ELECTRICAL ENGINEERING

F.M. Long Bio-Engineering Option

Academic Year 2019 - 2020

FALL						SPRING					
Course number	Course Title	USP	Credits	Min Grade	Grade Earned	Course Number	Course Title	USP	Credits	Min Grade	Grade Earned
Freshman year											
_____ 1101	First Year Seminar	FYS	3	C		CHEM 2300	Intro. to Organic Chemistry		4	C	
							CHEM 1020, 1050, 1000 or equivalent.				
CHEM 1020	General Chemistry I	PN	4			ES 2110	Statics (1)		3	*	
	ACT 23 or concurrent enrollment MATH 1400 or 1405 or 1450						MATH 2205 or concurrent enrollment				
ENGL 1010	College Comp & Rhetoric	COM1	3	C		MATH 2205	Calculus II		4	C	
							MATH 2200 or AP credit in MATH 2200				
ES 1060	Intro to Eng Problem Solving		3	C		PHYS 1210	Engineering Physics I (2)	PN	4	C	
	MATH 2200 or concurrent enrollment						Math 2200 or AP credit in MATH 2200				
MATH 2200	Calculus I	Q	4	C							
	MATH 1405 or MATH 1450, or MPE 5, or ACT 27/SAT of 600										
	Total		**17**				**Total**		**15**		
Sophomore year											
ES 2120	Dynamics (1)		3	*		EE 2220	Circuits and Signals		4	C	
	ES 2110 and MATH 2205; PHYS 1210 or concurrent enrollment.						EE 2210				
ES 2210	Electric Circuit Analysis		3	C		EE 2390	Digital Systems Design		4	C	
	MATH 2205 or concurrent enrollment						COSC 1010 or COSC1030 or ES 1060, and MATH 2205.				
MATH 2210	Calculus III		4	C		LIFE 1010	General Biology		4	C	
	MATH 2205 or AP credit in MATH 2205						MATH 0921 or MPE ≥2 or math ACT 21 or math SAT 600				
PHYS 1220	Engineering Physics II (2)		4			MATH 2250	Elementary Linear Algebra		3	C	
	MATH 2200 and 2205, and concurrent enrollment in MATH 2210.						MATH 2200 or MATH 2350				
	Human Culture Course	H1	3			MATH 2310	Applied Differential Equations I		3	C	
							MATH 2205				
	Total		**17**				**Total**		**18**		
Junior year											
EE 3220	Signals And Systems		3	C		EE 3330	Electronics II		4	*	
	EE 2220.						EE 2220 and EE 3310				
EE 3310	Electronics I		4	C		EE 4075	C++ with Numerical Methods		4	*	
	PHYS 1220 or PHYS 1320 or EE 3150, and EE 2220 or concurrent enrollment.						MATH 2205, (COSC 1010 or ES 1060), (MATH 2250 or 2310)				
EE 3510	Electric Machines and Power Systems		4	*		EE 4390	Microprocessors		3	*	
	ES 2210						EE 2390.				
	Communication Course	COM2	3			MOLB 2021	General Microbiology		4		
	COM1						LIFE 1010 and CHEM 1000 or 1020				
	Human Culture Course	H2	3								
	Total		**17**				**Total**		**15**		
Senior year											
BE 4810	Bioinstrumentation OR		3	*		BE 4820	Biomedical Signal Process OR		3	C	
	EE 2210 or similar electric circuit course						EE 3220 or similar linear systems course				
EE 4330	Electronic System Design					EE 4620	Automatic Control Systems			*	
	(4 credit hrs.) EE 2390 and EE 3330						(3 credit hrs.) EE 2220.				
EE 3150	Electromagnetics		3	*		EE 4220	Probabilistic Signals & Systems		3	C	
	ES2210, MATH 2210, and PHYS 1220 or concurrent enrollment						EE 3220 and MATH 2210				
EE 4820	Senior Design I (3)		2	C		EE 4830	Senior Design I (5)	COM3	2	C	
	see note below						EE 4820				
	Technical or Cultural Cont Elective (4)		3	*		MOLB 3610	Principles of Biochemistry (6)		4	*	
	US & Wyo Constitution Course	V	3				LIFE 1010 and CHEM 2300				
							BE or EE Elective		3	*	
	Total		**14**				**Total**		**15**		

Total Program Credits: 128

KEY

Fall only	Prerequisite(s)
Spring only	

*Students must have a minimum cumulative GPA of 2.0 in all Engineering courses and overall GPA of 2.0 for graduation. Grade of C (2.0) or higher is required for all prerequisite courses. Note: **a minimum of 42 hours of upper division coursework**, 30 hours of which must be from the University of Wyoming.

(1) or any ES, EE, BE course (≥2000 level), or COSC 3011 or COSC 3750

(2) 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.

(3) Prerequiste: EE 2220, EE 2390, & EE 3310 or concurrent enrollment, plus 6 hours of 4000 level EE/BE courses or concurrent enrollment. COM2 grade C or better.

(4) Technical Elective: Any course marked as technical electives in the ECE Math/Science Elective List.

(5)COM3 to satisfy this requirement with EE 4820/4830 the COM2 course must be taken before EE 4820. Also EE 4820 and EE 4830 must be taken in sequence. EE 4830 is ideally taken in the final semester.

(6) Note: MOLB 3610 is usually offered in the fall, so it can be swapped with the technical elective

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