

Bachelor of Science in Electrical Engineering Biomedical Applications Concentration (19 cr) Biomechanics focus

This suggested plan applies to students entering in Academic Year 2019-2020 who are ready for calculus.

Semester 1				Semester 2			
CH1150&1151	Univ. Chemistry I & Lab I	4		PH2100 &1100	Univ. Physics I - Mechanics	4	
CH1153	Prob. Solv. Chem. I :optional	1		ENG1102	Engineering Modeling & Design	3	
ENG1101	Engineering Analysis	3		MA2160	Calculus with Technology 2	4	
MA1160 ¹	Calculus with Technology 1	4		PH1200	Univ. Physics II Lab	1	
				EE1110	Essential Math for EE's	1	
				EE1111	Intro. to Elec. & Comp. Engg	1	
UN1015	Composition	3		UN1025	Global Issues	3	
Total			14/15	Total			17
Semester 3				Semester 4			
MA2321 ²	Linear Algebra	2		EE2112	Electrical Circuits II & Lab	4	
MA3521 ²	Differential Equations	2		MA3160	Multi-variable Calculus	4	
EE 2111	Electrical Circuits I	3		BL2020	Anatomy/Physiology 2	3	
CS1111	Intro to Programming in C/C++	3			Critical/Creative Thinking crse ⁶	3	
BL2010	Anatomy/Physiology 1	3			Social Resp./Ethical Reasoning crse ⁶	3	
BE2400	Cellular & Molecular Biology	3		Total			17
Total			16	Total			17
Semester 5				Semester 6			
EE 2174	Digital Logic and Lab	4		EE3901	Design Fundamentals	2	
EE3131	Electronics	4		EE3171 ⁹	Microcontroller Applications	4	
EE3160	Signals and Systems	3		BE3700&3701	Bio-Instrumentation and Lab	4	
PH2200	Univ. Physics 2-Elec&Magnet	3			BEA concentration elective ⁷	3	
BE3300 ³	Biomechanics I	3			HASS HU/FA elective ⁶	3	
Total			17	Total			16
Semester 7				Semester 8			
EE4901 ⁴	EE Design Project 1 (part 1)	2		EE4910 ⁴	EE Design Project 2 (part 2)	2	
EE3180 ⁹	Probability-Signal Analysis	3		EE3140	Electromagnetics	3	
EE3261	Control Systems	3		EE4250	Modern Communication Systems	3	
	EE elective ^{5,7}	3			EE elective ^{5,7}	3	
	2 nd Comp/Comm. Course ⁶	3			HASS elective ⁶	3	
	HASS EC/PSY/SS	3		Total			14
Total			17	Total			128 Credits

Students must add 3 units of co-curricular activities (such as Physical Education), usually taken in six .5 units.

Follow pre-requisites and semester offerings. This is a 'suggested' plan which can vary by individual student. Students who begin in a pre-calculus course will take ENG1001 and ENG1100 in place of ENG1101 in first year.

1. MA1160 may be replaced by MA1161.
2. MA2320 and MA3520 may replace MA2321 and MA3521.
3. Focus: Choose BE2800 Biomaterials 1, (taken in sem 6) or BE3300 Biomechanics 1 (taken in sem 7).
4. Approved Enterprise courses or BE4901 & BE4910 may replace EE4901 & EE4910. See department advisor for details.
5. EE Electives: 6 credits of EE courses not listed here and not EE3010, EE3805, EE4000, EE4805, EE4901, EE4910.
6. HASS = Humanities, Arts and Social Sciences. Follow university requirements for general distribution electives.
7. Credits may be double-counted toward an ECE accelerated master's program. Must be "EE" level 4000+ credits.
8. BEA conc. Elective – Choose one: BE2800, BE3350, BE3800, BE4250, BE4610, BE4700, BE4755. May switch to fall.
9. May use BE4770 plus 1cr. free elective in place of EE3171. Students may NOT substitute BE2110 for EE3180.

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CH1153	Prob. Solv. Chem. I optional	1		ENG1102	Engineering Modeling & Design	3	
ENG1101	Engineering Analysis	3		MA2160	Calculus with Technology 2	4	
MA1160 ¹	Calculus with Technology 1	4		PH1200	Univ. Physics II Lab	1	
				EE1110	Essential Math for EE's	1	
				EE1111	Intro. to Elec. & Comp. Engg.	1	
UN1015	Composition	3		UN1025	Global Issues	3	
	Total	14/15			Total	17	
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MA2321 ²	Linear Algebra	2		EE2112	Electrical Circuits II & Lab	4	
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EE3261	Control Systems	3		EE4250	Modern Communication Systems	3	
	BEA concentration elective ⁷	3			EE elective ^{5,7}	3	
	EE elective ^{5,7}	3			HASS elective ⁶	3	
	HASS EC/PSY/SS	3			Total	14	
	Total	17			Total	128 Credits	

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7. Up to 6 credits "EE" level 4000+ may be double-counted toward an ECE accelerated master's program.
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