

To : Academic Standards and Admissions Committee
From: Frank Peters, College of Engineering Academic Standards Committee
Date: February 19, 2006
Re: Change to admission requirements and recommended high school courses

The College of Engineering Academic Standards Committee has proposed one change to the College of Engineering's admission requirements, and proposes to publish a list of 'recommended high school courses.' Currently, Engineering does not have any requirements or recommendations in addition to the general University requirements. This change was voted upon and approved at the February 7, 2006 College of Engineering Faculty meeting.

Proposed Changes:

- Require 2 years of a single foreign language
- Recommend 4 years of high school mathematics
- Recommend 4 years of high school science (including one year each of chemistry, biology and physics)
- Recommend 3 years of high school social science

The foreign language requirement is proposed due to the increasing importance of the global workplace for today's engineers. The addition of the recommended high school courses will assist high school students in preparing for college, and to emphasize the importance of a strong mathematics and science background needed to be successful in engineering. These changes would put our college more in line with our peer universities' admission requirements, as shown in Table 1.

Table 1: Engineering admission requirements at peer institutions for the number of years of high school courses.

	math	foreign language	social sc.	science	arts
Current ISU	3	0	2	3	0
Proposed ISU Engr.	3 (4)	2	2 (3)	3 (4)	0
Illinois	4	2	3	3	1
Purdue	3	2		3	
Arizona	4	2	2	3	1
Davis	3 (4)	2	2	2	1
Michigan State	3	2	3	2	
Minnesota	4	2	3	3	1
North Carolina S.	3(4)	2	2	3	
Ohio State U.	3 (4)	2 (3)	2 (3)	2 (3)	1 (3)
Texas A&M	3.5	2		3	
Wisconsin	3 (4)	2 (4)	3 (4)	3 (4)	

Values in () are the Engineering College Recommendations

A review of freshmen who entered the College of Engineering during the last four years shows that over 90% of them meet the proposed foreign language requirement. See Table 2. Those students who enter ISU without the required high school foreign language courses, will be able to satisfy the requirement by using their electives to take 2 semesters of a single foreign language.

Table 2: The number of semesters of high school instruction students entering the College of Engineering have attained. (The data comes from the EDT5 downloads, which is collected by the admissions office when students apply for admission. It is not completely accurate as the data is self-reported.)

No. of Semesters	Fall 2001				Fall 2002				Fall 2003				Fall 2004			
	Foreign Language	Math	Science	Social Science	Foreign Language	Math	Science	Social Science	Foreign Language	Math	Science	Social Science	Foreign Language	Math	Science	Social Science
0	43	5	5	5	33	0	0	1	36	2	2	2	40	4	4	5
1	4	0	0	0	3	0	0	0	3	0	0	0	2	0	0	0
2	37	0	0	0	48	0	0	0	26	0	0	1	33	0	0	1
3	7	0	0	0	5	0	1	0	6	0	0	0	10	0	0	0
4	326	1	2	20	293	0	2	10	257	1	1	12	271	1	2	14
5	16	1	2	37	11	1	2	34	13	0	0	36	16	0	3	29
6	248	60	158	423	215	37	159	401	220	35	136	347	196	37	137	355
7	15	17	52	274	14	20	43	263	12	18	27	237	12	17	27	223
8	354	349	627	258	322	314	545	208	299	266	531	204	303	258	516	228
>8	73	690	277	106	71	643	263	98	71	621	246	104	74	640	268	102
4 or more	92%	100%	100%	100%	91%	100%	100%	100%	92%	100%	100%	100%	91%	100%	100%	99%
6 or more	61%	99%	99%	94%	61%	100%	100%	96%	64%	100%	100%	95%	61%	99%	99%	95%
8 or more	38%	93%	80%	32%	39%	94%	80%	30%	39%	94%	82%	33%	39%	94%	82%	34%