The General Education Program for Engineering Students

While a comprehensive understanding of science and mathematics is central and foundational to effective engineering practice, real-world engineering problems are both complex and situated within dynamic social, political, and cultural contexts. Therefore, well-rounded engineering curricula must also include courses that encompass the breadth of human experience and culture, both past and present. Such courses may include, but are not limited to, those that explore individual behavior, social and political structures, aesthetic values, modes and dynamics of communication, philosophical and ethical thought, and cognitive processes. These types of courses provide engineering students with a framework for rational inquiry, critical evaluation, and judgment when dealing with issues that are non-quantifiable, ambiguous, and/or controversial. In addition, they offer engineering students the opportunity to develop interests and insights that will deepen their appreciation for the diversity of the world in which they live and work.

Based on these premises, the goals of the College of Engineering General Education Program are to

- Provide the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- Support and complement the technical content of the engineering curricula through coursework that emphasizes such skills as written communication, oral communication, information literacy, cultural awareness, leadership, innovation, entrepreneurship, and managing change.

These goals are consistent with the objectives of the College of Engineering’s Engineer of 2020\(^1\) initiative, as well as the objectives of Purdue University’s Undergraduate Outcomes-Based Curriculum\(^2\).

Program Components

1. Foundational Learning Outcomes (FLOs)\(^3\)
   - Students must select from the list of courses approved by the University Core Council (UCC) to satisfy all six of the Foundational Learning Outcomes (available below)
     - Written Communication
     - Oral Communication
     - Information Literacy
     - Humanities

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\(^1\) Engineering Faculty Document 15-06 (April 9, 2007)
\(^2\) University Senate Document 11-7 (February 20, 2012)
\(^3\) The Science and Quantitative Reasoning Foundational Learning Outcomes are handled elsewhere in the engineering curricula.
2. Students must earn a C- or better in order to receive credit towards meeting each Foundational Learning Outcome listed above and this General Education Program.

3. At least 24 total credit hours are required.

4. At least 12 credit hours must be taken from the College of Liberal Arts, the Krannert School of Management, and/or the Honors College provided such courses are not focused primarily on engineering, technology, the natural sciences, or mathematics. (Note: ENGL 10600/10800 and COM 11400 count towards these requirements).

5. At least 6 credit hours must come from courses at the 30000-level or above, or from courses with a required prerequisite in the same department (e.g. SPAN 10200 requires SPAN 10100 as a pre-requisite).

6. Courses from the Colleges of Engineering, Science, and Technology can only be used towards the general education program if they satisfy FLOs.

7. If EPCS courses are taken to satisfy a foundational learning outcome then three (3) credits must be taken. If EPCS courses are used to fulfill a General Education requirement, they may not be used to fulfill a Technical Elective requirement in IE.

8. Courses must be drawn from either the list of courses approved by the University Core Council (UCC) as meeting an FLO, or from the following Colleges/Schools/Departments:
   - College of Health and Human Sciences
   - College of Liberal Arts
   - Krannert School of Management
   - Entrepreneurship
   - Department of Agricultural Economics
   - Interdisciplinary Studies

9. Credit is not allowed for language courses in the student’s native tongue(s), although literature, culture, drama, and related courses are allowed.

*Special consideration may be given to courses outside of these Colleges/Schools/Departments at the discretion of the IE undergraduate committee (or their designee). Excluded courses from the above Colleges/Schools/Departments will be at the discretion of the IE undergraduate committee (or their designee).

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4 If a course taken to fulfill some other degree requirement has also been approved as satisfying one or more of these Foundational Learning Outcomes, then those Foundational Learning Outcomes need not be satisfied again within the IE General Education Program.
Course Listing for Foundational Learning Outcomes

The courses used for meeting the Foundational Learning Outcomes is maintained by the Undergraduate Curriculum Council and maintained on the following webpage:

List of Approved GE courses for Foundational Learning Outcomes

List of Colleges/Schools/Departments eligible for GE courses

The following is a listing of the Colleges, Schools, and Departments and the course IDs associated with each. Unless a course is specifically excluded from the GE program within an otherwise approved college/school/department, any course is eligible within the below lists provided it does not focus primarily on engineering, technology, the natural science, or mathematics. Contact the IE advising office if you have concerns about a course qualifying as a GE.

