or better in MATH 0921 or level 2 on the MPE or math ACT of 21 or math SAT of 600.
MATH	2250	Elementary Linear Algebra	3	C	Prerequisite: grade of C or better in MATH 2200 or 2350.
MATH	2310	Applied Differential Equations I	3	C	Prerequisite: grade of C or better in MATH 2205. (Note: MATH 2210 is required for the sequel.)
		Credit hours subtotal:	**18**		

Notes: (S.O.) offered Spring semester ONLY (F.O.) offered Fall semester ONLY

*Students must have a minimum cummulative GPA of 2.0 in all Engineering course for graduation.
Grade of C (2.0) or higher is required for all prerequisite courses.

Students must complete a minimum of 42 hours of upper division coursework, 30 of which must from the University of Wyoming

EE 1010 may be replaced with technical elective if transfer credits > 30 hrs

PHYS 1210: no credit can be earned in PHYS 1210 if taken after ES 2120.

PHYS 1220 should be taken before or concurrently with ES 2210.

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Junior Fall Semester			Hrs	Min Grade	Notes
EE	3220	Signals and Systems	3	C	(F.O.) Prerequisite: EE 2220.
EE	3310	Electronics I	4	*	(F.O.) Prerequisites:PHYS 1220 or PHYS 1320 or EE 3150, and EE 2220 or concurrent enrollment.
EE	3510	Electromechanics	4	C	(F.O.) Prerequisite: EE 2220.
		Communication 2 course	3	C	COM 2
		Human Culture course	3	D	H#2
		Credit hours subtotal:	**17**		

Junior Spring Semester			Hrs	Min Grade	Notes
EE	3330	Electronics II	4	C	(S.O.) Prerequisite: EE 3310.
EE	4075	C++ with Numerical Methods for Engineers	4	*	(S.O.) Prerequisites: MATH 2205 and (COSC 1010 or ES 1060) and (MATH 2250 or 2310) or consent of instructor.
EE	4390	Microprocessors	3	*	(S.O.) Prerequisite: EE 2390.
		UW/Wyoming Constitution Course	3	C	V
MOLB	2021	General Microbiology	4	C	Prerequisites: LIFE 1010, CHEM 1000 or equivalent.
		Credit hours subtotal:	**18**		

Senior Fall Semester			Hrs	Min Grade	Notes
BE	4810	Bioinstrumentation **or**	3		(F.O.) Prerequisites: ES 3330.
		EE 4330 Electronic System Design	4	*	Prerequisites: EE 2390 and 3330.
EE	3150	Electromagnetics	3	C	(F.O.) Prerequisites: ES 2210 and MATH 2210.
EE	4820	Senior Design I	2	C	(F.O.) COM2; Prerequisites: EE 2390 and corequisite courses in the area of the design project.
		Technical Elective	3	*	
		Credit hours subtotal:	**14**		

Senior Spring Semester			Hrs	Min Grade	Notes
BE	4820	Biodata Systems	3	C	(S.O.) Prerequisites: basic course or equivalent in electronics, ZOO 4240 or concurrent enrollment
		or EE 4620 Automatic Control Systems	3	*	(S.O.) Prerequisite: EE 2220.
EE	4220	Probabilistic Signals and Systems	3	C	(S.O.) Prerequisite: EE 3220.
EE	4830	Senior Design II	2	*	(S.O.) Prerequisites: EE 4820 and selected courses in the area of the design project.
MOLB	3610	Principles of Biochemistry	4	C	Prerequisite: LIFE 1010 and a grade of C or better in CHEM 2300 or 2440
		EE Elective	3	*	
		Credit hours subtotal:	**15**		

TOTAL CREDIT HOURS: **132**

Notes:

(S.O.) offered Spring semester ONLY (F.O.) offered Fall semester ONLY

EE Elective: any non-required EE course.

Technical Elective: Any course in Engineering, Computer Science, or those marked as technical electives in the ECE Math/Science Elective List.

EE 4830 is normally taken in the final semester.

Options for Medical School (pre-med) and related programs (Note: total hours will exceed 132).

Visit the Preprofessional Health Advisory Office, College of Health Sciences for advising.

Substitute CHEM 1030 for CHEM 2300; Add CHEM 2420 & CHEM 2440; MOLB 3610, and add MOLB 4100 (Medicine) or ZOO 3115 (Dentistry)