

**Industrial Advisory Committee
Technology Department
Meeting Minutes: April 21, 2006
Kaskaskia Room, Student Center, SIUC
Carbondale, IL**

Present:

1. Jim Akers, Chair, via conference call (Woodward Governor)
2. Tom Bennett (AISIN)
3. Roger Chang
4. Bruce DeRuntz
5. Julie Dunston, Co-Chair
6. Brian Milligan (The Boeing Company)
7. Ron Milligan (The Boeing Company)
8. Tim Moore (Crain Enterprises)
9. Mandara Savage
10. Tomás Velasco

Agenda

1. Introduction of members
2. Approval of Fall 2005 Minutes of IAC meeting
3. Nomination/approval of new IAC members
4. NAIT Progress Report results
5. Review Undergraduate Curriculum (1.0 hour)
 - a. Industrial Technology program curriculum changes
 - b. Quality Engineering Technology program (new)
 - i. Proposed curriculum
 - ii. ABET accreditation
 - iii. Recruitment
 - c. Approval of new program/curriculum changes
6. Short-/Long-Term Goals (2.0 hours)
 - a. 5-year plan
 - b. Engineering Program
 - c. Off-Campus Program
 - i. Department Chair/Director
 - ii. Impact of on-campus program changes
 - d. PhD program
7. Review Graduate Curriculum (2.0 hours)
 - a. Review of courses/course content
 - b. On-Line courses
 - c. Off-campus program delivery

Welcoming Remarks:

The meeting convened at approximately 10:00 a.m. Initially, the EET Industrial Advisory Board members were also present and introductions were made by industrial members and faculty from both groups.

Minutes of the Previous Meeting:

Minutes of the Industrial Advisory Committee meeting held on November 4, 2005, were not available. At the upcoming Fall 2006 meeting, minutes from the two previous IAC meetings will be reviewed for approval.

New Business:

1. NAIT Progress Report

R. Chang announced that the NAIT review board unanimously approved the progress report submitted to them in Fall 2005. As a result, the next accreditation visit will be in Spring 2009.

2. Review Undergraduate Curriculum

- Discussion commenced with a request for opinions on the hiring of Engineering students versus Technology students. Motivation for the question came from recent discussions in faculty meetings on the feasibility of offering an engineering program (such as Quality Engineering) versus a Quality Engineering Technology program. Feedback from committee members were as follows:
 1. J. Akers suggested that “quality” does not necessarily emphasize engineering aspects, and that an engineering technology program may fit better into workplace demands; additionally, he stated that quality certifications are primarily a peer-reviewed recognition and not so much a requirement from employers.
 2. T. Bennett stated that within the automotive industry, hands-on capability is sought after; he also mentioned a concern with the local market for students with a degree in Quality Engineering – QE students would probably have to leave the area.
 3. R. Milligan agreed the “hands-on” approach being important. He went on to state that the IT students have a manufacturing engineering role. In contrast, QET students would be more focused and involved in one of two paths: supplier management or in-house quality.
- Proposed revisions to the existing IT Program were presented (see Attachment) with the following comments:

- B. Milligan expressed concern over teaching one quality system with Six Sigma. T. Velasco responded that other quality approaches would be covered.
- T. Velasco discussed that the development of three Six Sigma courses would be in alignment with the hours required for black belt training.
- B. Milligan inquired about listing Six Sigma III as an elective if this course was required for black belt certification. T. Velasco stated that if students wanted to attain black belt certification, they would have to complete an industrial project. If students completed a project in Six Sigma III, this would qualify as industrial experience.
- T. Bennett suggested that projects could be applied in Six Sigma II and Six Sigma III concepts could be incorporated into the Lean Manufacturing course.
- T. Bennett proposed that students who were taking one of the Six Sigma courses, but not yet ready for the project phase, work with students in Six Sigma III. This would assist them in understanding what the end product entailed.

R. Chang made a motion to approve the revised IT program. R. Milligan seconded the motion. Motion was approved unanimously.

