

Name \_\_\_\_\_ UID# U \_\_\_\_\_ \*2 IW and 2MC required in WSU Core \*Guide may be subject to program change

First Year	Cr	W/MC	Sem	Grade	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
MTH 2300	4.0				Calculus I (E-2 Additional) .....MTH 1350, or MPL 50 or ALEKS level 76	*	a	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
	3.0				Arts/Humanities (E-4) .....	a	*	a
PHY 2400	4.0				General Physics I (E-6) .....(MTH 2300 Grade D 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
<b>Credit Hours Per Semester in the Model Program.....</b>						<b>16</b>	<b>13</b>	<b>0</b>

Second Year	Cr	Sem	Grade	Pre/Co-requisites	Fa	Sp	Su	
ANT 2100 OR	4.0				Human Anatomy and Physiology I .....ANT 2100Lc	*	a	.
ANT 3100					Human Structure & Function I .....(CHM 1020 or CHM 1210 Grd 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/MC			Introduction to Sociology (Social Sciences) (E-5).....	*	a	a
ANT 2120 OR	4.0				Human Anatomy and Physiology II.....ANT 2100 Grade C or Better, ANT 2100Lc	.	*	a
ANT 3120					Human Structure & Function II .....ANT 3100 Grade C or Better, ANT 3120Lc	.	*	a
CHM 2120	3.0				Organic Chemistry II .....(CHM 2110, CHM 2110L), CHM 2120Lc	.	*	a*
CHM 2120L	2.0				Organic Chemistry II Lab .....(CHM 2110, 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
<b>Credit Hours Per Semester in the Model Program.....</b>						<b>16</b>	<b>18</b>	<b>0</b>

Third Year	Cr	Sem	Grade	Pre/Co-requisites	Fa	Sp	Su	
*BMB 4001*	3.0				Fundamentals of Biochemistry (Recommended for MCAT but not required for BME B).....	a	.	a
BME 3211*	4.0				Human Biomechanics I ..... MTH 2300, PHY 2400, BME 3211Rc	*	.	.
BME 3511	4.0				Bioelectronics I..... MTH 2300, PHY 2410, BME 3511Lc	*	.	.
BME 3540	3.0				Biomedical Computation .....MTH 2350	*	.	.
	3.0				Social Science (E-5).(*PSY 1010 is recommended for MCAT but not required for BME B*).....	*	.	.
BME 3212*	3.0				Human Biomechanics II .....BME/ISE 3211	.	*	.
BME 3512**	4.0				Bioelectronics II .....ISE/BME 3511, BME 3512Lc	.	*	.
BME 3530**	3.0				Biomedical Signals & Systems .....BME 3540, BME 3511	.	*	.
*ISE 2211*	3.0				Statistics for Engineers (Recommended for MCAT but not required for BME B).....EGR 1010 or MTH 2300	a	*	a
EGR 3350	3.0				Tech Comm for Engineers & Computer Scientists(E-1) .....ENG 1100	a	*	a
	3.0				Global Traditions/History (E-3).....	a	*	a
<b>Credit Hours Per Semester in the Model Program.....</b>						<b>14</b>	<b>16</b>	<b>0</b>

Fourth Year	Cr	Sem	Grade	Pre/Co-requisites	Fa	Sp	Su	
BME 4440	4.0				Biomaterials.....BME 3212, BME 3540, BME 4440Lc	*	.	.
BME 4550	4.0				Bioinstrumentation .....(ANT 2120 or ANT 3120), BME 3512, BME 3530, BME 4550Lc	*	.	.
BME 4703	4.0				Medical Imaging .....(ANT 2120 or ANT 3120), PHY 2410	*	.	.
BME 4910	3.0	IW			Senior Design I .....BME 3212, BME 3512, (ANT 2100 or ANT 3100), EGR 3350	*	.	.
BME 4421	3.0				Biotransport .....(ANT 2120 or ANT 3120), MTH 2350	.	*	.
BME 4920	3.0	IW			Senior Design II .....BME 4910	a	*	.
	3.0				Global Traditions/Interdisciplinary (E-3) .....	a	*	a
	3.0				Technical Elective (see back of guide for approved courses).....	a	*	a
<b>Credit Hours Per Semester in the Model Program.....</b>						<b>15</b>	<b>12</b>	<b>0</b>

**TOTAL SEMESTER CREDIT HOURS.....120.0**

**Meets or exceeds ABET minimum requirements of 37.5% engineering credit hours (45 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 BIE courses number 3000 or higher.
- \*\* 5 Students are strongly recommended to take BME 3512 and BME 3530 during the same semester.

**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**  
(★) 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. \*CHM 2110 offered Summer A Term  
\*CHM 2120 offered Summer B Term
6. Independent study or undergraduate research including departmental honors research can fulfill a maximum of three credit hours of TE requirements.

APPROVED BME Pre-Med TECHNICAL ELECTIVES					
Course	Title	Pre-req	Fa	Sp	Su
BME 4350 (3)	Computational Neuroergonomics & Healthcare Applications.....	BME students must submit a pre-req petition to take this course	a	.	.
BME 4450 (3)	Tissue Engineering & Regenerative Medicine.....	(ANT 2120 or ANT 3120) and BME 4440	.	a	.
BME 4460 (3)	Nanomedicine Fundamentals.....	BME 4440 and (ANT 2120 or ANT 3120)	.	a	.
BME 4710 (3)	Optical Imaging.....	PHY 2410 and PHY 2410L	a	.	.
BME 4720 (3)	Biomedical Optics.....	PHY 2410 and (ANT 2120 or ANT 3120)	.	a	.
BME 4950 (3)	Undergraduate Research in Biomedical Engineering II .....	(Department Permission)	a	a	a
BME 4960 (1-4)	Departmental Honors Research.....	(Application and Department Permission)	a	a	a
BME 4990 (3)	Undergraduate Independent Studies in Biomedical Engineering II.....	(Department Permission)	a	a	a
EGR 3940/4940	Engineering Internship.....	30 hours per week or 450 hours total of internship will count as a 3 credit hour technical elective	a	a	a

