Industrial Advisory Committee
Technology Department
Meeting Minutes: April 20, 2007
College of Engineering
Carbondale, IL

Present:
IT Advisory Committee

1. Tom Bennett (AISIN)
2. Sam Hoskins (Consultant, mistakeproofing.net)
3. Brian Milligan (The Boeing Company)
4. Ron Milligan (The Boeing Company)
5. Tim Moore (Crain Industries)
6. Scott Stewart (AISIN)
7. Roger Chang (SIUC)
8. Bruce DeRuntz (SIUC)
9. Julie Dunston (SIUC)
10. Mandara Savage (SIUC)
11. Tomás Velasco (SIUC)

EET Advisory Committee

1. Mike Abba (Ameren)
2. Steve Lazorchak (SIUC Physical Plant)
3. Ron Marusarz (retired, SIUC)
4. Bill Nielsen (Flanders Electric)
5. Dave Short (Ameren)
6. Carl Spezia (SIUC)
7. Dave Williams (SIUC)

Agenda

1. Introduction of members/Welcome by Dean Osborne
2. Discussion on non-thesis/non-research paper option for Manufacturing Systems (30 min.)
3. Nomination/approval of new IAC members
    Scott Stewart, AISIN
4. Approval of Fall 2006 Minutes of IAC meeting
5. Review Undergraduate Curriculum (30 min.)
    - New course offerings for 2007-2008
        - IT 110 Geometric Dimensioning & Tolerancing
        - IT 450 Project Management I
        - IT 470a, b Six Sigma Green Belt
        - IT 480 Six Sigma Black Belt
6. Short-/Long-Term Goals
    a. Quality Engineering Technology vs. Quality Engineering program (60 min.)

       i. Update on discussions
      ii. Proposed curriculum (Fall 2007 submission to IBHE)
   b. Recruitment Plan (30 min.)
       i. Identification of target groups
      ii. Short-term strategy
     iii. Long-term strategy
     iv. Robotics competition
7. Review Graduate Curriculum (60 min.)
- Review of courses/course content

Welcoming Remarks:
The meeting convened at approximately 10:10 a.m. A brief introduction was made by Dean Osborne.

Manufacturing Systems Program – Proposed Change in Research Requirements:

The Industrial Advisory Committee for the IT Program and the Industrial Advisory Board for the EET Program met jointly to discuss the possibility of a non-thesis/non-research paper option for the department. R. Marusarz inquired as to whether or not a project would still be required. B. Nielsen suggested a case study be completed if a student chose a non-research option. S. Hoskins stated his approval of the research paper option, and expressed concern that if the research aspect is taken out, it would "dummy down" the program. J. Akers made an analogy between the research option and managing a project. T. Velasco stated that the new option addresses the challenge of research requirements on future Manufacturing Systems students in the off-campus program. R. Milligan commented that there is a difference between managing a thesis and managing a project, and stated that a non-thesis, non-research paper option is a good one. T. Bennett asked whether enrollment had increased in other departments implementing a non-research option. This information was not known. C. Spezia mentioned that advisement of students on their thesis work is very time-consuming. T. Bennett recommended raising the skill level of students and recruiting more, and to not cheapen the degree. D. Williams reiterated that the main driver for the new option was the off-campus program, where thesis advisement would be very difficult. R. Chang emphasized that, for the majority of students in the master's program, the master's degree is their terminal degree. There was general discussion on the number of hours that would be required for a master's student employing the non-research option. R. Chang stated that other programs with non-research options required anywhere from 30 to 33 credit hours. B. Milligan recommended that the difference in credit hours be sufficient so that students don't immediately turn away from the thesis option. *Motion to approve the non-thesis, non-research paper option was made and seconded. Motion was approved unanimously.*

After this joint vote, the two committees separated and continued discussions on each individual program.

