



**WRIGHT STATE
UNIVERSITY**

**Bachelor of Science
Biomedical Engineering**
Curriculum A: Traditional BME Program

2008-2009

Student's Name _____ UID # _____

First Year	Qtr	Grade	(52 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
BME 195	2.0	_____	_____	Fundamentals of Biomedical Engineering	•	•	X	•
CEG 220	4.0	_____	_____	Introduction to "C" Programming for Engineers (EGR 101 or MTH 229)	a	X	a	a
CHM 121	3.0	_____	_____	General Chemistry I..... (High School Chemistry or CHM 101, MPL 4, CHM 125c)	X	a	•	a
CHM 125	2.0	_____	_____	General Chemistry I Lab..... (High School Chemistry or CHM 101, MPL4, CHM 121c)	X	a	•	a
CHM 122	3.0	_____	_____	General Chemistry II..... (CHM 121, CHM 125, CHM 126c)	•	X	a	a
CHM 126	2.0	_____	_____	General Chemistry II Lab..... (CHM 121, CHM 125, CHM 122c)	•	X	a	a
EGR 101	5.0	_____	_____	Introductory Mathematics for Engineering Applications..... (MPL 5 + HS Trig or MTH 131)	X	a	a	•
EGR 190	4.0	_____	_____	Fundamentals of Engineering and Computer Science .. (freshmen only, others take ISE 210)	X	a	a	•
ENG 101	4.0	_____	_____	Academic Writing and Reading	X	a	a	a
ENG 102	4.0	_____	_____	Writing in Academic Discourse (C or higher in ENG 101)	a	X	a	a
MTH 229	5.0	_____	_____	Calculus I..... (MTH 131 or MPL 7)	a	X	a	a
MTH 230	5.0	_____	_____	Calculus II..... (MTH 229)	a	a	X	a
PHY 240	4.0	_____	_____	General Physics I..... (EGR 101 or MTH 229, PHY 200c)	a	•	X	•
PHY 200	1.0	_____	_____	General Physics I Laboratory (PHY 240c)	a	•	X	•
___	4.0	_____	_____	General Education select one from Area II History..... (See GE sec of UG Cat)	a	a	X	a
Credit Hours Per Quarter in the Model Program.....					18	18	16	0

Second Year	Qtr	Grade	(52 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
ANT 310	5.0	_____	_____	Human Anatomy & Physiology I (CHM 121, ANT 310Lc)	X	a	•	•
ANT 311	5.0	_____	_____	Human Anatomy & Physiology II (C or higher in ANT 310, ANT 311Lc)	•	X	a	•
ANT 312	5.0	_____	_____	Human Anatomy & Physiology III (C or higher in ANT 311, ANT 312Lc)	•	•	X	a
EE 301	4.0	_____	_____	Circuit Analysis I (EGR 101 or MTH 230, PHY 242, EE 302c)	a	a	X	a
EE 302	1.0	_____	_____	Circuit Analysis I Laboratory (EE 301c)	a	a	X	a
ISE 301	4.0	_____	_____	Statistical Methods for Testing, Development and Manufacturing I..... (MTH 230 or EGR 101)	X	a	a	•
ME 212	4.0	_____	_____	Statics (EGR 101 or MTH 231, PHY 240)	X	a	a	a
ME 213	4.0	_____	_____	Dynamics (CEG 220, C or higher in ME 212)	a	X	a	a
MTH 231	5.0	_____	_____	Calculus III..... (MTH 230)	a	a	X	a
PHY 242	4.0	_____	_____	General Physics II..... (MTH 230, PHY 240, PHY 202c)	X	a	•	•
PHY 202	1.0	_____	_____	General Physics II Laboratory (PHY 242c)	X	a	•	•
PHY 244	5.0	_____	_____	General Physics III..... (MTH 230, PHY 240, PHY 204c)	•	X	a	•
PHY 204	1.0	_____	_____	General Physics III Laboratory (PHY 244c)	•	X	a	•
___	4.0	_____	_____	General Education select one from Area II Non-Western World (See GE sec of UG Cat)	a	X	a	a
Credit Hours Per Quarter in the Model Program.....					18	19	15	0

