

CORE REQUIREMENTS

Basic Math and Science (8 courses, 9.5-9.75 credits)		Engineering (5 courses, 4.75 credits)	Additional Degree Requirements
Sem	Course	Sem	Course
_____	MATH 131 Calculus I (1.25 credits)	_____	ENGR 200 Meas., Instr., & Analysis
_____	MATH 132 Calculus II (1.25 credits)	_____	ENGR 212L Linear Circuit Theory
_____	MATH 231 Calculus III (1.25 credits)	_____	ENGR 225 Mechanics I
_____	MATH 234 Diff. Equations	_____	ENGR 232 Engineering Materials
_____	PHYS 141L Mechanics	_____	ENGR 312 Automatic Control Systems
_____	PHYS 231L Elec., Mag., & Waves		
_____	CHEM 111L Intro. Chemistry I		
	and one elective, examples below:		
	Sem Course		
	_____ CHEM 112L Intro. Chemistry II		
	_____ PHYS 232L Optics & Mod. Phys.		
	_____ PHYS 300 Mathematical Methods		
	_____ MATH 228 Linear Algebra		
	_____ MATH 305 Probability		
	_____ other*		
	*(science or mathematics course approved in advance by department chair)		
Senior Capstone Design Project (2 courses, 2 credits)			
Sem	Course	Sem	Course
_____	ENGR 483 Capstone Design I	_____	ENGR 484 Capstone Design II

CONCENTRATION ELECTIVES

Electrical (6 courses, 7.25-7.5 credits)	Mechanical (7 courses, 7.75-8.25 credits)	Computer (7 courses, 8.25-8.75 credits)	
Sem	Course	Sem	Course
_____	ENGR 221L Digital Circuits & Systems	_____	CPSC 115L• Introduction to Computing
_____	ENGR 301L• Signal Processing & Applications	_____	CPSC 215L• Data Structures & Algorithms
_____	ENGR 303L Analog & Digital Communication	_____	ENGR 221L Digital Circuits & Systems
_____	ENGR 305L Microelectronic Circuits	_____	ENGR 305L Microelectronic Circuits
_____	ENGR 323L• Microproc. Systems	_____	ENGR 323L• Microprocessor Systems
Plus One Additional Engineering elective approved in advance by the dept. chair:	At least one from:	One additional ENGR elective 300 level or above approved in advance by dept. chair:	
	_____ ENGR 353 Biomechanics		
	_____ ENGR 431L Experimental Design & Methods	One additional CS elective approved in advance by dept. chair:	
	Plus One Additional Engineering elective approved in advance by the dept. chair:		
<i>Program totals: 21 courses, 23.5-24 credits</i>	<i>Program totals: 22 courses, 24-24.75 credits</i>	<i>Program totals: 22 courses, 24.5-25.25 credits</i>	
Biomedical (9 courses, 9.75-10.5 credits)		Without Concentration (6 to 7 courses, 7 credits)	
Sem	Course	At least 7 course credits chosen from the following:	
_____	BIOL 182L Evolution of Life	Sem Course	
_____	BIOL 183L Cellular Basis of Life*	_____ ENGR 110• Engr. Computation & Analysis OR	
		_____ ENGR 116 Intro. to Biomedical Engineering OR	
_____	BIOL 319L Animal Physiology OR	_____ ENGR 120 Introduction to Engineering Design	
_____	ENGR 357• Physiological Modeling		
_____	ENGR 116 Introduction to Biomedical Engineering	_____ ENGR 221L Digital Circuits & Systems	
_____	ENGR 353 Biomechanics	_____ ENGR 226 Mechanics II	
_____	ENGR 301L• Signal Processing & Applications	_____ ENGR 301L• Signal Processing & Applications	
_____	ENGR 311 Electrophysiology	_____ ENGR 302 Image Processing/Biomed Applic.	
Three engineering courses from the Bioelectrical focus or three courses from the Biomechanical focus:		_____ ENGR 303L Analog & Digital Communication	
Bioelectrical Focus:	Biomechanical Focus:	_____ ENGR 305L Microelectronic Circuits	
Sem	Course	_____ ENGR 306 Intro to Machine Learning	
_____	ENGR 316 Neural Engineering OR	_____ ENGR 311 Electrophysiology	
_____	ENGR 346L Computational Neuroscience	_____ ENGR 316 Neural Engineering	
_____	ENGR 221L Digital Circuits & Systems	_____ ENGR 320 Introd Robot Manipulation	
_____	ENGR 323L• Microprocessor Systems	_____ ENGR 323L• Microprocessor Systems	
		_____ ENGR 325L Mechanics of Materials	
		_____ ENGR 337 Thermodynamics	
		_____ ENGR 346L Computational Neuroscience	
		_____ ENGR 353 Biomechanics	
		_____ ENGR 357 Physiological Modeling	
		_____ ENGR 362L Fluid Mechanics	
		_____ ENGR 372L Heat Transfer	
		_____ ENGR 431L Experimental Design & Methods	
		(additional courses approved in advance by dept. chair)	
<i>Program totals: 24 courses, 26-27 credits</i>		<i>Program totals: 21-22 courses, 23.25-24 credits</i>	

NOTE: Courses with laboratories (denoted by suffix 'L') count as 1.25 course credits; courses without labs count as 1.0 course credit, except where noted.

Program totals do not include course/credit counts from "Additional Degree Requirements".

The maximum number of engineering transfer courses shall be three (refer to minutes of 11-30-2011 and 4-20-2012)

• - Satisfies computer programming proficiency requirement.