

Curriculum Schedule – Pre-Med Track

Bachelor of Science in Biosystems Engineering (ABET Accredited) 2008-2009

This track, in addition to satisfying ABET requirements for engineering accreditation, satisfies the standard requirements for entry into the pre-health field (medical or dental school). The major deviation from the standard curriculum is inclusion of organic chemistry (8 units including laboratories) as technical elective units.

Required Curriculum:

First Semester	Freshman Year (2008-2009)		Second Semester
Course	Units	Course	Units
ENGR 102 (Intro to engineering)	3	MATH 129 (Calculus with applications 2)	3
MATH 125 (Calculus with applications 1)	3	CHEM 152 (General Chemistry II)	4
CHEM 151 (General Chemistry I)	4	PHYS 141 (Introductory mechanics)	4
ENGL 101 (First Year Composition 1)	3	ENGL 102 (First Year Composition 2)	3
INDV/TRAD*	3	INDV/TRAD	3
Total	16	Total	17
Sophomore Year (2009-2010)			
ABE 296a (Seminar in BE)	1	ABE 205 (Biosys Engin. Analt. Skills Workshop)	3
CE 214 (Statics)	3	AME 250 (Dynamics).....	3
MATH 223 (Vector calculus)	4	MATH 254 (Ordinary Differential Eqns)	3
ABE 284 (Biosystems Transport Phen).....	3	PHYS 241 (Intro. electricity and magnetism)	4
MCB 181R&L or PLS 130	4	MCB182 or MIC205A&L or PSIO 201	4
Total	15	Total	17
Junior Year (2010-2011)			
ABE 320 (Computer aided design)	3	ABE 423 (Dynamics of biological systems).....	3
CE 218 or AME 331 (Hydr. or Flu. mech.)	3	ABE 484 (Advanced biosystems transport).....	3
CE 215 or AME 324A (Mech of materials)	3	ABE Elective**	3
SIE 305 (Engin. Probability and Statistics).....	3	ENGL 308 (Technical writing).....	3
CHEM 241a (Organic Chemistry)	3	CHEM 241b (Organic Chemistry)	3
CHEM 243a (Organic Chemistry Lab).....	1	CHEM 243b (Organic Chemistry)	1
Total	16	Total	16
Note – MCAT normally taken this semester.			
Senior Year (2011-2012)			
ABE 496a (Seminar in Engr. Careers & Prof.).....	1	ABE 498b (Biosystems Engineering Design 2).....	3
ABE 498a (Biosystems Engineering Design 1)	3	ABE Elective**	3
ABE 447 (Sensors and controls)	3	ABE 393 (Internship).....	1
ABE Elective**	3	ENGR 211P (Engineering economics)	1
INDV/TRAD*	3	TECH Elective***	1
INDV/TRAD*	3	INDV/TRAD*	3
Total	16	INDV/TRAD*	3
		Total	15

* INDV/TRAD courses must meet University general education requirements. One course must be recognized by the university as focusing on non-western culture, race, gender, or ethnicity. Tier 1 & 2 Ind. & Soc., Trad. & Cul., and GRCE course requirements are detailed on page 11.

**ABE Electives must contain elements of engineering design. See the following pages for a list of suitable courses.

***Technical electives depend upon area of emphasis and advisor's approval. Suggested technical electives are listed on following pages.