- Discussion continued with the proposed QET program (see Attachment):
 - T. Bennett addressed the marketability of QET versus IT. Locally, the IT program is known. It was recommended that students highlight the tools they have learned and applied when writing their résumés. This would assist employers in understanding students' educational background.
 - T. Moore asked if GD&T was covered in the IT 105 course. It was suggested by him, and agreed upon by R. Milligan, that a GD&T course be offered. Discussion continued on whether this course should be a 1-hour or 2-hour course. It was generally agreed upon that it wouldn't need to be 3 hours.
 - J. Akers inquired as to whether a full course in Service Quality was needed. R. Chang responded that service industries cover a wide span of areas such as business, healthcare, etc. and that, after reviewing course books on this topic, a 3-hour course was justified.
 - Discussion continued debating the pros and cons of QET versus QE. B. Milligan and R. Milligan emphasized the flexibility that an engineering (or engineering technology) degree would offer to students. Students would be considered for hire at Boeing with "engineering" in the program.

- T. Moore suggested that the faculty consider how a QET program would be marketed. R. Milligan stated that IT aligns with the manufacturing side. It is not as clear-cut with QET.

R. Chang made a motion to maintain the existing IT program and pursue ABET accreditation for the proposed QET program. B. Milligan seconded the motion. Motion was approved unanimously.

3. Short-/Long-Term Goals

- The Department's five-year plan was presented by R. Chang. In order to increase enrollment, the department would market to minorities and other under-represented groups. B. Milligan suggested adding the offering of a new ABET-accredited program to the five-year plan.

R. Chang made a motion to approve the five-year plan. B. DeRuntz seconded the motion. Motion was approved unanimously.

- The topic of an engineering program was revisited. Past discussions had included such suggestions as systems engineering, quality engineering and engineering management. R. Milligan stated that he felt that quality engineering or manufacturing engineering was a better fit for the department. Further thought will be given in the future to the specific engineering approach that will be taken in the long-term.
- The Manufacturing Systems program was reviewed briefly.
 1. One of the department goals is to offer the program off-campus. Consideration would have to be made regarding the writing of a thesis. It may be more feasible to not require a paper but to have the students complete a case study instead.
 2. B. Milligan suggested changing the content of the Quality Assurance course (MFGS 510) to reflect changes within the undergraduate program.
 3. B. DeRuntz recommended adding an advanced course(s) in project management.

Adjournment

The meeting was adjourned at 3:45 p.m

Attachment

Current IT Program	Revised IT Program	Proposed Quality Engineering Technology Program
<i>Core Courses:</i>	<i>Changes from Current IT Program:</i>	<i>Core Courses:</i>
MATH 140 Short Course Calc (or IT 307)	MATH 140 Short Course Calc (or IT 307)	MATH 140 Short Course Calc (or IT 307)
IT 105 CAD	IT 105 CAD	MATH 282 Intro. to Statistics
IT 208 Mfg. Processes	IT 208 Mfg. Processes	IT 208 Manufacturing Processes
IT 240 First-Line Supervision	IT 240 First-Line Supervision	IT 305 Industrial Safety
IT 270 Computational Methods	IT 465 Lean Manufacturing	IT 351 Industrial Metrology
IT 305 Industrial Safety	IT 305 Industrial Safety	IT 390 Cost Estimating
IT 375 Prod. & Inv. Control	IT 375 Prod. & Inv. Control	IT 465 Lean Manufacturing
IT 382 Motion & Time Study	IT 382 Motion & Time Study	Quality Auditing
IT 390 Cost Estimating	IT 390 Cost Estimating	Design of Experiments
IT 392 Facilities Planning	IT 392 Facilities Planning	IT 440 Project Management
IT 440 Mfg. Policy	IT 440 Project Management	Service Quality
IT 445 CAM	IT 445 CAM	IT 490 Six Sigma I
IT 475 Quality Control	IT 490 Six Sigma I	Six Sigma II
IT 485 Quality Control II	Six Sigma II	Six Sigma III
Technical Electives:		
IT 341 Maintenance		
IT 351 Industrial Metrology		
IT 386 Total Quality		
IT 455 Industrial Robotics		
IT 490 Six Sigma		

