

THE B.S. IN INTERDEPARTMENTAL ENGINEERING PROGRAM

Students who want to pursue degree programs in engineering may find that a typical BS program may be too specific for their individual needs. Those who are interested in architecture, for example, may find they want to design their own plan of study within certain guidelines. For this reason, they should consider the Interdepartmental Engineering (B.S. IDE) Degree.

This Degree program requires that students complete three sequences of technical courses of their own choosing. Additionally, students completing a B.S. IDE degree must complete an independent study project that culminates in a written senior thesis. The Interdepartmental Programs in Engineering (IDE) Committee reviews each proposed program and may accept it, reject it, or require it to be modified. The program approved by the IDE Committee for a given student constitutes that student's degree requirements.

Course Requirements

1. A total of 32 courses (128 credit hours), including a minimum of 18 devoted to mathematics, other natural sciences and engineering.
2. At least eight courses in **engineering**. It is expected that these engineering courses will be taken from 2 or more departments. For graduation, a student must earn a grade-point average of 2.0 in these 8 engineering courses in addition to having a cumulative grade-point average of 2.0.
3. Eight to ten courses in **mathematics or other natural sciences**, including three math courses (one in differential equations), and four courses in physics or chemistry, with at least one in each.
4. Three **sequences** of technical or scientific courses, including the engineering courses if desired. Each sequence must include at least three courses, with no more than one introductory-level course per sequence. A sequence is defined as “a logical progression of study, confined to an acceptably identifiable area, in which later material builds upon and extends earlier material.” (In rare cases, the Committee has approved the use of a non-technical or nonscientific sequence to strengthen the focus of a program when a student wishes to study such a discipline in depth.)
5. One **Primary Writing** course (CAS 105).
6. In addition to the *Primary Writing* requirement, selected courses in the School of Engineering and Applied Sciences have been certified by the College Curriculum Committee to meet the *Upper Level Writing* requirement.

Students must complete any two of the following courses:

BME: 101, 260, 396

CHE: 246, 255, 273/4

ECE: 111, 113

ME: 241, 242, 204, 205, 211, 223, 251, 213

OPT: 241, 256

7. Two **clusters**, one in the social sciences and the other in the humanities, with an average grade of C or better. A second major or minor in one of these divisions may substitute for that cluster.
8. A **senior thesis**, which is a written summary of independent study under the supervision of an appropriate faculty member during your junior and senior years. During the Junior year, each student is expected to associate with a faculty member and to define an area of independent study. Up to eight credit hours of independent study may be included in a student's program.

(over)

Making Formal Application

To apply to the Interdepartmental Program, fill out the attached application. This form must show that you have (or will have at the current semester's end) completed at least the primary writing requirement, three math courses (including one in differential equations), and four courses in physics or chemistry, with at least one in each, and two engineering courses.

A GPA of at least 2.7 in the above listed courses and an overall GPA of 2.0 are required for admission. If you are unsure, apply anyway and let the IDE Committee review your plan and offer its advice.

Complete a blue Concentration form, write a senior project proposal and submit them with the attached application to the SEAS Deans Office, Lattimore 306A, x5-4155.

All students admitted to the IDE program must earn a minimum cumulative GPA of 2.0 for all courses taken in their fields of specialization. This includes all courses in the sequences as well as the eight required engineering courses.

IDE Committee members (2006-2007)

K. Davis	Professor, Biomedical Engineering, 5-6418 Med. Center, x3-4844, davis@bme
M. Anthamatten	Professor, Chemical Engineering, Gavett 250, x5-5526, anthamatten@che
R. Waag	Professor, Electrical Engineering, Hopeman 340, x5-4430, waag@ece
R. Perucchio	Professor, Mechanical Engineering, Hopeman 415, x5-4069, rlp@me.rochester.edu
C.Guo	Professor, Optics, Wilmont 419, x5-2134, guo@optics.rochester.edu
T. Hsiang,	Chair, Computer Studies Bldg, x5-3293, hsiang@ece.rochester.edu

**For more information, contact the SEAS Deans Office, 306 Lattimore Hall,
(585) 275-4155. Visit our web site at <http://www.seas.rochester.edu>.**

B.S. in INTERDEPARTMENTAL ENGINEERING PROPOSAL

Name	Adviser	Class
Address	Date	
Phone	E-mail address	
Proposal Title	Student ID Number	

A. List the courses to be taken for your degree and any grades earned. Please print.

Engineering courses (can be included in the sequences)

*	_____ Fall/Spring _____	_____ Fall/Spring _____
*	_____ Fall/Spring _____	_____ Fall/Spring _____
	_____ Fall/Spring _____	_____ Fall/Spring _____
	_____ Fall/Spring _____	_____ Fall/Spring _____

Sequences (at least 3 courses each, no more than one introductory level course per sequence)

Title: _____	Title: _____
_____ Fall/Spring _____	_____ Fall/Spring _____
_____ Fall/Spring _____	_____ Fall/Spring _____
_____ Fall/Spring _____	_____ Fall/Spring _____
_____ Fall/Spring _____	_____ Fall/Spring _____

Title: _____

_____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

Primary Writing requirement

* _____ Fall/Spring _____

Upper Level Writing

_____ Fall/Spring _____

_____ Fall/Spring _____

Humanities cluster or 2nd major/minor

Title: _____

Cluster #: _____

Courses:

_____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

Social Science cluster or 2nd major/minor

Title: _____

Cluster #: _____

Courses:

_____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

Mathematics & Science courses

(cannot be included in the sequences)

*MTH _____ Fall/Spring _____

*MTH _____ Fall/Spring _____

*MTH _____ Fall/Spring _____

*CHM _____ Fall/Spring _____

*PHY _____ Fall/Spring _____

*CHM/PHY _____ Fall/Spring _____

*CHM/PHY _____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

Free Electives

_____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

_____ Fall/Spring _____

*For admission, you must have at least a 2.7 GPA in these courses and a 2.0 overall GPA.

Name _____ Student ID # _____

3. List the courses (number and credit hours) to be completed for your degree, and the grades earned.

First year: _____ **Second year:** _____

Fall	Spring	Fall	Spring
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Total credit hours: _____ Total credit hours: _____

Third year: _____ **Fourth year:** _____

Fall	Spring	Fall	Spring
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Total credit hours: _____ Total credit hours: _____

C. List any fifth year, summer courses, and/or transfer credits, if applicable:

D. _____ Please be sure to attach the following items:
_____ Concentration form

_____ Senior Project proposal, signed by both you and your faculty adviser, explaining:

1. the title of your project;
2. a brief description of the topic;
3. when the work will be started, completed and defended;
4. the objectives and methods most important in the project.

Applicant Signature

Adviser Signature

Date

For office use only:

Requires course GPA: _____ Cum GPA _____ SEAS GPA: _____ Sequence GPA: _____

(Write grades earned next to completed courses above)

Approved _____ Not Approved _____ Signed: _____ Date: _____

Comments: _____