Miami University
Department of Engineering Technology—Advisory Council Minutes
Engineering Technology—Combined Meeting
Friday, March 31, 2006
Wilks Conference Center, Hamilton, Ohio

Minutes

Attendees: (see lists from breakout sessions)

1. Following introductions, Rob presented a brief update about the department. Some key items presented include
    - Number of majors is flat or has dropped slightly
    - Number of SCH dropped again in spring 2006. We need to get SCH above 1000.
    - Students per section has improved slightly.
2. We discussed the draft report from TAC/ABET that was received in February. This report was supposed to have been sent within 30-60 days following our review visit which was September 25-27, 2005. Rob shared our response to the report and made the following comments:
    - Institutional weakness—we are working hard to get this removed as we believe if is unfounded.
    - MET weakness—we believe this is a mistake and should not have been included in the draft report. We have addresses all Met concerns.
    - EMT weakness—we have responded to this weakness and hope it gets lowered to a concern or eliminated. Through curriculum changes we have addressed all EMET concerns.
3. Gary announced the initiation of Epsilon Pi Tau, a national honor society for Technology majors. We will have our first annual ceremony on April 21, 2006 the same Friday as Senior Design presentations.
4. Rob announced an NSF grant for scholarships and asked companies to write a letter of support for the grant. He will follow up with an e-mail and a "draft" letter that you can use as you wish. The letters are needed by Friday April 7, 2006.
5. We then broke into 3 sessions: ECET-AD, MET-AD&BS, and EMET-BS.

Submitted by Rob Speckert

SEAS Advisory Council
Electrical and Computer Engineering Technology (AD)
March 31, 2006

Members Attending: Tom VonDerHarr, Brendon Kuhl, Roger Seifried, and Suguna Bommaraju

1. Minutes The minutes from last meeting were reviewed and actions taken on suggestions from that meeting were discussed. These include:

- Keeping the ENT 297 course – This is being done and the course is being upgraded
- Added PLC course – The first offering will be spring 2007
- Numbering Systems show up in 3 courses: ENT 293, 295, MTH 231. – Teaching number systems has been removed from ENT 295, added to the beginning of ENT 293, and ENT 293 is now a co-requisite for ENT 295.
- Consider keeping Motorola for 295 & 297 – ENT 295 will be Motorola based and ENT 297 will be Intel based.
- Keep EASY4 - This is being kept as the first two weeks of ENT 295
- CPLD is absolutely required (understand how applied) - PLD will be covered in ENT 293
- ENT 291: Add VFD, different kinds & features. Include lab. – A VFD lab has been added to ENT 291 and was first included in spring 2006 offering.
- Easy 4 - need to allow take home and use. - This will be done starting with the fall 2006 offering of ENT 295
- HS Recruiting – See below

2. Course Content The revised content for four courses was reviewed (see attached)

There were two driving forces for revision:

1. Advisory Council and other suggestions for improvement
2. Requirements for the EMET program resulting from their recent ABET review.

Those courses and their key changes are:

ENT 291 Industrial Electronics

- Added VFD topic and lab
- Will remove PLC topic next offering and replace it with digital logic, which is needed for the EMET program need. The PLC will be covered in a full course, ENT 296, with its first offering spring 2007.

ENT 295 - Microprocessors I

- Retains the Motorola focus
- Upgrade to the 68HCS12 processor
- New lab equipment with the 68HCS12 processor
- Revised laboratories

- Removed the topic of numbering systems

ENT 297 – Microprocessors II

- Retains the Intel focus
- The course has been retained as a requirement for the ECET program
- It is being redeveloped.

ENT 294 – Digital Switching

- The number systems topic is being moved to the front of the course
- It is now a co-requisite to ENT 295
- PLD topic and labs will be included

3. Recruiting

Our hands-on LED Chaser activity was done with about 120 high school students at 3 local high schools.
One of these high schools has made a campus visit and the other 2 are being invited.
The hands-on nature of this activity has been well received as opposed to people coming just to talk to the students.
A grant request has been submitted for the funding to do this again next year.

4. Program Reviews

ABET: Our next ABET review will be in 2007 and we are making good progress in collecting and organizing material that will be needed. The self-study will be done in the spring of 2007.

Miami University: This review will be about the same time period. Hopefully much of the preparation for ABET will address this review also. We need to get more information on what this involves.

5. General comments

- Complimented on responsiveness to Advisory Council suggestions
- Suggest offering a bachelors degree in Electrical and Computer Engineering Technology
- Include flux vector and closed loop with encoder as part of VFD topic
- Add proximity sensors (shielded and unshielded), light curtains and encoders to the curriculum
- Do PLD at the schematic capture level. Altera is a good system for this.

