Date: 22 February 2013

To: Randy Smith
   Vice Provost, Office of Academic Affairs (OAA)

From: Ed McCaul
   Secretary, College of Engineering Committee on Academy Affairs (CCAA)

Subject: Proposed Change to the College of Engineering’s General Education Diversity Requirement

CCAA reviewed and approved the attached proposal to revise our General Education diversity requirement on the 20th of February 2013. I am forwarding it to you so that it can be approved by the Council on Academic Affairs. If you have any questions concerning this proposal please let me know.
Proposed Change for Engineering General Education Requirement

Proposal
Currently the General Education (GE) requirements for all engineering programs include a Social Diversity in the U.S. (0-3 hr, 1 course) requirement. The College of Engineering requests that this requirement be modified to require either Social Diversity in the U.S. (0-3 hr, 1 course) or Global Studies (0-3 hr, 1 course).

This change would maintain a diversity requirement at its current level but expand the context to be either U.S. or Global. Since the stated goals of the two categories vary only in geographic focus, this allows the curriculum to make both visible to students without expanding curriculum requirements.

Background on Requirements
Arts and Sciences General Education Model includes both categories (Social Diversity in US, 0-3 hr, 1 course and Global Studies, 0-6 hr, 2 courses). Students must complete the required courses in these areas, however they can overlap with another GE category or the major. If they do not choose an overlapping course, the requirement must still be met. Sets of courses are designated for each category (http://ascadvising.osu.edu/sites/ascadvising.osu.edu/files/BA%20GE%20AU12_1.pdf; accessed 10-31-12)

Social Diversity in the United States - The goal of courses in this category is to foster an understanding of the pluralistic nature of institutions, society, and culture in the United States in order to help the student become an educated, productive, and principled citizen.

Global Studies - The goal of courses in this category is to foster an understanding of the pluralistic nature of institutions, society, and culture across the world in order to help the student become an educated, productive, and principled citizen.

The only difference between the two goals statements being in the geographic focus; “in the United States” versus “across the world”.

Currently approved Engineering GE Model includes only the Social Diversity in the U.S. (0-3 hr, 1 course) requirement.

Discussion
It is recognized that incorporating global competence within engineering and technology programs will require a review and modification of existing curricula to make sure it is comprehensive, coherent, efficient, and accessible to all students.1 A study group within the College of Engineering recently carefully considered the issues around preparing undergraduate students for the practice of engineering in a global environment. In line with a continuous quality improvement (CQI), outcomes based approach of the college, the Study Group 1) defined eight desired global competencies (outcomes) for engineering graduates and 2) collected data regarding the relative importance of each and our current performance against these competencies. As part of the process, the importance and preparation of our recent graduates towards global competence was assessed by surveying our 2 & 3rd year alumni, 10 &


After consideration of the report, the Core Curriculum and College Services Committee concluded that the best mechanism for our Engineering General Education model is to continue with the present one-course requirement, but to allow students to choose between Social Diversity in the U.S. and Global Studies.

Understanding of the pluralistic nature of institutions, society, and culture in context of the U.S. and globally is of importance in the current environment of engineering education. Several of the competencies identified in the alumni survey cited above can be related to this goal and can be addressed in either geographic context. Having an option has the advantage of making both categories visible in curriculum planning without added a potential additional course requirement to the engineering curriculum.

Many institutions across the country have embarked on development of experiences and programs related to the objective of achieving global competence in their engineering students. As an example, Georgia Tech has developed an extensive option for students, termed the International plan, ([http://www.internationalplan.gatech.edu/](http://www.internationalplan.gatech.edu/)) which includes internationally focused courses and study abroad. Similarly Purdue University has initiated a Global Engineering Program ([https://engineering.purdue.edu/GEP/About/mission](https://engineering.purdue.edu/GEP/About/mission)) offering the tools and opportunities for global engineering discovery, education of engineers who exhibit scientific initiative and cultural sensitivity as they step into roles of international leadership, and engaging and positively impacting communities both at home and abroad. Since most other institutions do not have general education implemented with the types of categories of the Ohio State model, this proposal would be a modest shift in the Ohio State engineering program, but would be unique in that it would highlight for all engineering students to the importance of “understanding of the pluralistic nature of institutions, society, and culture” in the United States and across the world.

**Impact on Students Progress to Degree**

Attached is a form Entitled “The Ohio State University – College of Engineering, General Education 2012-2013”. This form indicates by underlining courses which currently fulfill the Social Diversity in the U. S. category as approved by the appropriate panel of the College of Arts and Sciences faculty. On the same appended sheet, courses approved by the appropriate panel of the College of Arts and Sciences faculty for the Global Studies requirement (as of AU 12) have been circled. These courses appear across five of the GE categories and represent a wide range of courses commonly taken by Engineering students. A majority of engineering students fulfill the current requirement by selection of an appropriate 2367 (Second Writing class). A relatively small number end up taking a non-double count course for this requirement. With a modest level of attention, students should be able to meet the requirement without difficulty.

