

# Table 1. Curriculum for the 5-yr BS/Biology MS/BE Program

Tissue Eng

	Engineering	Biology		Liberal Arts					
<b>Yr 1</b>	Fall	BE1225 (Intro to BE)	2	BIOL1441 (Cell & Molecu) MATH1426 (Calculus 1) # CHEM 1441 (Gen Chem 1 w/lab)	4 4 4	POLS2311 (US government)	3	17	
	Spring	MATH2425 (Calculus 2)	4	BIOL1442 (Structure & function) # CHEM1442 (Gen Chem 2 w/lab)	4 4	POLS2312 (State & Local) ENGL1301 (Composition 1)	3 3	18	
<b>Yr 2</b>	Fall	MATH2326 (Calculus 3)	3	# PHYS1443 (Gen Technical Physics 1) CHEM2321 (Org Chem 1) # CHEM2181 (Org Chem 1 Lab)	4 3 1	HIST1311 (US History 1) ENGL1302 (Composition 2)	3 3	17	
	Spring	MATH3319 (Diff eq and Linear Algebra)	3	# PHYS1444 (Gen Technical Physics 2) CHEM2322 (Org Chem 2) # CHEM2182 (Org Chem 2 Lab)	4 3 1	HIST1312 (US History 2) Fine Art (free elective)	3 3	17	
<b>Yr 3</b>	Fall	MAE2314 (Fluid Mechanics 1) MAE3310 (Thermodynamics 1) or CHEM3321 (Phys Chem 1) CSE1310 (Intro to Computer & Programming)	3 3 3	BIOL3301 (Cell Physiology)	3	Social Science (free elective)	3	15	
	Spring	EE2320 (Circuit Analysis) # MAE2381 (Measurement Lab 1)	3 3	BIOL3444 (General Microbiology) BIOL3315 (Genetics)	4 3	Literature (3 hr)	3	16	
	Summer	BE5309 (Human Physiology)	3					3	
<b>Yr 4</b>	Fall	BE4325 (Fundamentals of BE) BE4331 (Biopolymer) BE5364 (Tissue Engineering)	3 3 3	BIOL3312 (Immunology)	3	BIOL3305 or COMS3302 (Tech Writing)	3	15	
	Earliest time to submit application for Graduate School Admission in preparing for taking graduate 5000-level courses								
	Spring	EE 3317 (Linear System) BE5372 (Drug Delivery) BE4333 (Nano-Biomaterials)	3 3 3	# BIOL4329 (Neuro Engineering) CHEM4311 (Biochemistry 1)	3 3				15
	Summer			# BIOL4365 (Tissue Engineering Lab)	3				3
<b>Yr 5</b>	Fall	BE5337 (Transport Phenomena in BME) BE5361 (Biomaterials & Blood Compatibility) + BE5390 (Research Project)	3 3 3	BIOL5314 (Biometry)	3			12	
	Spring	# BE5382 (Lab Principles) BE5366 (Process Control in Biotechnology) BE5335 (Biol Materials, Mech & Processes) + BE5293 (Master Comp Exam)	3 3 3 2					11	

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159

# Lab Courses

Revised Nov 7 2011

+ For thesis-substitute option: BE5390 (Research Project) and BE5293 (Master Comp Exam) are required

+ For thesis option: Apply BE5698 (Master Thesis) to replace BE5390 and BE5293 requirements

+ Students are encouraged to explore research opportunities, identify research topics with faculties for Research Project or Thesis at the beginning of the 4th year.