Third Year	Qtr	Grade	(47 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
BME 419	3.0	_____	_____	Biofluid Mechanics (ME 212, EGR 101 or MTH 235, BME 428)	•	X	•	•
BME 420	3.0	_____	_____	Biomedical Heat and Mass Transfer..... (BME 419)	•	•	X	•
BME 422*	4.0	_____	_____	Engineering Biophysics (EE 321)	•	•	X	•
BME 428	5.0	_____	_____	Biomechanics and Bioenergetics..... (ME 212, ME 213)	X	•	•	•
BME 460	5.0	_____	_____	Biomedical Electronics..... (EE 301, EE 302)	•	X	•	•
BME 463	2.0	_____	_____	Biomedical Computers..... (CEG 220 or EGR 101, EE 301 or EE 301c)	X	•	•	•
BME 464	4.0	_____	_____	Microprocessors for Biomedical Engineering (BME 460)	•	•	X	•
EE 321	4.0	_____	_____	Linear Systems I..... (EE 301, EE 302)	a	X	a	a
ISE 407	4.0	_____	_____	Industrial Ergonomics (ISE 301)	X	•	•	•
MTH 235	5.0	_____	_____	Differential Equations with Matrix Algebra..... (MTH 231)	X	a	a	•
___	4.0	_____	_____	General Education select one from Area III..... (See GE sec of UG Cat)	a	a	X	a
___	4.0	_____	_____	General Education select one from Area III (See GE sec of UG Cat)	a	X	a	a
Credit Hours Per Quarter in the Model Program.....					16	16	15	0

Fourth Year	Qtr	Grade	(45 credit hours)	Pre/Co-requisites	Fa	Wi	Sp	Su
BME 439*	4.0	_____	_____	Biotransport and Artificial Organs (BME 420, BME 463)	•	X	•	•
BME 440	4.0	_____	_____	Biomaterials (ME 213, EE 321, BME 463)	X	•	•	•
BME 461	4.0	_____	_____	Bioinstrumentation I (ANT 312, BME 460, EE 321)	X	•	•	•
BME 462	4.0	_____	_____	Bioinstrumentation II (BME 461)	•	X	•	•
BME 470	4.0	_____	_____	Photon Radiation (ANT 312, PHY 242, PHY 244)	X	•	•	•
BME 471	4.0	_____	_____	Medical Imaging (BME 470)	•	X	•	•
BME 491	3.0	_____	_____	Biomedical Engineering Design I (BME 420, BME 464, BME 461c)	X	•	•	•
BME 492	1.0	_____	_____	Biomedical Engineering Design II (BME 491, BME 402c)	•	X	•	•
BME 402	2.0	_____	_____	Biomedical Engineering Design II Lab (BME 491, BME 492c)	•	X	•	•
BME 493	1.0	_____	_____	Biomedical Engineering Design III (BME 492, BME 403c)	•	•	X	•
BME 403	2.0	_____	_____	Biomedical Engineering Design III Lab (BME 492, BME 493c)	•	•	X	•
_____	4.0	_____	_____	General Education select one from Area IV (See GE sec of UG Cat)	a	a	X	a
_____	4.0	_____	_____	General Education select additional course from Areas II, III and IV . (See GE sec of UG Cat)	a	a	X	a
_____	4.0	_____	_____	General Education select additional course from Areas II, III and IV . (See GE sec of UG Cat)	a	a	X	a
Credit Hours Per Quarter in the Model Program.....					15	15	15	0

TOTAL PROGRAM CREDIT HOURS

196

_____ **Meets or exceeds ABET minimum requirement of 37.5% engineering credit hours (73.5 credit hours).**

Advisor Initials

General Information:

Two separate curricula are available for the B.S.E. degree in Biomedical Engineering:

- 1. Curriculum A** prepares the graduate for the engineering industry employment. Graduates are also prepared for graduate training in biomedical engineering or in a traditional engineering area.
- 2. Curriculum B** also satisfies the admission requirements for medical, osteopathic, dental, or veterinary schools. Graduates are also well prepared to pursue graduate training in engineering or the life sciences.
- 3. Program Planning** - the student, in cooperation with his/her advisor, should use a Program Guide and the corresponding catalog to plan his/her program. Any problem, which arises in connection with a particular Program Guide, should be referred to the student's advisor.

NOTES:

- 1. Use this guide, advisor consultations, and the Undergraduate Catalog to carefully plan a program of study.** Some courses are offered only once or twice a year. Complete mathematics and physics courses early since they are prerequisite to many engineering courses.
- 2. In the right hand columns**
 (X) denotes courses in a model program with a non-conflicting schedule for a full-time student;
 (a) denotes courses likely to be available;
 (•) denotes courses normally not available. Check the Class Schedule for current information.
- 3. Course numbers in parentheses** denote a prerequisite course except when followed by "c" indicating a co-requisite course.
- *4. BME 485 Six Sigma for Engineers** may replace either BME 422 or BME 439. BME 485 is 4.0 credit hours, taught Winter annually, and has a prerequisite of ISE 301. Student must see his or her advisor prior to the third year to discuss the following replacement options:
 - BME 485 replaces BME 422 (a third year Winter Gen Ed would move to Spring)
 - BME 485 replaces BME 439