Electrical Engineering, BSEE
Bio-Engineering Option

FALL						SPRING					
Course Number	Course Title	USP	CR	Min Grade	Grade	Course Number	Course Title	USP	CR	Min Grade	Grade

FRESHMAN YEAR

Course Number	Course Title	USP	CR	Min Grade	Grade	Course Number	Course Title	USP	CR	Min Grade	Grade
CHEM 1020	General Chemistry I	PN	4	C		CHEM 2300	Intro Organic Chem		4	C	
Prerequisite:	*ACT Math 23 or concurrent MATH 1400, 1405 or 1450*					*Prerequisite:*	*D in CHEM 1020*				
EE 1010	Intro/Electrical & Computer Eng		1	D		MATH 2205	Calculus II		4	C	
						Prerequisite:	*C in Math 2200*				
	USP: Communications I	C1	3	C		EE/ES > 2000	Any ES, EE, BE course (2000 or higher) or COSC 3011 or COSC 3750		3	D	
MATH 2200	Calculus I	Q	4	C		PHYS 1210	Engr Physics I		4	C	
Prerequisite:	*C in Math 1405 or 1450, MPE 5, Math ACT 27, Math SAT 640*					*Prerequisite:*	*Concurrent in Math 2205*				
COSC 1010	Computational Thinking		3	C							
	Total		**15**				**Total**		**15**		

SOPHOMORE YEAR

Course Number	Course Title	USP	CR	Min Grade	Grade	Course Number	Course Title	USP	CR	Min Grade	Grade
EE/ES > 2000	Any ES, EE, BE course (2000 or higher) or COSC 3011 or COSC 3750		3	D		EE 2220	Circuits and Signals		4	C	
						Prerequisite:	*C in ES 2210*				
ES 2210	Electric Circuit Analysis		3	C		EE 2390	Digital Systems Design		4	C	
Prerequisite:	*Concurrent in MATH 2205*					*Prerequisite:*	*C in MATH 2205 and COSC 1010*				
MATH 2210	Calculus III		4	C		LIFE 1010	*General Biology I*	PN	4	C	
Prerequisite:	*C in Math 2205*					*Prerequisite:*	*ACT Math 23 or concurrent MATH 1400, 1405 or 1450*				
PHYS 1220	Engr Physics II		4	C		MATH 2250	Elementary Linear Algebra		3	C	
Prerequisite:	*Concurrent in MATH 2210*					*Prerequisite:*	*C in Math 2200*				
	USP: Human Culture	H	3	D		MATH 2310	Applied Differential Eqns I		3	C	
						Prerequisite:	*C in MATH 2205*				
	Total		**17**				**Total**		**18**		

JUNIOR YEAR

Course Number	Course Title	USP	CR	Min Grade	Grade	Course Number	Course Title	USP	CR	Min Grade	Grade
EE 3220	Signals and Systems		3	D		EE 3331	Electronics II		3	D	
Prerequisite:	*C in EE 2220*					*Prerequisite:*	*C in EE 2220 and either EE 3310 or EE 3311*				
EE 3311	Electronics I		3	C		EE 3332	Electronics II Laboratory		1	D	
Prerequisite:	*Concurrent in EE 2220 and C in PHYS 1220 or C in EE 3150*					*Prerequisite:*	*Concurrent in EE 3331 (or completed) and C in EE 3312*				
EE 3312	Electronics I Laboratory		1	C		EE 4075	C++ with Num Meth for		4	D	
Prerequisite:	*Concurrent in EE 3311 (or completed)*					*Prerequisite:*	*C in MATH 2205, COSC 1010 and either MATH 2250 or MATH 2310*				
EE 3510	Elec Machines & Power Systems		4	D		EE 4390	Microprocessors		3	D	
Prerequisite:	*C in ES 2210*					*Prerequisite:*	*C in EE 2390*				
	USP: Communications II	C2	3	C		MOLB 2021	General Microbiology		4	D	
Prerequisite:	*C in C1*						*C in LIFE 1010 and CHEM 1020*				
	USP: Human Culture	H	3	D			General Elective		3	D	
	Total		**17**				**Total**		**18**		

SENIOR YEAR

Course Number	Course Title	USP	CR	Min Grade	Grade	Course Number	Course Title	USP	CR	Min Grade	Grade
BE 4810	Bioinstrumentation		3	D		One of:	BE 4820 or EE 4620		3	D	
Prerequisite:	*Varies*					*Prerequisite:*	*Varies*				
EE 3150	Electromagnetics		3	C		EE 4220	Probabilistic Signals and Systems		3	D	
Prerequisite:	*C in ES 2210, MATH 2210, and concurrent in PHYS 1220*					*Prerequisite:*	*C in MATH 2210 and concurrent in EE 3220*				
EE 4820	Senior Design I		2	C		EE 4830	Senior Design II	C3	2	C	
Prerequisite:	*C in EE 2220, EE 2390, and C2; Concurrent in EE 3311/3312 and 6 credits of 4000-level EE/BE courses*					*Prerequisite:*	*C in EE 4820 and concurrent in design courses*				
	Technical Elective		3	D		MOLB 3610	Principles of Biochemistry		4	D	
						Prerequisite:	*LIFE 1010 and C in CHEM 2300*				
	USP: US & Wyo Const.	V	3	D			BE or EE Elective (>4000)		3	D	
	Total		**14**				**Total**		**15**		

Fall only or spring only course

Total Program Credits: 129

- A minimum of 128 hours is required. • A minimum of 42 hours must be upper division.
- Math/Science, Technical, and BE/EE Electives must be selected with advisor's approval from Department list. •Math courses used as a General Elective must be 2000 level or higher.
- Degree candidates must meet the academic requirements of the university, and must have a minimum GPA of 2.0 in all engineering courses.

- Students may not take a course for S/U credit to satisfy any requirement, unless the course is offered for S/U credit only.
- PHYS 1210 must be taken prior to or concurrently with ES 2120. While PHYS 1220 is not a prerequisite for ES 2210, it is recommended that PHYS 1220 is taken before or concurrently with ES 2210.
- Grades of C or better are required for all courses that are prerequisites for courses within the students course of study and all required MATH courses.

2024–2025 Catalog Year