

To: The Faculty of the College of Engineering  
From: The Faculty of the School of Chemical Engineering  
Subject: Change in Minimum Degree Requirements for Chemical Engineering ( B.S. ChE )

The Faculty of the School of Chemical Engineering has approved the following changes in the minimum degree requirements for the B.S. degree in Chemical Engineering. This action is now submitted to the Engineering Faculty with a recommendation for approval.

These changes are in response to changes in the First-Year Engineering Program effective for students entering Purdue in the Fall Semester 2006.

The implementation of the first-year program into our curriculum is summarized:

- (1) The number of credit hours required for graduation is unchanged at 131.
- (2) The suggested plan of study is unchanged for the sophomore year, with 3 hours of Gen-Ed elective moving from semester 1 to semester 6 and 1 hour of free elective moving from semester 6 to semester 8. The plan of study assigns 31 credit hours total to the first year.
- (4) We retain COM 114 as a required course in our curriculum. Students who enter our program without this course will be accommodated by a revised plan of study that includes the course in the sophomore year.
- (5) We retain CHM 116 or CHM 124 as a required course in our curriculum. Students who enter our program without this course will be accommodated by a revised plan of study that includes this course in the sophomore year. CHM 124 or CHM 116 is now a co-requisite for CHE 205 instead of a pre-requisite so as to allow students taking the CHM requirement during the sophomore year to stay on course with the standard curriculum.
- (7) ENGR 106 ( 2 hrs) and CS 152 (2 hours) are replaced by ENGR 126 ( 3 hrs).
- (8) PHYS 152 becomes 172. PHYS 152 and PHYS 172 are official university equivalents per the Office of the Registrar and are therefore interchangeable in all cases – anywhere PHYS 172 is listed as a requirement, either course will be accepted. Only PHYS 172 will be officially listed as it is the new requirement.

**CURRENT PLAN OF STUDY**  
**SCHOOL OF CHEMICAL ENGINEERING**  
Purdue University  
*Students beginning Fall 2005-Summer 2006*

Total Credit Hours - 131

**FRESHMAN YEAR**

First Semester

(4) CHM 123 or 115<sup>a</sup> Gen. Chemistry  
(4) ENGL 106 or 108 (3) English Comp I  
(1) ENGR 100 Freshman Engr Lec  
(2) ENGR 106 Intro to Computer  
(4) MA 165 or 161<sup>b</sup> Geom & Calc I  
(3) Gen-Ed Elective  
17 or 18

Second Semester

(4) CHM 124 or 116<sup>a</sup> Gen. Chemistry  
(3) COM 114 Fund. of Commun  
(4) MA 166 or 162 Geom & Calc II  
(4) PHYS 152 Mechanics  
(2) CS 156<sup>c</sup> C Programming  
17

**SOPHOMORE YEAR**

Third Semester

(0) CHE 200 Chem Engr Seminar  
(3) CHE 205<sup>e</sup> Chemical Engr Calc  
(3) CHM 261 Organic Chemistry I  
(1) CHM 263 Organic Chem Lab I  
(4) MA 261 Multivar Calculus  
(3) PHYS 241  
(3) Gen-Ed Elective  
17

Fourth Semester

(3) CHE 211 Chem Engr Thermo  
(3) CHE 320 Statistical Modeling  
(3) CHM 262 Organic Chemistry II  
(1) CHM 264 Organic Chm Lab II  
(4) MA 262 Lin Algebra and Diff Eq  
(3) Gen-Ed Elective  
17

**JUNIOR YEAR**

Fifth Semester

(3) CHE 306 Staged Separations  
(3) CHE 377 Momentum Transfer  
(3) CHM 370 Physical Chemistry  
(2) CHM 376 Physical Chem Lab  
(3) BIOL 295E Biol of the Living Cell  
(3) MA 303 Diff Eq for Engineering  
17

Sixth Semester

(0) CHE 300 Chem Engr Seminar  
(3) CHE 330 Prin of Molec Engr  
(3) CHE 348 Chem Reaction Engr  
(3) CHE 378 Heat & Mass Transfr  
(3) I E 343 Engr Cost Analysis  
(3) Engineering Elective  
(1) Free Elective  
16

**SENIOR YEAR**

Seventh Semester

(0) CHE 400 Chem Engr Seminar  
(3) CHE 434 Chemical Engr Lab I  
(3) CHE 456 Process Dyn & C'trol  
(3) Gen-Ed Elective  
(3) Technical Elective  
(3) CHE Elective  
15

Eighth Semester

(3) CHE 435 Chem Engr Lab II  
(3) CHE 450 Design...Process Sys  
(3) Gen-Ed Elective  
(3) CHE Elective  
(3) Gen-Ed Elective  
15

<sup>a</sup> ChE prefers that students take the CHM 123/124 sequence. Students who have taken CHM 115/116 will also be accepted into the School of Chemical Engineering.

