

Electrical Engineering, BS (2015-2016)



University of Wyoming

Freshman Fall Semester

			Hrs	Min	Grade	Notes
CHEM	1020	General Chemistry I	4		D	PN#1; Prerequisite-ACT Math score of 23 or above, or concurrent enrollment in Math 1400, 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 MPEor Math ACT of 27 or Math SAT of 600.
Credit hours subtotal:			17			

Freshman Spring Semester

			Hrs	Min	Grade	Notes
EE	1010	Intro. to Electrical and Computer Engineering	1		C	(S.O.)
ES	2110	Statics	3		C	Prerequisites: MATH 2205 or concurrent enrollment.
MATH	2205	Calculus II	4		C	Prerequisite: grade of C or better in MATH 2200 or Advanced Placement credit in MATH 2200.
MATH	2250	Elementary Linear Algebra	3		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; Prerequisite: grade of C or better in MATH 2200 or AP credit in MATH 2200.
Credit hours subtotal:			15			

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	Prerequisite: MATH 2205.
MATH	2210	Calculus III	4		C	Prerequisite: grade of C or better in MATH 2205 or Advanced Placement 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.
MATH	2310	Applied Differential Equations I	3		C	Prerequisite: grade of C or better in MATH 2205.
		US/Wyoming Constitution Course	3		D	V
		Math/Science Elective	3		C	One course from the ECE Math/Science Elective List
Credit hours subtotal:			17			

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

*Students must have a minimum cumulative 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 48 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.

Math/Science Elective: One course from the ECE Math/Science Elective List. ABET requires a minimum of 32 hours of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as biological, chemical, and physical sciences.

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Junior Fall Semester			Hrs	Min Grade	Notes
EE	3150	Electromagnetics	3	*	(F.O.) Prerequisites: ES 2210 and MATH 2210.
EE	3220	Signals And Systems	3	C	(F.O.) Prerequisite: EE 2220.
EE	3310	Electronics I	4	C	(F.O.) Prerequisite: PHYS 1220 or PHYS 1320 and EE 2220 as a corequisite.
EE	3510	Electromechanics	4	C	(F.O.) Prerequisite: EE 2220.
		Communication 2 course	3	C	COM 2
Credit hours subtotal:			<u>17</u>		

Junior Spring Semester			Hrs	Min Grade	Notes
EE	3330	Electronics II	4	*	(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	4220	Probabilistic Signals and Systems	3	C	(S.O.) Prerequisite: EE 3220.
EE	4390	Microprocessors	3	*	(S.O.) Prerequisite: EE 2390.
EE	4620	Automatic Control Systems	3	*	(S.O.) Prerequisite: EE 2220.
Credit hours subtotal:			<u>17</u>		

Senior Fall Semester			Hrs	Min Grade	Notes
EE	4440	Communication Theory	3	*	(F.O.) Prerequisite: EE 3220.
EE	4820	Senior Design I	2	C	(F.O.) Prerequisites: EE 2390, EE 3330 and corequisite courses in the area of the design project.
		General Elective	3	*	Any ≥ 1000 level course (MATH course must be $> \text{Math } 2210$)
		EE Elective	3	*	
		EE Elective	3	*	
		Human Culture course	3	D	H#2
Credit hours subtotal:			<u>17</u>		

Senior Spring Semester			Hrs	*	Notes
EE	4830	Senior Design II	2	*	Prerequisites: EE 4820
		EE Elective	4	*	
		EE Elective	3	*	
		EE Elective	3	*	
		Technical Elective	3	*	
Credit hours subtotal:			<u>15</u>		

TOTAL CREDIT HOURS: 132

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

EE Electives: A minimum of 19 hours of EE electives is required. A minimum of 16 credit hours of non-required EE courses offered by the ECE Department. Suggestions are as follows:

Electronics: EE 4250, 4300, 4330, 4340, 4360, 4380, 4560, BE 4810, BE 4820

Comm/Signal Processing: EE 4245, 4300, 4345, 4530, 4870

Systems & Controls: EE 5210, 5400

Power Engineering: EE 4510, 4540, 4550, 4560

Digital/Computer: EE 4070, 4360, 4490, 4590, 4870, 4970, 4990

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.