

## BSChBE Standard Option

Chemical and Biomolecular Engineering is a discipline that traditionally has been based in the application of chemistry as an enabling science. The strength of that foundation has resulted in enormous advances in the chemical, petroleum and related industries that have relied on Chemical Engineering to provide much of the intellectual capital on which they depend. Over time, and with increasing speed, the discipline has expanded so that biological sciences *and* chemistry now fill the position once uniquely held by chemistry. Georgia Tech's School of Chemical and Biomolecular Engineering is a national leader in restructuring its curriculum and research initiatives to reflect that evolution. For these reasons, a new BSChBE curriculum has been developed.

The curriculum below has been approved for 2003-04. Unfortunately, this is not part of the 2003-05 catalog. The following changes to the BSChBE program have been made:

**Chemistry 3281 (Instrumental Analysis) is no longer required.**

**A Chemistry Elective has been added (choose from Chem 3281, Chem 3511, Chem 4511 & 4512+). +Will count for technical or free elective (must take both courses in the sequence).**

**Biology 1510 is required.**

**The ChBE Elective must be selected from the following: ChBE 4770; ChBE 4775; ChBE 4752; ChBE 4310/6779; ChBE 4535; ChBE 4763; ChBE 4764; ChBE 4776; ChBE 4793; ChBE 4794 and 6000 level technical courses which are not required for the MS degree. Students must obtain approval before registering for a 6000 level course.**

**Technical Electives have been reduced from 9 hours to 6 hours at the 3000/4000 level. You may substitute one 2000 level course (3 hours). There are no 1000 level technical electives approved for this curriculum. ChE 4803 (Freshman Seminar) does not count for technical elective credit.**

**This curriculum is required for all students who first enroll summer 2004 or after, unless you choose the Biotechnology Option.**

## Standard Option for B.S. in Chemical and Biomolecular Engineering

Effective Summer 2003

Year/Sem	Course ID	Course Name	Sem Hrs	Total Sem Hrs	Cum Total Hrs
1/Fall	CHEM 1310	General Chemistry	4		
	MATH 1501	Calculus I	4		
	ENGL 1101	English Comp I	3		
	<b>BIOL 1510</b>	<b>Biological Principles</b>	<b>4</b>		
	HPS 1040/1062		2	17	17
1/Spring	CHEM 1311	Inorganic Chem I	3		
	CHEM 1312	Inorganic Chem Lab	1		
	MATH 1502	Calculus II	4		
	PHYS 2211	Physics I	4		
	CS 1371	Computing for Engineers	3		
	ENGL 1102	English Comp II	3	18	35
2/Fall	CHBE 2100	Chem Proc Principles	3		
	CHEM 2311	Organic Chem I	3		
	MATH 2401	Calculus III	4		
	PHYS 2212	Physics II	4		
	HIST/GOV	Required Soc Sci	3	17	52
2/Spring	CHBE 2110	ChE Thermodynamics I	3		
	CHBE 2120	Numerical Methods in ChE	3		
	CHEM 2312	Organic Chem II	3		
	CHEM 3412	Physical Chem II	3		
	MATH 2403	Differential Eqns	4	16	68
3/Fall	CHBE 3110	ChE Thermodynamics II	3		
	CHBE 3200	Transport Processes I	3		
	CHEM 2380	Synthesis Lab I	2		
	MSE 2001	Engineering Materials	3		
	ECON 2100	Economics & Policy	3		
	SS ELECT		3	17	85
3/Spring	CHBE 3210	Transport Processes II	3		
	CHBE 4300	Kinetics & Reactor Design	3		
	<b>CHEM ELEC</b>	<b>3281*; 3511; 4511 &amp; 4512**</b>	<b>3</b>		
	FREE ELECT		3		
	SS ELECT		3	15	100

4/Fall	CHBE 3225	Separation Processes	3		
	CHBE 4400	Process Control	4		
	CHBE 4515	Process Safety	1		
	FREE ELECT		3		
	HUM ELECT		3		
	TECH ELECT		3	17	117
4/Spring	CHBE 4200	Trans Phen/Unit Ops Lab	3		
	CHBE 4505	Process Design & Economics	3		
	<b>CHBE ELECT</b>	<b>Select from approved list</b>	3		
	HUM ELECT		3		
	TECH ELECT		3	15	132

- \* Not offered in spring – only offered once per year. Please see Chemistry Course Schedule.
- \*\* May be used as technical elective or free elective (must take both courses and complete the sequence).