2007-2008 BIOMOLECULAR ENGINEERING CONCENTRATION

(for students who enter Chemical Engineering Fall 2007 and after)

Freshman Year

CES 102	Engineering Disciplines & Skills	2	CH 102	General Chemistry	4
CH 101	General Chemistry	4	CH E 130	Chemical Engineering Tools	3
ENGL 103	English Composition	3	MTHSC 108	Calculus of One Variable II	4
MTHSC 106	Calculus of One Variable I	4	PHYS 122	Physics with Calculus I	3
Arts and Humanities/Social Science[1]		3	Arts and Humanities/Social Science[1]		3
Semester Totals:		***16***			***17***

Sophomore Year

CH 223	Organic Chemistry	3	BIOCH 301	General Biochemistry	3
CH E 211	Intro. to Chemical Engineering	4	BIOCH 302	Molecular Biology Lab	1
MTHSC 206	Calculus of Several Variables	4	CH 224	Organic Chemistry	3
PHYS 221	Physics with Calculus II	3	CH 229	Organic Chemistry Lab.	1
Arts and Humanities/Social Science[1]		3	ChE 220	Chemical Engr. Thermodynamics I	3
			ChE 230	Fluids/Heat Transfer	4
Semester Totals:		***17***			***15***

Junior Year

BIOL 103	General Biology I	3	BIOE 302	Biomaterials	3
BIOL 105	General Biology Lab I	1	CH E 321	Chemical Engr. Thermodynamics II	3
CH E 307	Unit Operations Lab. I	3	CH E 330	Mass Transfer & Separ. Proc.	4
CH E 319	Engineering Materials	3	Arts and Humanities/Social Science[1]		3
MTHSC 208	Intro. to Ord. Diff. Equations	4	ENGINEERING REQUIREMENT[2]		3
Arts and Humanities/Social Science[1]		3			
Semester Totals:		***17***			***16***

Senior Year

BIOCH 431	Physical Approach to Bioch.	3	CH E 353	Process Dynamics and Control	3
BMOLE 403	Biotransport Phenomena	3	CH E 433	Process Design II	3
CH E 407	Unit Operations Lab. II	3	CH E 444	Chem. Engr. Senior Seminar II	1
CH E 431	Chemical Process Design I	3	MICRO 413	Industrial Microbiology	3
CH E 443	Chem. Engr. Senior Seminar I	1	Arts and Humanities/Social Science[1]		3
CH E 450	Chemical Reaction Engineering	3	ENGINEERING REQUIREMENT[2]		3
Semester Totals:		***16***			***16***

Total = 130 hrs.

Notes

[1] See Policy on Social Sciences and Humanities for Engineering Curricula. Six of these credit hours must also satisfy the Cross-Cultural Awareness and Science and Technology in Society Requirements.

[2] Select from BMOLE 423, BMOLE 425, BMOLE 426, BE 428

Note: No student may exceed a maximum of two attempts, including a *W*, to complete successfully any CH E course.