TO: The Faculty of the College of Engineering

FROM: The Faculty of the School of Engineering Education

RE: New General Education Requirements: BS degree Interdisciplinary Engineering Studies (IDES)

The Faculty of the School of Engineering Education has approved the attached new degree requirements. This action is now submitted to the Engineering Faculty with a recommendation for approval.

SUMMARY OF PROPOSED CHANGES:

The general education program is changed to follow the new College of Engineering general education program. An Economics Selective consisting of ECON 25100, 25200, or IE 34300 replaces the requirement that IE 34300 is required.

DETAILED DEGREE REQUIREMENTS:

See attachment.

CURRENT REQUIREMENTS:

Based on EFD 21-12. See attachment.

EFFECTIVE DATE:

Effective for all students entering Purdue Fall 2013 or later

REASONS:

EFD 43-13 changed the College of Engineering general education program. This EFD changes the IDES general education program and degree requirements to follow the new College general education program. Since these students will not practice engineering, engineering economics is not required, but some economics is. Note: this program is not accredited by ABET and is specifically for students who do NOT plan to practice engineering. The most popular concentration is pre-medical engineering.

David F. Radcliffe
Kamyar Haghighi Head, School of Engineering Education
Epistemology Professor of Engineering Education

APPROVED FOR THE FACULTY
OF THE SCHOOLS OF ENGINEERING
BY THE ENGINEERING
CURRICULUM COMMITTEE
ECC Minutes 9-6-13
Date 10/3/2013
Chairman

Current 120 credit Degree Requirements for Bachelor of Science (BS) Degree in Interdisciplinary Engineering Studies (not ABET accredited)

Definition	Credits
First-year Engineering Program If the common first year program in engineering is changed, the BS requirements will be changed to reflect these changes	29-36
Communications Com 11400 or equivalent. These courses can count towards the first year program, towards the general education program, or towards the Area requirements. Recommendation is to take Com 11400 as part of the FYE program.	3 counted elsewhere
General Education Follow Engineering's General Education Program requirements Note: Individual plans of study may recommend particular general education courses.	18
Math, Basic Science and Engineering (MBSE) Required sophomore mathematics: Multivariate calculus (MA 26100), and linear algebra & differential equations, MA 26200 or (MA 26500 & 26600), or equivalent	8-10
Sophomore Science selective. ENE approved selective. (May not be the same course used as FYE Science Selective.)	3-4
Statistics selective ENE approved statistics course from the Department of Statistics or approved engineering statistics course. The engineering courses count towards the required 30 credits in engineering. Statistics courses count towards the MBSE requirements.	3 counted elsewhere
Engineering Minimum 30 credits at 200+ level, of which at least 15 credits are at 300 + level. Maximum number of credits in any one engineering discipline is 24. *Note: It is the student's responsibility to see that all prerequisites are met.*	
Required Engineering core: (Can substitute equivalent courses for IE 343) IE 343 IDE 301 (no substitutions)	3 1
Engineering Design Selective Three credits of engineering design. Must be approved by School of Engineering Education.	3
Elective Engineering Courses Courses selected by the student with the aid of an adviser. Must be approved by School of Engineering Education.	23
Minimum Engineering	**30**
Additional engineering, CS, mathematics or science courses as needed. **Minimum MBSE**	**44**

Definition	Credits
Area Additional courses selected to satisfy the student's educational objectives. There is no minimum in the Area since more than 44 credits of MBSE courses may be taken. A computer aided design (CAD) course is very highly recommended.	
Maximum Area Credits	**28**
Minimum Credits Required for Graduation	**120**
Other Graduation Requirements All plans of study must be approved by the School of Engineering Education. An overall Graduation Index of 2.0 or higher and a minimum GPA of 2.0 in the engineering courses at the 200 level and higher included in the plan of study are required. All other Purdue University graduation requirements including "There must be at least 32 credits at the 300 level or higher for graduation," must be satisfied	