**Transition Plan**

This revised requirement is to take effect for all students entering Ohio State engineering beginning Autumn 2013. Currently enrolled students will be allowed to utilize the revised requirement if they have not yet met their current requirement.
The following course list is approved for students admitted to The Ohio State University (any program) Summer 2012 and after. Students admitted prior to Summer 2012 should contact their academic advisor to receive a copy of their general education requirements.

GENERAL EDUCATION

Ohio State’s General Education (Gen Ed) is an integral part of your academic experience in the College of Engineering. This curriculum is designed to provide you with a better understanding of society’s traditions and past, accomplishments and aspirations, relation and responsibility to the natural world, diversity and plurality, and problems and needs. The goal is for you to develop skills, competencies, and a breadth of knowledge as an educated, productive citizen. Specific goals aimed toward the broader goal of the Gen Ed are listed under each category of the curriculum.

Gen Ed Course Planning

<table>
<thead>
<tr>
<th>First Writing Course</th>
<th>Literature</th>
<th>3 hr</th>
<th>Visual/Performing Arts</th>
<th>3 hr</th>
<th>Cultures &amp; Ideas OR 2nd Historical Study</th>
<th>3 hr</th>
<th>Professional Ethics</th>
<th>0-3 hr</th>
<th>Social Diversity in the U.S.</th>
<th>0-3 hr</th>
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<tbody>
<tr>
<td>Second Writing Course</td>
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<td>3 hr</td>
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<td>Social Science 1 (Subgrp.)</td>
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<td>Historical Study</td>
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Some majors require specific course(s) in certain General Education categories:
- Engineering 2267 - Required for Industrial & Systems Engineering 2nd Writing
- Economics 2001.XX - Required for Aviation, Civil, Environmental Engineering (Social Science Subgroup C)

1. Each course may be used to fulfill only one category, except Professional Ethics and Social Diversity in the U.S. which can overlap with another Gen Ed category within specific parameters. See the descriptions of these two Gen Ed categories for more information.

WRITING AND RELATED SKILLS (6 hr) Select TWO courses, one per subgroup.

A. First Writing Course
   English 1110.01, 1110.02, 1110.03

B. Second Writing Course
   African-American and African Studies 2167.01, 2167.02
   Agricultural Communication 2267
   Arabic 2267
   Art Education 2167.01, 2167.02, 2167.03
   Communication 2267
   Comparative Studies 2167.02, 2167.03, 2167.04, 2167.07, 2167.08
   Dance 2267
   Economics 2167.01, 2167.02
   Education Teaching and Learning 2167

   Engineering 2267
   English 2167.01, 2167.02, 2167.03, 2167.04, 2167.05
   Environmental and Natural Resource 2267
   Film Studies 2167.01, 2167.02, 2167.03
   German 2267
   History of Art 2167
   Human Development and Family Science 2567
   Landscape Architecture 2267
   Linguistics 2167.01, 2167.02
   Modern Greek 2267

   Nursing 2267
   Philosophy 2267
   Physics 2267
   Political Science 2267.01
   Psychology 2267
   Slavic Languages and Literatures 2267
   Sociology 2267.01, 2267.02, 2267.03
   Theatre 2267.01, 2267.02, 2267.03
   Women’s Gender and Sexuality Studies 2267.01, 2267.02, 2267.03, 2267.04
   Yiddish 2267

SOCIAL SCIENCES (6 hrs) Select TWO courses, no more than one per subgroup.

A. Individuals & Groups
   African-American and African Studies 1101, 2218
   Animal Sciences 2202
   Anthropology 2205, 2206
   Communication 1100, 1101, 2311
   Economics 2040 (also satisfies Ethics requirement)

   Education: Educational Policy and Leadership 2241
   Education: Teaching and Learning 4085
   Geography 2100
   Human Development and Family Science 2260, 2230, 2400, 2410, 2440
   International Studies 4090
   Linguistics 2041, 2042, 2101

   Political Science 2150, 2367
   Psychology 1100, 2267, 2271
   Rural Sociology 2260
   Social Work 1110
   Sociology 2210, 2370, 2380
   Speech and Hearing Science 3330, 3350
   Women’s, Gender and Sexuality Studies 1100
HISTORICAL STUDY (3 hr) Select ONE course.

The goal of the courses in this category is to develop your knowledge of how past events influence today’s society and help you understand how humans view themselves.

