



# Bachelor of Science Biomedical Engineering - Curriculum B- Pre-Med 2015-2016

Name \_\_\_\_\_ UID# \_\_\_\_\_ U \_\_\_\_\_ Phone# \_\_\_\_\_

\*2 IW and 2MC required in WSU Core

First Year	Cr	IW/MC Sem	Grade	(34 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
BIO 1120	4.0			Cells and Genes .....MPL level 30 or AKEKS level 46-60 or MTH 1280		★	a	.
CHM 1210	3.0			General Chemistry I .....(HS CHM or CHM 1010),(MTH 1280 or ALEKS level 46),CHM 1210Lc		★	a	a
CHM 1210L	2.0			General Chemistry I Lab .....CHM 1210c		★	a	a
EGR 1010	4.0	IW		Intro Math for Egr Applications (E-2).....(ALEKS level 61 or MPL 40 & HS Trig) or ACT MTH 25 or MTH 1350		★	a	.
ENG 1100	3.0			English (E-1) .....ACT23, or (SAT Verbal 530 or WPL 40)		★	a	a
CHM 1220	3.0			General Chemistry II .....CHM 1210, CHM1210L, CHM 1220Lc		a	★	a
CHM 1220L	2.0			General Chemistry II Lab .....CHM 1220c		a	★	a
MTH 2300	4.0			Calculus I (E-2 Additional).....MTH 1350 or ALEKS level 50		a	★	a
PHY 2400	4.0			General Physics I (E-6) .....(MTH 2300 Grade C or Better or EGR 1010 Grade C or Better), PHY 2400Lc		a	★	a
PHY 2400L	1.0			General Physics I Lab (E-6) .....PHY 2400c		a	★	a
PSY 1010	4.0	IW		Introduction to Psychology (Social Sciences) (E-5).....		a	★	a
Credit Hours Per Semester in the Model Program.....						16	18	0

Second Year	Cr	Sem	Grade	(30 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
ANT 3100	4.0			Human Structure & Function I .....(CHM 1020 or CHM 1210 Grade C or Better), ANT 3100Lc		★	a	.
CHM 2110	3.0			Organic Chemistry I ..... CHM 1220, CHM 1220L, CHM 2110Lc		★	a	a*
CHM 2110L	2.0			Organic Chemistry I Lab .....CHM 2110c		★	a	a*
MTH 2310	4.0			Calculus II (E-2 Additional) .....MTH 2300		★	a	a
SOC 2000	3.0	IW		Introduction to Sociology (Social Sciences) (E-5).....		★	a	a
ANT 3120	4.0			Human Structure & Function II .....ANT 3100 Grade C or Better, ANT 3120Lc		.	★	a
CHM 2120	3.0			Organic Chemistry II .....(CHM 2110 and CHM 2110L), CHM 2120Lc		.	★	a*
CHM 2120L	2.0			Organic Chemistry II Lab .....(CHM 2110 and CHM 2110L), CHM 2120c		.	★	a*
PHY 2410	4.0			General Physics II (E-6) .....PHY 2400, MTH 2300,{ MTH 2310}, PHY 2410Lc		a	★	a
PHY 2410L	1.0			General Physics II Lab (E-6) .....MTH 2300, {MTH 2310}, PHY 2410c		a	★	a
MTH 2350	4.0			Differential Equations w/ Matrix Algebra .....MTH 2310		a	★	a
Credit Hours Per Semester in the Model Program.....						16	18	0

Third Year	Cr	Sem	Grade	(31 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
BME 3211*	4.0			Human Biomechanics I .....(EGR 1010 or MTH 2300) and PHY 2400, BME 3211Lc		★	a	.
BME 3511	4.0			Bioelectronics I.....(EGR 1010 or MTH 2300) and PHY 2410, BME 3511Lc		★	.	.
BME 3540	3.0			Biomedical Computation ..... {MTH 2350}		★	.	.
BMB 4210***	3.0			Biochemistry and Molecular Biology.....CHM 2120		★	.	.
BME 3212*	3.0			Human Biomechanics II .....BME 3211		a	★	.
BME 3512	4.0			Bioelectronics II .....BME 3511, BME 3512Lc		.	★	.
BME 3530	3.0			Biomedical Signals & Systems .....{BME 3540}, BME 3511		.	★	.
EGR 3350	3.0			Tech Comm for Engineers & Computer Scientists(E-1) .....ENG 1100		a	★	a
Credit Hours Per Semester in the Model Program.....						14	13	0

Fourth Year	Cr	Sem	Grade	(32 Credit hours)	Pre/Co-requisites	Fa	Sp	Su
BME 4410	3.0			Biothermodynamics .....BME/ISE 3211		★	.	.
BME 4550	4.0			Bioinstrumentation .....ANT 3120, BME 3512, BME 3530		★	.	.
BME 4701	4.0			Medical Imaging .....ANT 3120, PHY 2410		★	.	.
BME 4910**	3.0	IW		Senior Design I .....BME 3212, {BME 4550}		★	.	.
_____	3.0			Global Traditions/History (E-3) .....		★	a	a
BME 4421	3.0			Biotransport .....BME 4410, MTH 2350		.	★	.
BME 4920**	3.0	IW		Senior Design II .....BME 4910		.	★	.
ISE 2211	3.0			Statistics for Engineers .....EGR 1010 or MTH 2300		a	★	a
_____	3.0			Global Traditions/Interdisciplinary (E-3) .....Must be Multicultural		a	★	a
_____	3.0			Arts/Humanities (E-4) .....Must be Multicultural		a	★	a
Credit Hours Per Semester in the Model Program.....						17	15	0

**TOTAL SEMESTER CREDIT HOURS**.....127.0

CECS Admission Requirements met \_\_\_\_\_ Initial \_\_\_\_\_ Date \_\_\_\_\_

Meets or exceeds ABET minimum requirements of 37.5% engineering credit hours (47.62 semester credit hours).

Advisor Initials \_\_\_\_\_

**General Information:**

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.
- \* 4 Except for BME 3211 & 3212, students must have met the CECS entrance requirements in order to register for CECS courses number 3000 or higher.

**Additional Requirements:**

- Students are required to have two Multicultural Competence courses from any of the Wright State Core MC designated courses, Study Abroad courses, or Service Learning courses.
- Students are also required to have two Integrated Writing (IW) courses from the Wright State Core.

**NOTES:**

1. **Use this guide, advisor consultations, and the Undergraduate Catalog to carefully plan a program of study.** Most courses are offered only once or twice a year. Complete mathematics and physics courses early since they are prerequisite to many engineering courses. Delaying these courses may delay completion of the program. Pay close attention to prerequisite and corequisite information listed on the right of the guide.
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 number in { } denotes may be either a prerequisite or corequisite course.
4. Course number followed by "c" denotes a corequisite course.
- \*\* 5. EGR 4910 and EGR 4920 may be substituted for BME 4910 and BME 4920 with department approval.
6. \*CHM 2110 offered Summer A Term  
\*CHM 2120 offered Summer B Term
- \*\*\*7 For MCAT prep, students are advised to take BMB 4230 in the Spring semester.