Proposed Degree Requirements for Bachelor of Science (BS) Degree in Interdisciplinary Engineering Studies (not ABET accredited)

Definition	Credits
First -year Engineering Program If the common first year program in engineering is changed, the BS requirements will be changed to reflect these changes.	29-33
Communications Com 11400 or equivalent. Must select a course that satisfies the Purdue University Foundational Learning Outcome in Oral Communication, and satisfies 3 credits of the general education program. Recommendation: take Com 11400 as part of the FYE program	3 counted in FYE program
English ENGL 10600 or 10800. Must select a course that satisfies the Purdue University Foundational Learning Outcomes in Information Literacy and in Written Communication. This requirement satisfies 3 or 4 credits of the Engineering general education program. Recommendation: take ENGL 10600 or 10800 as part of the FYE program.	3 or 4 counted in FYE program
General Education Follow Engineering's General Education Program requirements. A total of at least 24 credits are required – 6 or 7 of these credits for Com and ENGL are counted in the FYE program. The remaining credits must be chosen to satisfy the Purdue University Foundational Learning Outcomes in Humanities, Behavior/Social Science and Science, Technology & Society. At least 18 credits of the General Education program (including Com and ENGL) must be taken outside of the Colleges of Engineering, Science, and Technology. Courses from the Colleges of Engineering, Science and Technology used in the General Education Program may only be used to satisfy Purdue University Foundational Learning Outcomes in Humanities, Behavior/Social Science and Science, Technology & Society (they cannot be used to add depth or non-technical breadth). If EPICS is used to satisfy the Science, Technology & Society Outcome, three credits of EPICS are required. The engineering (at 20000 and higher level) and science credits used in the General Education program can also be used to satisfy the engineering requirements and MBSE science requirements, respectively, but credits are not double-counted for graduation. 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. Note: Individual plans of study may recommend particular general education courses.	17-18
Economics Selective Take ECON 25100, ECON 25200, or IE 34300. Credits for ECON 25100 or 25200 satisfy Purdue University Foundational Learning Outcomes in Behavior/Social Science and count in the General Education package. Credits for IE 34300 count in Engineering.	

Definition	Credits
Math, Basic Science and Engineering (MBSE)	
Required sophomore mathematics Multivariate calculus (MA 26100), and linear algebra & differential equations, MA 26200 or (MA 26500 & 26600), or equivalent	8-10
Sophomore Science selective ENE approved selective. (May not be the same course used as FYE Science Selective.)	3-4
Statistics selective ENE approved statistics course from the Department of Statistics or approved engineering statistics course. The engineering courses count towards the required 30 credits in engineering. Statistics courses count towards the MBSE requirements **Engineering**: Minimum 30 credits at 20000+ level, of which at least 15 credits are at 30000 + level. Maximum number of credits in any one engineering discipline is 24. *Note: It is the student's responsibility to see that all prerequisites are met.*	3-counted elsewhere
Required Engineering Core: IDE 30100 (no substitutions)	1
Engineering Design Selective Three credits of engineering design. Must be approved by School of Engineering Education.	3
Elective Engineering Courses: Courses selected by the student with the aid of an adviser. Must be approved by School of Engineering Education.	26
Minimum Engineering	**30**
Additional engineering, CS, mathematics or science courses as needed.	
Minimum MBSE after FYE program	**44**
Area Additional courses selected to satisfy the student's educational objectives. There is no minimum in the Area since more than 44 credits of MBSE courses may be taken. A computer aided design (CAD) course is very highly recommended.	
Maximum Area Credits	**29**
Minimum Credits Required for Graduation	**120**
Other Graduation Requirements All plans of study must be approved by the School of Engineering Education. An overall Graduation Index of 2.0 or higher and a minimum GPA of 2.0 in the engineering courses at the 20000 level and higher included in the plan of study are required. All other Purdue University graduation requirements must be satisfied.	