

A Proposal to Discontinue the Undergraduate Program in Engineering Applications

September 30, 2002; Revised October 10, 2002

The Dean of Engineering, Dr. James Melsa, is proposing the elimination of the undergraduate program in Engineering Applications. Engineering Applications (previously named Engineering Operations) is a very small interdepartmental program that is administered by a faculty committee chaired by Assistant Dean of Engineering, Professor Loren Zachary. The program is the only engineering program at Iowa State that is not accredited (accreditation for it has not been sought), and it is offered only as an undergraduate program. Students are admitted into the program after completing the basic program (generally the first year) of engineering courses and the development of an approved program of study including a statement of professional objectives and schedule of courses that support that objective. All courses making up the program of study are drawn from courses that are offered by the various departments of the college and university for audiences other than engineering applications students – i.e. there are no courses offered solely for the engineering applications program. The program was intended to provide an opportunity for students to design a more flexible program of study than more traditional engineering curricula at a time when many engineering curricula were considered to be quite structured and rigid. The more traditional engineering programs have recently become a bit more flexible, and as a result the already low demand for the program has been reduced even further. The program has never been large, and in recent years has been by far the smallest of all engineering undergraduate programs at Iowa State. The primary rationale for this proposal is the significant and continuing lack of interest in the program on the part of students, potential employers of graduates, and the faculty of the college.

The administering committee, College of Engineering Curriculum Committee, and Engineering Caucus of the Faculty Senate have all been consulted regarding the proposed discontinuation and all of these groups support the discontinuation. The College of Engineering administration, the College of Engineering Academic Council, and the College of Engineering Faculty have also been consulted and all support the proposed discontinuation. The College of Engineering Faculty voted formally to support the discontinuation proposal without dissent at a faculty meeting that was held on September 19, 2002, as did the College of Engineering Curriculum Committee at a meeting held on September 11, 2002 and the Engineering Caucus of the Faculty Senate at a meeting held on September 10, 2002.

The following numbered items pertaining to the proposed discontinuation are in the format described in the formal “Program Discontinuation Procedures” document dated December 1998.

- 1. Program Discontinuation Requested by:** Dr. James L Melsa, Dean, College of Engineering

2. **Program Name:** Engineering Applications
3. **Administered by:** A faculty committee from several engineering departments chaired by the Assistant Dean of Engineering for Undergraduate Programs.
4. **Rationale for Discontinuation:** This program discontinuation proposal is a result of the significant and continuing lack of interest in the program on the part of students, potential employers of graduates, and the faculty of the college. Additional reasons are the chronic and consistent low enrollment of the program coupled with opportunities to meet similar educational objectives through other programs offered by the college and university. Recent budget reductions have also been a secondary consideration in the proposal, as the College of Engineering works to identify and focus on its highest priorities, consistent with the needs and advice of its multiple internal and external constituencies. The proposal is partially the result of a larger initiative to examine carefully and focus college of engineering programs to enhance efficiency and resource utilization. This is an unaccredited undergraduate program. Most, if not all, of the students' interests could be accommodated by studying in other undergraduate programs offered at ISU, such as industrial or mechanical engineering. Its elimination will allow the faculty members involved in the program to redirect their efforts to higher priority focus areas. The impacts on student educational opportunities and total college enrollment are expected to be minimal, in part because of the very small number of students involved and also because of the quite reasonable alternative engineering programs available to them at ISU.
5. **Similar Programs at other Regent's Institutions:** There are no programs of this name at other Regent's institutions. Other engineering programs at ISU and/or SUI can accommodate students' interests in this program.
6. **Enrollment Data for Current and Previous four years**

Engineering Operations/Applications Enrollment

Fall 1998	1
Fall 1999	2
Fall 2000	3
Fall 2001	9
Fall 2002	8

7. **Information Required by the Board of Regents:**

- a. Status and plans of students who are currently enrolled in the program.** Seven of the current students are classified as seniors and one is classified as a junior. Because of the curriculum requirements exclusive reliance on courses offered for students in other curricula, there will be no problem accommodating graduation requirements for the current students during a phase out period that allows all current students to graduate. As far as we have been able to determine, the currently enrolled students plan to complete the program, and all are expected to do so by 2005 at the latest.
- b. Projected phase-out information.** The current administrative committee structure will be maintained until the last of the currently enrolled students graduates (expected to be in 2004 or 2005). As indicated above, no special courses are offered for this program, and thus associated costs are expected to be minimal.
- c. Reallocation expected as a result of the proposed elimination.** The elimination of this program will allow an estimated \$50,000 in faculty and staff effort to be reallocated to other higher priority activities.
- d. Impact of discontinuance on other programs and the institution.** The expected impact on other programs and the institution as a whole is expected to be minimal. This program allowed a very small number of students a slightly more flexible approach to an engineering degree. Both on- and off-campus constituencies now view that opportunity as being unimportant because of other alternatives available within the College of Engineering for such students. It is estimated that at least 6 of the 8 currently enrolled students would have chosen to attend ISU in one of the other current engineering programs if the engineering applications program had not been offered at the time they entered the university. Even if the proposed elimination caused 8 fewer students to enroll in the College of Engineering, the impact would be negligible in an undergraduate population that is currently 4,963 students.
- e. Impact on minorities and women.** Current enrollment in this program includes two female students and two students from ethnic minority groups. Although these numbers represent a significant fraction of the program's total enrollment, they do not represent a significant portion of the 791 women or 422 ethnic minority students enrolled in the College of Engineering. Furthermore, it is expected that potential students who might have previously selected this program will select alternative engineering programs if this proposal is approved. There has been no indication from current students that they chose to come to the College of Engineering primarily because of the availability of this program.

- f. Potential faculty and staff reassignments.** There are no faculty or staff with full-time responsibilities associated with this program. All current faculty and staff who are involved with the program will reallocate their efforts to other priority responsibilities of their departments and the college.

- g. Reallocation of facilities and equipment.** There are no facilities or pieces of equipment that are devoted entirely to this program, and because of the extremely low enrollment, the impact of the proposed discontinuance on facilities and equipment will be negligible.