New Undergraduate Program (Majors, Minors, Sequences) Proposal
Illinois State University - University Curriculum Committee

Program Department Technology   **Submission Date** Thursday, May 05, 2011
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Initiator Department Technology
Coauthor(s) None   **Version** 2
Title of New Program Engineering Technology   **Proposed Starting Catalog Year** 2012-2014

1.   Proposed Action

✓   New Major   **Major CIPS Code** 15.00

New Minor

New Sequence

More than 50% of courses in this program are Distance Education

Degree Type(s)

Bachelor of Science

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2.   Provide *Undergraduate Catalog* copy for new program.

MAJOR IN ENGINEERING TECHNOLOGY

Engineering Technology is an interdisciplinary curriculum that provides experiences in the following areas: Automation, Product Design, Process Control, Plastic Materials, Quality Management, and/or Technical Project Management. The goal of the major is to prepare professionals capable of managing projects and processes in government and private enterprise settings. Course work emphasizes the management of people, processes, and materials through hands-on activities. Initial employment opportunities include: project management, process control, production management, product design, quality control support, and technical sales.
— 75 hours required.
— 17 hours in General Education: MQM 100; PSY 110; CHE 102; MAT 120; PHY 105.
— 46 hours in Engineering Technology core: TEC 100, 111, 116, 130, 216, 233, 240, 263, 270, 285, 292, 313, 320, 330, 392; HSC 271.
— 12 hours minimum of sequence elective courses selected from the following: TEC 234, 244, 316, 345, 370 and 398 (3 hours only); ACC131 and ECO105. Students should see the department advisor for specific course recommendations.

ALLOWABLE SUBSTITUTIONS FOR REQUIRED COURSES:
— Acceptable substitutions for CHE 102 are CHE 110 and 112, or CHE 140.
— Acceptable substitution for MAT 120 is MAT 144 or 145.
— Acceptable substitution for MQM 100 is ECO 138.
— Acceptable substitutions for PHY 105 are PHY 108 or PHY 110.
— Acceptable substitution for TEC 270 is MQM 220.
— Acceptable substitutions for TEC 330 are ACC 131 and ACC 132.

3.   **Provide a description for the proposed program.**

The proposal is to change the existing B.S. in Industrial Technology: Engineering Technology Sequence to a B.S. degree in Engineering Technology. There are no other programmatic changes and no new courses will be added.

4.   **Provide a rationale of proposed program.**

The faculty in the Department of Technology approved a motion to support all sequences moving to degree programs at a retreat (September 30, 2007). In order to optimize opportunities for enhanced recruitment of students to a high graduate-demand profession, we are proposing a change from an Engineering Technology Sequence within the Industrial Technology degree program to a stand-alone major in Engineering Technology. Initial employment opportunities exist in project management, process control, production management, product design, quality control support, and technical sales. Recently, there have been more employment opportunities with companies such as Caterpillar, Inc. and Supply Chain Systems International than there are students graduating from this program. Nearly 100% of our graduates find employment in the discipline. To our knowledge, no other B. S. degree in Engineering Technology exists in the state of Illinois. Our advisory board supports our move to a major and agrees that there is ample employment capacity in Illinois for many more graduates from our program.

The current major name "Industrial Technology" does not serve our program well from a student recruitment standpoint, nor does it align well with our profession. Engineering Technology has a discreet CIP code (15.00), and can be accredited by either the Association of Technology, Management and Applied Engineering (ATMAE) or the Accreditation Board of Engineering and Technology (ABET). Fundamentally, these accrediting organizations exist to enhance the quality of undergraduate baccalaureate engineering technology programs in North America and the preparedness of graduates to enter the profession. Moving this program to a stand-alone major status will provide more flexibility and give the faculty the option to pursue ABET accreditation in the future, or stay with ATMAE accreditation.

