

# DRAFT

Engineering Faculty Document No. 36-03  
March 12, 2004

**To:** The Engineering Faculty  
**From:** V. J. Meyers, Chair, Engineering Education Committee  
**Subject:** Revision of the General Education Requirements for Undergraduate Engineering Degrees

The Engineering Education Committee recommends two changes to the General Education Program of the Schools of Engineering.

## **Present Program:**

The present General Education Program is described in Engineering Faculty Document 55-98 as shown in Attachment A.

Paragraph two and Item 8 of that document read as follows:

### Paragraph 2:

To these ends, all B.S. students in the Schools of Engineering are required to complete a general education program of 18 credit hours in approved humanities and social sciences electives. Students are strongly encouraged to develop a coherent general education plan, and distribute their general education credits throughout their academic program. The collection of courses used to fulfill this requirement must meet all of the following conditions.

### Item 8:

Individual schools may impose requirements in addition to those previously stated, but may not require a specific course as part of the general education program.

## **Proposed Changes:**

The Committee proposes that:

- 1) the total credit hours in the general education program be reduced from 18 to 15, and
- 2) individual schools be allowed to require one particular general education course (of up to 3 credit hours) as part of the General Education Program.

## **Reasons:**

Since ABET no longer specifies the size of the general education program, the committee feels that the above proposed reduction in credit hours will provide the opportunity for schools to reduce the total credit hours required for their degree(s). This marks a return to the number of credits that were in the general education program in the early 1970's. The increase to 18 credit hours was mandated by ABET at that time, but that mandate no longer exists. The reduction in hours will give schools the flexibility to adjust their curricula to reflect either the need for more required courses or to reduce the number of hours required for graduation as recommended by President Jischke. Schools will retain the right to keep their general education program at 18 credit hours.

There are several schools that have identified at least one general education course that they feel should be required for all of their students. ABET states that the curriculum should have a "general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives". The committee feels that allowing schools to require at least some portion of the general education program will better insure its complementary and consistent nature as desired by ABET.

### **Proposed Program:**

The following General Education Program is consistent with the changes proposed above and results from modifications of only Paragraph 2 and Item 8 of the present program as stated in Attachment A.

#### **General Education Program**

Humanities and social sciences courses encompass the breadth of human experience and culture, both past and present, including individual behavior, social and political structures, aesthetic values, modes and dynamics of communication, philosophical and ethical thought, and cognitive processes. Such courses are an integral part of all engineering curricula which complements technical and professional content by enabling engineering students to appreciate the world in which they live and work, and to contribute as both educated members of society and aware, ethical professionals. Humanities and social sciences courses also provide a framework for rational inquiry, critical evaluation, judgment and decisions when dealing with issues that are non-quantifiable, ambiguous, or controversial. Of equal importance, they offer opportunities for engineering students to develop interests and insights that guide, enrich and expand their perceptions of the world they live in.

To these ends, all B.S. students in the Schools of Engineering are required to complete a general education program of at least 15 credit hours in approved humanities and social sciences courses. Individual Schools may require more than 15 credit hours. Students are strongly encouraged to develop a coherent general education plan, and distribute their general education credits throughout their academic program. The collection of courses used to fulfill this requirement must meet all of the following conditions.

1. Courses must be drawn from those offered by the departments of Agricultural Economics, Audiology and Speech Sciences, Child Development and Family Studies, Communication, Economics, English, Foreign Languages and Literatures, History, Interdisciplinary Studies, Philosophy, Political Sciences, Psychological Sciences, Sociology and Anthropology, Visual and Performing Arts. Any course offered by these departments is allowable, provided that it is open to students in the offering department and is not focused primarily on professional training, natural science or mathematics.

2. In order to ensure sufficient exposure to topics dealing with global, societal and contemporary issues, at least 9 credit hours must be drawn from courses offered by the departments of Agricultural Economics, Economics, Communication, Foreign Languages and Literatures, History, Interdisciplinary Studies, Philosophy, Political Sciences, Psychological Sciences, or Sociology and Anthropology.
3. At least 6 of the credit hours must be taken in the same department and a maximum of 12 credit hours may be taken in any one department.
4. At least 6 of the credit hours must come from courses at the 300-level or above, or from courses with a required prerequisite in the same department.
5. If a foreign language course is used to satisfy part of the requirements, the student must take at least 6 credit hours of the same language. Credit is not allowed for language courses in the student's native tongue(s), although literature, culture, drama and related courses are allowed.
6. Credit by examination or granted credit (e.g., advanced placement credit), conditioned solely at the discretion of the awarding department, can be used to satisfy any part of the requirement.
7. No course may be counted more than once toward the requirement, even if the offering department allows it to be repeated for credit.
8. Individual schools may impose requirements in addition to those previously stated, and may require up to one specific course (of not more than 3 credit hours) as part of the general education program.

## **Attachment A: Present General Education Program**

### **General Education Program**

Humanities and social sciences courses encompass the breadth of human experience and culture, both past and present, including individual behavior, social and political structures, aesthetic values, modes and dynamics of communication, philosophical and ethical thought, and cognitive processes. Such courses are an integral part of all engineering curricula which complements technical and professional content by enabling engineering students to appreciate the world in which they live and work, and to contribute as both educated members of society and aware, ethical professionals. Humanities and social sciences courses also provide a framework for rational inquiry, critical evaluation, judgment and decisions when dealing with issues that are non-quantifiable, ambiguous, or controversial. Of equal importance, they offer opportunities for engineering students to develop interests and insights that guide, enrich and expand their perceptions of the world they live in.

"To these ends, all B.S. students in the Schools of Engineering are required to complete a general education program of 18 credit hours in approved humanities and social sciences electives. Students are strongly encouraged to develop a coherent general education plan, and distribute their general education credits throughout their academic program. The collection of courses used to fulfill this requirement must meet all of the following conditions."

1. Courses must be drawn from those offered by the departments of Agricultural Economics, Audiology and Speech Sciences, Child Development and Family Studies, Communication, Economics, English, Foreign Languages and Literatures, History, Interdisciplinary Studies, Philosophy, Political Sciences, Psychological Sciences, Sociology and Anthropology, Visual and Performing Arts. Any course offered by these departments is allowable, provided that it is open to students in the offering department and is not focused primarily on professional training, natural science or mathematics.
2. In order to ensure sufficient exposure to topics dealing with global, societal and contemporary issues, at least 9 credit hours must be drawn from courses offered by the departments of Agricultural Economics, Economics, Communication, Foreign Languages and Literatures, History, Interdisciplinary Studies, Philosophy, Political Sciences, Psychological Sciences, or Sociology and Anthropology.
3. At least 6 of the credit hours must be taken in the same department and a maximum of 12 credit hours may be taken in any one department.
4. At least 6 of the credit hours must come from courses at the 300-level or above, or from courses with a required prerequisite in the same department.
5. If a foreign language course is used to satisfy part of the requirements, the student must take at least 6 credit hours of the same language. Credit is not allowed for language courses in the student's native tongue(s), although literature, culture, drama and related courses are allowed.
6. Credit by examination or granted credit (e.g., advanced placement credit), conditioned solely at the discretion of the awarding department, can be used to satisfy any part of the requirement.
7. No course may be counted more than once toward the requirement, even if the offering department allows it to be repeated for credit.
8. Individual schools may impose requirements in addition to those previously stated, but may not require a specific course as part of the general education program.