

Study Plan for the B.Sc. Degree in Biomedical Engineering

First year

First semester

Course #	Course title	C.H.	Pre/Co Requisite
CIS 100	Computer skills	3	----
MATH 101	Calculus I	3	----
PHYS 101	General physics I	3	----
CHEM 101	General chemistry I	3	----
Eng 111	English Language	3	Passing Eng 99/---
MS 100	Military science	3	----
Total		18	

Second semester

Course #	Course title	C.H.	Pre/Co Requisite
Eng 112	Communication skills 2	3	Eng 111
Arb 101	Arabic 1	3	----
Arb 103	Arabic language lab	1	----
PHYS 102	General physics II	3	PHYS 101
PHYS 107	General Physics lab.	1	---/PHYS 102
CHEM 102	General chemistry II	3	CHEM 101/---
CHEM 107	General chemistry lab.	1	---/CHEM 102
MATH 102	Calculus II	3	MATH 101/---
Total		18	

Second Year

First semester

Course #	Course title	C.H.	Pre/Co Requisite
BIO 103	General biology	3	---/---
BIO 107	General biology practical	1	---/BIO 103
CS 115	Programming in C++ language	3	CIS 100/---
ME 101	Engineering workshops	2	---/---
ME 101A	Engineering workshops Lab	0	---/ME 101
EE 202	Communication skills for engineers	2	Completion of 90 C.H.
MATH 201	Intermediate analysis	3	MATH 102/--
MATH 203	Ordinary differential equations	3	MATH 102/--
Total		17	

Second semester

Course #	Course title	C.H.	Pre/Co Requisite
EE 212	Electric circuits analysis	3	PHYS 102/MATH 203
EE 240	Introduction to linear systems	3	CS 115, MATH 201/---
ME 215	Engineering mechanics	3	PHYS 101/---
CHEM 217	Organic chemistry	3	CHEM 102/---
ME 200	Engineering drawing A	1	CIS 100/---
CPE 254	Digital logic design and computer architecture (for non CPE students)	3	CIS 100/---
Total		16	

Third Year

First semester

Course #	Course title	C.H.	Pre/Co Requisite
MED 236A	Physiology	3	BIO 107/---
MED 236B	Physiology lab	1	---/MED 236A
BME 321A	Analysis of biomedical signals and systems	3	EE 240/---
EE 213	Electric circuits lab	1	EE 212/---
BME 311	Medical electronics I	3	EE 212/---
ME 343	Fluid mechanics	3	PHYS 101, MATH 203/---
IE 341	Engineering economy	2	Math 201/---
Total		16	

Second semester

Course #	Course title	C.H.	Pre/Co Requisite
CHEM 262	Biochemistry	3	CHEM 217, BIO 103/---
CHEM 266	Biochemistry lab	1	---/CHEM 262
BME 312	Medical electronics II	3	BME 311/---
BME 317	Medical electronics lab.	1	EE 213/BME 312
ChE 340	Thermodynamics	3	Math 203/---
BME 302	Statistics for biomedical engineers	3	---/BME 321A
EE 305	Numerical methods for engineers	3	CS 115, MATH 203/---
Total		17	

Forth Year

First semester

Course #	Course title	C.H.	Pre/Co Requisite
University requirement elective course	Of student's choice	3	----
BME 411	Biomedical instrumentation I	3	BME 312, MED 236A/---
EE 440	Control systems	3	BME 321A/---
CPE 353	Microprocessors systems (for non CPE students)	3	CPE 254/---
ChE 400	Professional ethics for engineers	1	Fourth year standing/---
BME 421	Digital signal processing	3	BME 321A/BME 302
Total		16	

Second semester

Course #	Course title	C.H.	Pre/Co Requisite
University requirement elective course	Of student's choice	3	----
EE 442	Control systems lab	1	EE 440/---
BME 412	Biomedical Instrumentation II	3	BME 411/---
BME 442A	Introduction to biomedical materials	3	CHEM 262, ME 215/---
BME 452	Biomedical transport phenomenon	3	BME 302, MED 236A, EE 305, ChE 340/---
BME 418	Biomedical instrumentation lab I	1	BME 411/BME 412
BME 438	Digital logic design and computer architecture lab	1	CPE 353/---
Total		15	

Summer Semester

Course #	Course Title	C.H.	Pre/Co Requisite
BME 490	Engineering training	3	Completion of 117 Credit hours/---

Fifth Year

First semester

Course #	Course title	C.H.	Pre/Co Requisite
University requirement elective course	of student's choice	3	----
Track elective course	of student's choice	3	Choice dependent
Track elective course	of student's choice	3	Choice dependent
BME 531A	Physiological modeling	3	BME 452/---
BME 517	Biomedical instrumentation lab II	1	BME 418/---
BME 591	Graduation project I	1	Completion of 114 C.H, BME 412/---
Total		14	

Second semester

Course #	Course title	C.H.	Pre/Co Requisite
Track elective course	of student's choice	3	Choice dependent
Track elective course	of student's choice	3	Choice dependent
BME 592	Graduation project II	3	BME 591/---
BME 594	Seminar in biomedical engineering	0	---/BME 591
Total		9	

Distribution of credit hours over academic year and semester standing

Year standing	First semester	Second semester	Summer semester	Total
First	18	18	0	36
Second	17	16	0	33
Third	16	17	0	33
Forth	16	15	3	34
Fifth	14	9	0	23
Total				159

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