

## FAB Engineering – Biological Engineering Specialization

Suggested GUIDE only. Semesters of offerings subject to change.

Rev. 6/6/13

**^** denotes pre-health option

Name: \_\_\_\_\_

2013-2014

ID #: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Entered OSU: (Qtr) \_\_\_\_\_ (Acad Yr) \_\_\_\_\_

*General Education and Tech Elec course lists available in 260 Ag Eng Bldg*

**NOTE: Bolded courses offered once/year.**

Yr	Autumn Semester	Spring Semester	Yr.
1	<b>Engineer 1110.10</b> (Intro to OSU and FABE I) 0.5 Biology 1113 (Quantitative Biology) 4 Chemistry 1210 (General Chemistry I) 5 * Engineer 1181.xx (Fundamentals of Engineering I) 2 Math 1151 (Engineering Calculus I) 5 * Note: Honors and Scholars versions available	<b>Engineer 1120.10</b> (Intro to OSU and FABE II) 0.5 Chemistry 1220 (General Chemistry II) 5 * Engineer 1182.xx (Fundamentals of Engineering II) 2 Math 1172 (Engineering Calculus II) 5 Physics 1250 (Mechanics, Thermal Physics, Waves) 5 <i>General Education course</i>	<b>33</b>
	Target/Actual: <span style="border: 1px solid black; padding: 2px;">16.5</span>	Target/Actual: <span style="border: 1px solid black; padding: 2px;">17.5</span>	
	<b>FABE 2100</b> (Energy in Bio-Systems) 1 Math 2177 (Mathematical Topics for Engineers) 4 Physics 1251 (E&M, Optics, Modern Physics) 5 English 1110 (First-year English Composition, Gen Educ) <i>General Education course</i>	<b>FABE 2110</b> (Fluid Mechanics in FABE) 4 <b>FABE 2720</b> (or ^Second Biology course) 2 (3) Chemistry 2310 (Intro Organic Chemistry) or ^2510 (Orgnc Chem+lab) 4 Engineering 1221 or CSE 1222 (Computer Programming) 2 Engineer 4410.01 (Computer Graphics - AutoCad) 2 Mech Eng 2040 (Statics and Mechanics of Materials) 4	<b>33-34</b>
Target/Actual: <span style="border: 1px solid black; padding: 2px;">16</span>	Target/Actual: <span style="border: 1px solid black; padding: 2px;">18</span>		
3	<b>FABE 2120</b> (Thermodynamics in FABE) 4 ISE 2040 (Engineering Economics) 2 ISE 3800 (Engineering Project Management) 2 Advanced Biology elective course (^Organic Chem + lab) Engineering 2367 (Writing for Engineer, Gen Educ)	<b>FABE 3130</b> (Heat & Mass Transfer in FABE) 4 <b>FABE 3140</b> (Professional Development in FABE) 1 <b>FABE 3150</b> (System Dynamics & Electricity) 4 <b>FABE 3510</b> (Introduction to Biological Engineering) 4 Advanced Biology elective course (^Biochemistry 4511) <i>General Education course</i>	<b>34</b>
	Target/Actual: <span style="border: 1px solid black; padding: 2px;">16</span>	Target/Actual: <span style="border: 1px solid black; padding: 2px;">18</span>	
	<b>FABE 4900</b> (Capstone Design I) 3 <b>FABE 5160</b> (Electronics, Measurement, & Instrumentation) 4 Technical Elective (^Microbiology) Technical Elective <i>General Education course</i>	<b>FABE 4170</b> (Program Review for FABE) 0 <b>FABE 4910</b> (Capstone Design II) 3 Technical Elective [^Mol Gen 4500 or Physiol 3101 (+ 3102/opt)] Technical Elective (^Anatomy/med) General Education course General Education course	<b>31</b>
Target/Actual: <span style="border: 1px solid black; padding: 2px;">16</span>	Target/Actual: <span style="border: 1px solid black; padding: 2px;">15</span>		

> Check On-line Course Bulletin for availability of other courses.

### GENERAL EDUCATION (24 hrs.)

A total of 18 hours (or 5 courses) must be taken between History, Social Sciences, and Arts & Humanities, PLUS 6 hours (2 courses) of English and Communication (Second Writing Course)

History Survey (3hrs) \_\_\_\_\_ ( ) \_\_\_\_\_

English and Communication Skills (6 hrs.)

English 1110.xx \_\_\_\_\_ ( ) \_\_\_\_\_

(2367. ) \_\_\_\_\_ ( ) \_\_\_\_\_

2nd History or Cultures & Ideas (3 hrs) \_\_\_\_\_ ( ) \_\_\_\_\_

**Total:** \_\_\_\_\_

Literature (3 hrs.) \_\_\_\_\_ ( ) \_\_\_\_\_

Select appropriately identified GE courses eligible to double count from list on the back of this sheet

Ethics (3 hrs) (May overlap another GE category) \_\_\_\_\_ ( ) \_\_\_\_\_

Visual & Performing Art (3 hrs.) \_\_\_\_\_ ( ) \_\_\_\_\_

Social Diversity in the US (3 hrs) (May overlap another GE category) \_\_\_\_\_ ( ) \_\_\_\_\_

Social Sciences (6 hrs., only 1 per group) \_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

### TECHNICAL ELECTIVES: (9-10 hrs.)

(any engineering or biological science course, level ≥ 3000)

\_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

Total: \_\_\_\_\_

### Advanced Biology Electives: (10 hrs.)

\_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

\_\_\_\_\_ ( ) \_\_\_\_\_

Total: \_\_\_\_\_

### Hours Required

Required Engineering Courses (ABET 48): 48

Math and Science Courses (ABET 32): 41

General Education: 24

Technical Electives: 9

Advanced Biology Electives: 10

**Total:** \_\_\_\_\_

Minimum Required to Graduate:

**132**