

2010 11 CHECKLIST: Biological Systems Engineering General Program Option

Student: _____ Student ID: _____ Telephone No.: _____

2010-11 Course Requirements for BSE Degree – Courses Common to All Option Areas

Courses in this table are not to be included in calculations used to check the 2.35 GPA program entrance requirement

Crds	Sem/Yr Taken	Grade	Requirement	Course Taken to Meet Requirement
_____	_____	_____	University Communication A Course	_____
_____	_____	_____	University Communication B Course	_____
_____	_____	_____	Ethnic Studies Course (minimum of 3 credits of any e classified course)	_____
_____	_____	_____	Humanities Courses (minimum of 6 credits of H, L or Z classified courses)	_____
_____	_____	_____	Social Science Course (minimum of 3 credits of any S or Z classified course that is not an Econ or AAE course)	_____
_____	_____	_____	International Studies Course (minimum of 3 credits from required list. Course can be used to meet any other curriculum requirement)	_____
_____	_____	_____	Economics Course (AAE 215, ECON 101, 102 or 111)	_____

Free Electives

Courses in this table are not to be included in calculations used to check the 2.35 GPA program entrance requirement

Crds	Sem/Yr Taken	Grade	Course
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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2010-11 Course Requirements for BSE Degree – Courses Common to All Option Areas

All courses in this table must be included in calculations used to check the 2.35 GPA program entrance requirement

Crds	Sem/Yr Taken	Grade	Requirement	Course Taken to Meet Requirement
			MATH 221 (5) Calculus and Analytic Geometry	
			MATH 222 (5) Calculus and Analytic Geometry	
			MATH 234 (3) Calculus - Functions of Several Variables	
			Intro Statistics for Engineers (STAT 224 (3) or 324 (3))	
			Chemistry (CHEM 109 (5) or CHEM 103 (4) and CHEM 104 (5))	
			COMP SCI 310 (3) Problem Solving (preferred) or CBE 255 (3) or CIV ENGR 291 (3)	
			Agr. and Life Science Course (min. of 3 crds from required list). Food and Bioprocess Engrs must take FOOD SCI 432 (3)	
			Biological Sciences (min. 3 crds from required list)	
			E M A 201 (3 crds) Statics	
			PHYSICS 202 (5) General Physics	
			M E 231 (2) Introductory Engineering Graphics or M E 170 (2) Civil Engineering Graphics	
			M E 361 (3) Thermodynamics or CBE 310 (3) Chemical Process Thermodynamics	
			Engineering Economics Course (I SY E 313 (3) or M E 314(3) or ACCT I S 300 (3) or FINANCE 300 (3))	
			BSE 249 (3) Engr. Principles for Biological Systems or CBE 250 (3)	
			BSE 364 (3) Engr. Properties of Food and Biological Materials	
			BSE 365 (3) Measurements and Instrumentation for Biol Systems	
			BSE 375 (3) Biological Concepts for Engineers	
			BSE 409 (1) Career Management for Engineers	
*			BSE 509 (3) BSE Senior Design	

2010-11 Course Requirements for BSE Degree – General Program Option

All courses in this table must be included in calculations used to check the 2.35 GPA program entrance requirement

Crds	Sem/Yr Taken	Grade	Requirement	Course Taken to Meet Requirement
			Dynamics Course (E M A 202 (3) or M E 240 (3))	
			CIV ENGR 310 (3) Fluid Mechanics or M E 363 (3) Fluid Dynamics	
			Mechanics of Materials Course (E M A 303 (3) or E M A 304 (3) or E M A 306 (4) or M E 306 (3))	
			Four BSE Courses from the following list: 201 (1), 351 (3), 356 (3), 367 (3), 372 (2), 441 (3), 460 (3), 472 (3), 473 (2), 475 (3), 476 (3), 542 (4), 571 (3), 642 (2-3), 671 (1-3)	
			Minimum of fifteen credits of math, science, statistics or computer science courses that are designated “advanced” or engineering courses with a 300 or greater course number. These fifteen credits can include BSE courses taken over and above the required minimum of four listed above. The combination of courses taken to meet this requirement must be approved by the BSE Undergraduate Instruction and Program Committee.	
			Courses from the College of Agriculture and Life Science, College of Engineering, Institute of Environmental Studies, School of Business, and/or Computer Science Department. These courses can not be used to meet other degree requirements. The combination of courses taken to meet this requirement must be approved by the BSE Undergraduate Instruction and Program Committee.	
			TOTAL– Minimum 41 Credits Required	

Four Year Road Map: General Program Option

This Road Map is a tool to assist you and your advisor in planning your academic career. Use it along with the Curriculum Sheet for your major, your DARS report, the appropriate checklist in the back of this document, and the Timetable. Your specific program of study could, and probably will, look different. You need to customize the Road Map to fit your situation, and consult with your advisor about the best path for you.

Year 1 – Fall Semester Course	Credits
MATH 221 (Calculus and Analytic Geometry)	5
CHEM 109 (Advanced General Chemistry)	5
Social Science (See I.E.4)	3
E P D 155 (Basic Communication) or other Comm A course (See I.C.)	2
	15

Year 2 – Fall Semester Courses	Credits
MATH 234 (Calculus - Functions of Several Variables)	3
COMP SCI 310 (Problem Solving Using Computers)	3
E M A 202 (Dynamics)	3
BSE 249 (Engineering Principles for Biological Systems)	3
STAT 224 (Introductory Statistics for Engineers)	3
	15

Year 3– Fall Semester Courses	Credits
BSE Technical Elective Course (See VI.D.)	3
BSE 364 (Engineering Properties of Food and Biological Materials)	3
M E 363 or CE 310 (Fluid Dynamics)	3
BSE 409-Career Management for Engineers	1
Ag & Life Sciences (See VI.C.)	3
Technical Elective (See VI.D.)	3
	16

Year 4– Fall Semester Courses	Credits
BSE 509 (Biological Systems Engineering Senior Design)	3
BSE Technical Elective Course (See VI.D.)	3
I SY E 313 (Engineering Economics)	3
Humanities (See I.E.3)	3
Technical Elective (See VI.D.)	3
Technical Elective (See VI.D.)	3
	18

Year 1 – Spring Semester Courses	Credits
MATH 222 (Calculus and Analytic Geometry)	5
M E 170 or 231 (Introductory Engineering Graphics)	2
Biological Science (See I.F.)	3
E M A 201 (Statics)	3
Economics Course (See I.E.1)	4
	17

Year 2 – Spring Semester Courses	Credits
M E 361 (Thermodynamics)	3
E M A 303 or 304 or 306 or M E 306 (Mechanics of Materials)	3
BSE 375 (Biological Concepts for Engineers)	3
PHYSICS 202 (General Physics)	5
	14

Year 3 – Spring Semester Courses	Credits
BSE Technical Elective Course (See VI.D.)	3
BSE 365 (Measurements and Inst. for Biological Systems)	3
E P D 397 (Technical Comm.) or other Comm B course (See I.C.)	3
Ethnic Studies/International (See I.E. 2 & I.H.)	3
Technical Elective (see VI.D)	3
Technical Elective (see VI.D)	3
	18

Year 4 – Spring Semester Courses	Credits
BSE Technical Elective Course (See VI.D.)	3
Humanities (See I.E. 3)	3
Technical Elective (See VI.D.)	3
Technical Elective (See VI.D.)	3
Technical Elective (See VI.D.)	3
	15

Notes: Need 128 credits to complete degree. If Chemistry 103 & 104 is taken in place of Chemistry 109, it is suggested to take Chemistry 103 in Fall semester and Chemistry 104 in Spring semester of year 1.