Minutes of the Previous Meeting:
Minutes of the Industrial Advisory Committee meeting held on November 3, 2006, were reviewed. *Motion to approve the minutes was made by R. Chang, seconded by T. Velasco. Motion was approved unanimously.*
New Business:
Nomination/approval of new IAC members

- Scott Stewart (AISIN) was introduced as a new IAC member. *Motion to approve Scott as an IAC member was made by R. Milligan, seconded by M. Savage. Motion was approved unanimously.*

Review Undergraduate Curriculum

- R. Chang announced that an ad had been placed in the Southern Illinoisan for an Adjunct Instructor in the off-campus program. The ad serves two purposes: (1) to hire a qualified instructor to teach in the off-campus program, and (2) to advertise new course offerings for Fall 2007.
- The revised IT Curriculum (see attached) was presented to the IAC for comments:
    1. S. Hoskins stated that the curriculum is very attractive and what industry needs.
    2. T. Moore recommended an introduction to view orientation in the new GD&T course, 1 – 2 weeks in length. R. Milligan suggested that basic drawing practices be covered initially.
    3. S. Hoskins inquired about ASQ certification relative to the Six Sigma courses. R. Chang stated that 3 years of industrial experience, as well as a project, is required for Green Belt certification.
    4. J. Akers suggested providing Six Sigma concepts within a service context. In his experience, students can grasp manufacturing concepts after being introduced to examples related to service, but have more difficulty transitioning from manufacturing to service.

Short-/Long-Term Goals

1. **Quality Engineering Program**

   - After the Spring 2006 meeting, it was agreed upon by the IAC members and IT faculty that a QET program would be pursued within the department. Since that time, T. Velasco and J. Dunston met with Dean Osborne regarding the future direction of the Technology Department. The Dean made it clear that his recommendation was for the department to pursue a new program in engineering. Additionally, the Dean suggested that "Industrial" be included in the program name since this is a traditional, well-known field of engineering and broader in nature than quality engineering. As a result, the program name "Industrial and Quality Engineering" was proposed, along with the curriculum (see attached).

   - T. Bennett commented that GD&T is a crucial course for a quality engineering program.

   - R. Milligan inquired about the possibility of converting the IT program to an IE program as an option for students. However, this would require approval at the IBHE level.

   - B. Milligan asked whether other engineering programs required 4 semesters of Calculus. Since the department would pursue ABET accreditation for the Industrial and Quality Engineering program, the 4 calculus courses would be necessary and consistent with all other ABET-accredited engineering

programs.

- R. Chang questioned the IAC members regarding which student they would most likely hire: one with an IT degree or an IE degree. R. Milligan stated that Boeing would not hire anyone for an engineering position without an engineering degree.

- T. Bennett commented that if some of the same courses were offered for both IT and IE students, the level of difficulty would be targeted towards engineering. This was a primary concern when looking over courses that would overlap the two programs. The faculty agreed that further consideration would need to be given to address this concern.

- *T. Velasco made a motion to approve the direction of the department in pursuing an Industrial and Quality Engineering program, seconded by R. Chang. Motion was approved unanimously.*

2. **Recruitment Plan**
   - R. Chang opened the discussion by identifying four target groups in our recruitment plan: high school students, community College graduates, displaced workers, and current workers in the workforce without a degree.

   - T. Moore suggested offering courses at the local high schools that are developed and sponsored by SIU.

   - T. Bennett commented that high school students regularly tour AISIN, and that SIU graduates currently working at AISIN could informally talk to students about SIU programs.

   - J. Dunston announced a new program that is being developed by the Associate Dean to bring local high schools to SIU for a robotics competition.

3. **Review Graduate Curriculum**
   - Since the department has increased its quality focus and is pursuing a quality engineering degree, R. Chang suggested the name "Manufacturing Systems" be changed to "Manufacturing and Quality Systems".

   - S. Hoskins suggested that the Six Sigma Black Belt course be given a 500-level designation. If this course was added to the graduate curriculum, Six Sigma Green Belt II (IT 470b) would become a prerequisite for the program.

   - Discussion continued on additional courses that would be offered as a result of the non-research option. Some of the courses that were suggested included: Design of Experiments, Service Quality, Quality Auditing, Theory of Constraints, and Project Management II.

- S. Hoskins asked if the Six Sigma courses would be waived for someone that had ASQ certification. T. Velasco commented that ASQ certification is highly regarded but that other companies with their own certification might be questionable.

- *R. Chang made a motion to approve the 6 courses listed above as acceptable, but not all-inclusive, for the graduate program, seconded by T. Velasco, Motion was approved unanimously.*

Adjournment
The meeting was adjourned at approximately 4:30 p.m.