The ability to recruit students to our program would be significantly enhanced. The prevailing reason for the movement of sequences in our department away from "Industrial Technology" is the problem of marketing the discipline. When students search for majors at ISU our program shows up as a major in "Industrial Technology" rather than Engineering Technology. High school students may become interested in our discipline through courses in Project Lead the Way (PLTW) and Science, Technology, Engineering and Mathematics (STEM), or through involvement in high school student organizations. These students are not likely to understand the term "Industrial Technology" when researching majors, but likely will be attracted to "Engineering Technology".

Additional Benefits:

§ Increased support for ISU's Educating Illinois goals, as well as CAST and Department of Technology goals.
§ Increased potential to collaborate with other departments and colleges such as Health Sciences, Physics and the College of Business.
§ Increased potential to apply for ABET Accreditation and receive it.
§ Increased degree recognition and program status for students (Engineering Technology major and BS degree).
§ Increased recognition of program from employers hiring graduates (Engineering Technology major and BS degree).
§ Improved program marketing through enhanced visibility to students and parents. The Engineering Technology Major will be listed on the ISU website and will be easier to search on national websites.
§ Increased program visibility should also improve faculty recruitment.
§ Increased industry involvement through resource sharing and donations.
§ Increased recruitment of higher quality students who otherwise might be applying for an engineering school.

5.   **Describe the expected effects of the proposed program on existing campus programs (if applicable).**

The Engineering Technology Program is central to other programs in the department and will continue to serve those students as well as its own. There are no new course requirements and nothing additional is being requested of the engineering technology students for them to graduate. Consequently, the move from a sequence to a major is not expected to place additional demands on existing campus programs. Emails/letters were received for courses outside the department when the program was last revised.

6.   **Provide a sample four year plan of study demonstrating that a student could realistically complete the program requirements in a specific number of semesters.**

Please see the attached file showing a four year plan.

7.   **Describe the expected curricular changes required, including new courses. If proposals for new courses have also been submitted, please reference those related proposals here:**

1. There are no changes in hours, however, the formatting of the Engineering Technology Core requirements has been changed to improve clarity.

8.   **Anticipated funding needs and source of funds.**

1. No additional funds will be needed to support this proposal.

9.   **No**   **Does this program count for teacher education?**

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10.   **No**   **Is this an Interdisciplinary Studies program?**

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11.   **The following questions must be answered.**

    Yes   Have you confirmed that Milner Library has sufficient resources for the proposed program?

    No   Are more than 124 hours required to complete a degree with this major?

    No   Beyond General Education, does the major require more than 76 semester hours?

    No   Does this B.A., B.S., B.E.Ed. require more than 55 semester hours of major courses?

    No   Does this program stipulate specific general education courses offered in the major department/school as a part of the major requirements only if such courses serve as prerequisites for other courses required by the major?

    No   Is the proposed program intended to be longer than four years (as indicated by the plan of study)?

    N.A.   Have letter(s) of concurrence from affected departments/schools been obtained?
A departments/school is affected if it has a program with significant overlap or if it teaches a required or elective course in the program.

12.   Routing and action summary for New Program:

1. Technology Department Curriculum Committee Chair

Klaus Schmidt (website)	Klaus Schmidt	1/31/2011 5:33:07 PM
Signature	Print	

Date

2. Technology Department Chair/School Director

Richard Boser (website)	Richard Boser	2/5/2011 10:19:35 AM
Signature	Print	

Date

3. College of Applied Science and Technology College Curriculum Committee Chair

Cara Rabe-Hemp (website)	Cara Rabe-Hemp	5/5/2011 2:13:23 PM
Signature	Print	

Date

4. College of Applied Science and Technology College Dean

Todd McLoda (website)	Todd McLoda	5/5/2011 2:14:06 PM
Signature	Print	

Date

5. University Curriculum Committee Chair

Jean Standard (website)	Jean Standard	9/22/2011 3:32:35 PM
Signature	Print	

Date

All new programs (majors, minors, sequences) are routed by the U.C.C. to the Academic Senate