BACHELOR OF SCIENCE IN BIOMEDICAL ENGINEERING **Catalogue**

Biosensing & Instrumentation Specialization (BME - BI)

Student: **Date:** **2017-2018**

ID #: **Advisor:**

Year 1

Semester 1	Cr	Status	Semester 2	Cr	Status
ENGR 002 - Graphical Communication	2		BME 001 - Intro to Biomedical Eng Design[4]	2	
CHEM 031 - General Chemistry I	4		PHYS 031 - Physics for Engineers I	4	
Foundational Writing & Info Literacy[1]	3		MLRS 034 - Human Cell Biology[7]	4	
MATH 021 - Calculus I	4		MATH 022 - Calculus II	4	
CS 020 - Programming for Engineers	3		CHEM 032 - General Chemistry II[7]	4	
ENGR 050 - First Year Engineering Seminar	1				
Total credits	*17*		*Total credits*	*18*	

Year 2

Semester 1	Cr	Status	Semester 2	Cr	Status
EE 100 - Electrical Engr. Concepts I[7]	4		EE 004 - Linear Circuit Analysis II	3	
CE 001 - Statics[7]	3		EE 082 - Linear Circuits Laboratory II	2	
ANPS 019 - Human Anatomy & Physiology[7]	4		ANPS 020 - Human Anatomy & Physiology[7]	4	
MATH 121 - Calculus III	4		EE 101 - Digital Control with Embedded Sys	4	
PHYS 125 - Physics for Engineers II	3		MATH 271 - Adv Engineering Mathematics	3	
			BME 081 - Biomedical Engineering Lab I	2	
Total credits	*18*		*Total credits*	*18*	

Year 3

Semester 1	Cr	Status	Semester 2	Cr	Status
EE 171 - Signals and Systems	4		BME Biosensing & Instrumentation Elective[3]	3	
EE 120 - Electronics I	4		BME Biosensing & Instrumentation Elective[3]	3	
STAT 151 - Applied Probability	3		BME Biosensing & Instrumentation Elective[3]	3	
MATH 122 - Applied Linear Algebra	3		BME Biosensing & Instrumentation Elective3	3	
BME 151 - Fall BME Workshop	1		BME 152 - Spring BME Workshop	1	
General Education Elective[2]	3		General Education Elective[2]	3	
Total credits	*18*		*Total credits*	*16*	

Year 4

Semester 1	Cr	Status	Semester 2	Cr	Status
BME BI Technical Elective[5]	3		BME BI Technical Elective[5]	3	
BME BI Technical Elective[5]	3		BME BI Technical Elective[5]	3	
BME 187 - Capstone Design I	3		BME 188 - Capstone Design II	3	
BME 181 - Biomedical Eng Lab II	2		General Education Elective[2]	3	
General Education Elective[2]	3		General Education Elective[2]	3	
Total credits	*14*		*Total credits*	*15*	

1. Foundational Writing & Information Literacy: Students must take either ENGS 001 or HCOL 085 (only if the student is enrolled in the HCOL). Students transferring from the College of Arts &Sciences can use a TAP class for this requirement.
2. Required General Education Elec (GenEd): 15cr of approved GenEd electives, including 3cr of D1 and 3cr of D1 or D2.
3. BME Biosensing & Instrumentation Electives: Any 100-level or higher EE course. CE, ENGR, ME, CS, MATH, STAT and life sciences courses with approval of BME advisor. At least 6 hours must be 100-level or above engineering courses.
4. First-Year Design Experience: Transfer students without applicable transfer credit have the option of either taking BME 001 or replacing the credits with engineering course work at the 100-level or higher.
5. BME BI Technical Electives: BIOC 212, CE 359, CS 256, CS 302*, CS 352*, EE 207, EE 210, EE 213, EE 227, EE 228, EE 275, EE 278, EXMS 240, HLTH 135, MATH 300*, MATH 303*, ME 201, ME 208, ME 209, ME 285, ME 312*, MLRS 140, MLRS 175, MPBP 323*, PATH 101, RMS 213, RMS 250, STAT 200 & STAT 211. Other courses may be pre-approved by advisor and program head. At least 9 credits must be at the 200-level or above. Note that 300-level courses (*) require instructor permission for undergraduate enrollment.*