- African-American and African Studies 214
- Consumer Sciences: Fashion and Retail Studies 2174
- Economics 2101
- Education: Physical Activity and Educational Services 2219
- Engineering 2346
- History 2110
- Japanese 115
- Korean 215
- Modern Greek 2301
- Near Eastern Languages and Cultures 2101
- Persian 2120
- Philosophy 2101
- Portuguese 2101

ARTS & HUMANITIES (6 hr) Select TWO courses, one per subgroup.

The goal of courses in this category is to allow you to evaluate significant writing and works of art. Such studies develop capacities for aesthetic and historical response and judgment, interpretation and evaluation, critical listening, reading, seeing, thinking, and writing, and experiencing the arts and reflecting on that experience.

A. Literature
- African-American and African Studies 214
- Arabic 2101
- Chinese 2101
- Comparative Studies 2001
- English 2101
- French 2101

B. Visual/Performing Arts
- African-American and African Studies 214
- Art 2101
- Chinese 2101
- Comparative Studies 2001
- East Asian Languages and Literatures 2101
- English 2101
- Film Studies 2170

BREADTH: 2nd Historical Study or Cultures & Ideas (3 hr) Select ONE course from Historical Study or Cultures & Ideas.

A. 2nd Historical Study
- African-American and African Studies 214
- Chinese 2101
- Consumer Sciences: Fashion and Retail Studies 2174
- Economics 2101

- Education: Physical Activity and Educational Services 2219
- Engineering 2346
- History 2110
- Japanese 115
- Korean 215
- Modern Greek 2301
- Russian 2101

- Spanish 2101
- Theatre 2101
- Women's, Gender and Sexuality Studies 2111

History (any History course at the 2000 or 3000 level, except the following: 2194, 2500, 3194, 3195, 3197, 3198)

History of Art 2001

Philosophy 2101

Women's, Gender and Sexuality Studies 2121

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Updated 9/17/2012
PROFESSIONAL ETHICS (0-3 hr) Select ONE course. Ethics course can fulfill additional Gen Ed category if category is unfulfilled.

The goal of courses in this category is to develop a nuanced understanding of the applied ethical issues involved in a professional career in engineering and technology.

A. Ethics + Social Science Courses
   Economics 3048 (also fulfills Social Science, Individuals & Groups subgroup)
   Sociology 3402, 3404 (also fulfills Social Science, any subgroup)

B. Ethics + Cultures & Ideas Courses
   Comparative Studies 3412 (also fulfills Arts & Humanities, Cultures & Ideas subgroup)
   Philosophy 1302 (also fulfills Arts & Humanities, Cultures & Ideas subgroup)

The courses above will fulfill both the designated category and the Ethics category. Students who do not appropriately plan their coursework to fulfill one of their Gen Ed categories with an Ethics course will be required to take an additional course to fulfill their Ethics category.

SOCIAL DIVERSITY IN THE U.S. (0-3 hr) Select ONE course. Diversity course can fulfill additional Gen Ed category if category is unfulfilled.

The goal of courses in this category is to foster an understanding of the pluralistic nature of institutions, society, and culture in the United States.

Courses: All undeclared courses in other categories will fulfill both that designated category and the Social Diversity in the US category. Students who do not appropriately plan their coursework to fulfill one of their Gen Ed categories with a Social Diversity in the US course will be required to take an additional course to fulfill their Social Diversity in the US category.

APPROVED GENERAL EDUCATION OPTIONS

Foreign Language

Students pursuing a degree in the College of Engineering are not required to complete a foreign language category in their General Education. However, students who are interested in pursuing coursework in a foreign language are permitted to choose one of the following approved substitutions, within the stated parameters:

Substitution A: Completion through enrollment in a foreign language sequence through 1103, or enrollment in a foreign language course with a prerequisite of 1103, can be substituted for one Gen Ed course requirement as a Cultures & Ideas.

Substitution B: Completion of a foreign language minor can be substituted for two Gen Ed courses: one course as a Social Science (Individuals & Groups or Organizations & Politics subgroup only) and one course as either a Literature or a Cultures & Ideas.

Contemporary World

Students pursuing a degree in the College of Engineering are not required to complete a Contemporary World requirement in their General Education. However, students who are interested in completing a University-level Contemporary World course are permitted to the following approved substitutions:

Substitution A: Approved to fulfill Social Science, any subgroup:
   Anthropology 4597.01, 4597.02, 4597.03, 4597.04
   Evolution, Ecology, and Organismal Biology 4597.02
   Geography 4597.01, 4597.02
   International Studies 4597.01, 4597.02
   Political Science 4597.01, 4597.02
   Sociology 4597.01, 4597.02

Substitution B: Approved to fulfill Visual & Performing Arts subgroup:
   Comparative Studies 4597.01, 4597.02
   History 4597