Engineering Faculty Document # 11-06
September 28, 2006

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

The Faculty of the School of Materials Engineering has approved the following changes in the minimum degree requirements for the B.S. degree in Materials Science and 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 128.

(2) The suggested plan of study is unchanged for the Sophomore, Junior, and Senior years. The plan of study assigns 32 credit hours total to the first year.

(3) ENGL 106 (3 hrs) is replaced by "English Composition (3 hrs) " to recognize that other courses are recognized substitutes.

(4) COM 114 (3 hrs) is replaced by "COM 114 or approved Communication elective."

(5) We retain CHM 116 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.

(6) MSE 190 (or other first year electives) (1 hr) becomes "first-year electives (2 hrs)." Many students take a 4 hour English Composition course (+ 1) and a one-hour introductory engineering course such as MSE 190 or ENGR 103 (1 hr) .

(7) ENGR 106 (2 hrs) and CS 152 (2 hours) are replaced by ENGR 126 (3 hrs).

(8) PHYS 152 becomes PHYS 152 or 172 .

CURRENT

Minimum Degree Requirements
For Materials Engineering

Credit Hours Required for Graduation: 128

Courses	*Credit Hours*
Mathematics and Physical Sciences	
Calculus: MA 165,166, 261, 265, 266	**18**
Chemistry: CHM 115, 116, 257, 373	**15**
Physics: PHYS 152, 241, 252	**8**
Communication and General Education	
English Composition and Speech: ENGL 106, COM 114	**6**
General Education: humanities and social science elective courses selected with MSE faculty guidance in accordance with the general education requirements of the College of Engineering.	**18**
Seminars	
ENGR 100, MSE 190 (or other first-year electives), MSE 390	**2**
Core Engineering Courses	
Computing: ENGR 106, CS 152	**4**
Basic Mechanics: ME 270, NUCL 273	**6**
MSE Core: 230, 235, 240, 335, 340, 350, 367, 370, 382, 430, 440. Integrated MSE courses, including year-long, industry-sponsored senior design projects, on the structure, properties, processing, and performance of engineering materials.	**33**
Technical Electives A plan of study is designed with the help of a faculty advisor to meet each individual student's professional goals. At least 12 of the 18 credits must be materials-specific courses; the remaining 6 credits may be selected from an approved list of courses, including other academic disciplines.	**18**

PROPOSED

Minimum Degree Requirements
For Materials Engineering

Credit Hours Required for Graduation: 128

Courses	*Credit Hours*
Mathematics and Physical Sciences	
Calculus: MA 165,166, 261, 265, 266	**18**
Chemistry: CHM 115, 116, 257, 373	**15**
Physics: PHYS 152 or 172, 241, 252	**8**
Communication and General Education	
English Composition:	**3**
Communication: COM 114 or approved Communication elective	**3**
General Education Electives: Humanities and social science elective courses selected with MSE faculty guidance in accordance with the general education requirements of the College of Engineering.	**18**
Seminars	
ENGR 100, MSE 390	**1**
First-year (or other) electives	**2**
Core Engineering Courses	
Computing: ENGR 126	**3**
Basic Mechanics: ME 270, NUCL 273	**6**
MSE Core: 230, 235, 240, 335, 340, 350, 367, 370, 382, 430, 440. Integrated MSE courses, including year-long, industry-sponsored senior design projects, on the structure, properties, processing, and performance of engineering materials.	**33**
Technical Electives A plan of study is designed with the help of a faculty advisor to meet each individual student's professional goals. At least 12 of the 18 credits must be materials-specific courses; the remaining 6 credits may be selected from an approved list of courses, including other academic disciplines.	**18**