Prepared by Roger Seifried.
4/3/06

Advisory Council
Electro-Mechanical Engineering Technology (BS)
March 31, 2006

Present: Mysore Narayanan, Ken Warfield, Charles Faulkner, Ken Ekegren, Jeff Miller, Carole Scott, Ken Warfield, Adam Tarter, and Rob Speckert.

1. Updates from last meeting—Rob mentioned that the EMET program did make the curriculum changes in response to TAC/ABET and advisory council input. These changes will be effective fall 2006. The changes are:
    - Remove ENT 312 Thermodynamics and add ENT 310 Fluid Mechanics.
    - Delete 6 credit hours of electives and add ENT 296 Programmable Logic Controllers (a new 3 cr. hrs. course) and ENT 470 Topics in Electro-Mechanical Engineering Technology a new 3 cr. hrs course to be developed.
    - Allow STA 301 or STA 368.
    - Change specified pre-requisite courses by dropping ENT 292 from the list and adding ENT 196, 272, and 291. Also change the wording to indicate that ALL prerequisites are required.
2. We discussed the addition of new colleges as distance partners effective fall 2006. They are:
    - Terra State
    - Stark State
    - Zane State
    - and possibly, Southern State Community College

    We then discussed the fact that we actually have several other colleges requesting that we connect with them. We will likely limit the expansion to the 3 or 4 for fall 2006.

    Ken Ekegren asked about the video connection capability and whether or not we can reliably connect to this many sites at once. Rob mentioned that we are looking at a model of having multiple course sections and dividing the state into regions. More at our next meeting on this.
3. It was announce that Rob Speckert will be joining EMET faculty beginning fall 2006. Rob will take the lead on assessment and continuous improvement.
4. We finished with open discussion of how advisory council can further help with Electromechanical Assessment and Continuous Improvement. We discussed that value of pre and post tests. We agreed the pre-test will remain and continue to be used as a communication tool with our distance partners. We will use the post test again but adjust where, when, and how administered and how much the results will count toward grades/graduation.

The meeting adjourned at 3:50 P.M.

Mechanical Engineering Technology Advisory Council Minutes
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Harry T.Wilks Conference Center
Miami University, Hamilton Campus

- The meeting was called to order at 2:00 PM by Gary Drigel and Ronald Earley. Members in attendance were: Rich Albrecht, Gary Drigel, Ronald Earley, Dan Hellenbrand, Dave Lippert, Randy Myers, Vipul Ranatunga, Ken Williams, and James Valentine.
- Under old business, recruitment of company employees was discussed and it was suggested that the ENT department supply a short video describing the programs, etc. to specific company representatives who would make it available to employees and track interest. Based on these data a combined recruitment seminar could be planned. Ron Earley and Don Becker will coordinate this project.
- Considerable time was spent discussing details of the accreditation review process recently completed. Members were assured that the MET program was only cited for relative minor concerns that have been or are in the process of being corrected. It was explained to the members that the weakness cited in the draft report should not have been attributed to the MET program and that TAC/ABET will correct that mistake. The members discussed the possibility of various contingency actions that could be implemented if warranted.
- MET program courses currently undergoing significant modifications and improvements were discussed in detail. Program laboratory equipment additions and improvements continue to be a major emphasis and all industrial members renewed their collective commitment to the facilitation of this on-going quality improvement component.
- It was recognized that the areas of engineering associated with MET are multiple and that the program should continue to provide a broad technical educational base to its graduates. Companies will then help define and give identity to specific engineering tasks assigned to and expected of the graduates. It was decided that each industrial member should be provided a copy of the latest MET student advising packet for review and that each would provide feed-back information, especially related to program overall curriculum and course offerings. Ron Earley and Gary Drigel will coordinate this effort.
- Details of current, on-going, new student recruitment efforts by the department were provided. The concept of dual admission agreements with surrounding two year community colleges was explained and the members agreed that these relationships will provide significant potential for program enrollment increases. A significant amount of time was spent discussing the potential impact of Gary Drigel's denied student recruitment plan on

department enrollment numbers. All members agreed that this should be implemented. It was suggested that a letter be mailed to denied Oxford SEAS students congratulating them on being accepted into the ENT program prior to their receiving the denial letter.

- The question was asked by one of the industrial members: what is the program/department doing to address the concepts of globalization of engineering jobs and to teach graduating students how to function and compete within this here-to-stay environment? It was agreed that currently very little emphasis is being placed on this extremely important aspect of the student's education and that much more should be integrated into the MET curriculum. The Project Management course is an excellent platform to facilitate this process. It was further agreed that this subject should be included as a major topic of continued consideration and discussion on the agenda for the next meeting.
- The meeting was adjourned at 4:00 PM.

Respectfully submitted by:
Ronald Earley