<sup>b</sup> The MA 165/166 (4 cr. each) sequence is preferred; however, the MA161/162 (5 cr. each) sequence may be taken. If MA 161 and/or 162 is taken, these courses will be accepted as only 4 credit hours each toward meeting the graduation requirements for ChE.

<sup>c</sup> C Programming is preferred by ChE; however, FORTRAN will be accepted. If CS 158 or ENGR 117 (both 3 cr. each) are taken, the extra credit may be used toward meeting the "free" elective requirements.

<sup>e</sup> A "C" or better must be earned in CHE 205 to continue to enroll in CHE courses.

**PROPOSED PLAN OF STUDY**  
**SCHOOL OF CHEMICAL ENGINEERING**  
Purdue University  
*Students beginning Fall 2006 and after*

Total Credit Hours - 131

**FRESHMAN YEAR**

<u>First Semester</u>			<u>Second Semester</u>		
(4)	CHM	123 or 115 <sup>a</sup> Gen. Chemistry	(4)	CHM	124 or 116 Gen. Chemistry
(4)	ENGL	106 or 108 (3) English Comp I	(3)	COM	114 Fund. of Commun
(1)	ENGR	100 Freshman Engr Lec	(4)	MA	166 or 162 Geom & Calc II
(3)	ENGR	126 Intro to Engr Prb Solv&Comp	(4)	PHYS	172 Mechanics
(4)	MA	165 or 161 <sup>b</sup> Geom & Calc I	15		
16/15					

**SOPHOMORE YEAR**

<u>Third Semester</u>			<u>Fourth Semester</u>		
(0)	CHE	200 Chem Engr Seminar	(3)	CHE	211 Chem Engr Thermo
(3)	CHE	205 <sup>c</sup> Chemical Engr Calc	(3)	CHE	320 Statistical Modeling
(3)	CHM	261 Organic Chemistry I	(3)	CHM	262 Organic Chemistry II
(1)	CHM	263 Organic Chem Lab I	(1)	CHM	264 Organic Chm Lab II
(4)	MA	261 Multivar Calculus	(4)	MA	262 Liner Algebra & Diff Eq.
(3)	PHYS	241 Electricity & Optics	(3)		Gen-Ed Elective
(3)		Gen-Ed Elective	17		
17					

**JUNIOR YEAR**

<u>Fifth Semester</u>			<u>Sixth Semester</u>		
(3)	CHE	306 Staged Separations	(0)	CHE	300 Chem Engr Seminar
(3)	CHE	377 Momentum Transfer	(3)	CHE	330 Prin of Molec Engr
(3)	CHM	370 Physical Chemistry	(3)	CHE	348 Chem Reaction Engr
(2)	CHM	376 Physical Chem Lab	(3)	CHE	378 Heat & Mass Transfr
(3)	BIOL	295E Biology of the Living Cell	(3)	I E	343 Engr Cost Analysis
(3)	MA	303 Diff Eqs for Engr	(3)		Gen-Ed Elective
17			(3)		Engineering Elective
			18		

**SENIOR YEAR**

<u>Seventh Semester</u>			<u>Eighth Semester</u>		
(0)	CHE	400 Chem Engr Seminar	(3)	CHE	435 Chem Engr Lab II
(3)	CHE	434 Chemical Engr Lab I	(3)	CHE	450 Design...Process Sys
(3)	CHE	456 Process Dyn & C'trol	(3)		Gen-Ed Elective
(3)		Gen-Ed Elective	(3)		Gen-Ed Elective
(3)		Technical Elective	(3)		CHE Elective
(3)		CHE Elective	(1/2)		Free Elective
15			16/17		

<sup>a</sup> ChE prefers that students take the CHM 123/124 sequence. Students who have taken CHM 115/116 will also be accepted into the School of Chemical Engineering.

<sup>b</sup> The MA 165/166 (4 cr. each) sequence is preferred; however, the MA161/162 (5 cr. each) sequence may be taken. If MA 161 and/or 162 is taken, these courses will be accepted as only 4 credit hours each toward meeting the graduation requirements for ChE.

<sup>c</sup> A "C" or better must be earned in CHE 205 to continue to enroll in CHE courses.