- **College of Health and Human Sciences:**
  - American Sign Language (ASL)
  - Consumer Science & Retailing (CSR)
  - Human Development & Family Studies (HDFS)
  - Health & Human Sciences (HHS)
  - Health & Kinesiology (HK)
  - Health Sciences (HSCI)
  - Hospitality & Tourism Management (HTM)
  - Nursing (NUR)
  - Nutrition Science (NUTR)
  - Psychology (PSY)
  - Speech, Language & Hearing Science (SLHS)
  - Youth Development & Ag Education (YDAE)

- **Krannert School of Management:**
  - Economics (ECON)
  - Management (MGMT)
  - Organizational Behavior & Human Resources (OBHR)

- **College of Liberal Arts:**
  - African American Studies (AAS)
  - Art & Design (AD)
  - Afro-American Studies (AFRO)
  - American Studies (AMST)
  - Anthropology (ANTH)
  - Arabic (ARAB)
  - Asian American Studies (ASAM)
  - Classics (CLCS)
  - Comparative Literature (CMPL)
  - Communication (COM)
  - Dance (DANC)
  - English (ENGL)
  - Foreign Languages & Literatures (FLL)
  - French (FR)
  - Film & Video Studies (FVS)
  - German (GER)
  - Greek (GREK)
IT IS THE RESPONSIBILITY OF THE STUDENT TO MAKE SURE THAT THE PROVISIONS FOR THE GENERAL EDUCATION PROGRAM ARE SATISFIED AS A CONDITION OF GRADUATION.
BSIE General Education Program Checklist

PUID ______________________  Name ________________________________

Expected Graduation Date  Fall  Spring  Summer  20_______  

Minor(s) _______________________

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<th>Course Number</th>
<th>300/400/Pre-Req Required</th>
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<td>Oral Communication (OC)</td>
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<td>Science, Technology &amp; Society (STS)</td>
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<td>ENGL 10600</td>
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Total Hours: __________________

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<th>Course Number</th>
<th>300/400/Pre-Req Required</th>
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Total Hours: __________________

*see back for program rules and policies  Total GE Credit Hours (min 24 hrs)  __________
BSIE General Education Program

Basic Rules and Policies

⇒ Complete courses that fulfill the Purdue University Foundational Learning Outcomes (FLOs) (minimum grade of C-)
⇒ Courses can be used to fulfill multiple FLOs, but students are still required to complete a total of 24 credit hours
⇒ At least 12 hours from the Colleges of Liberal Arts, Krannert School of Management, and/or Honors College (provided that such courses are not focused primarily on engineering, technology, the natural sciences, or mathematics)
⇒ At least 6 hours must come from courses at the 30000-level or above, OR from courses with a required pre-requisite in the same department (e.g. SPAN 10200 requires credit for SPAN 10100)
⇒ Courses from the Colleges of Engineering, Science, and Technology can only be used towards the general education program if they satisfy FLOs
⇒ If EPCS courses are used to satisfy an FLO, then three (3) credits must be completed
⇒ Credit is not allowed for language courses in the student’s native tongue(s), although literature, culture, drama, and related courses are allowed

Finding Courses

⇒ Approved FLO Course Listings:

   http://www.purdue.edu/provost/initiatives.curriculum/course.html
⇒ From the Colleges/Schools/Departments of: Health & Human Sciences, Liberal Arts, Krannert School of Management, Entrepreneurship, Agricultural Economics, and Interdisciplinary Studies
⇒ Special consideration may be given to courses outside of these Colleges/Schools/Departments at the discretion of the IE undergraduate committee (or their designee)
⇒ Excluded courses from the above College/schools/Departments will be at the discretion of the IE undergraduate committee (or their designee)