

Miami University
Department of Engineering Technology—Advisory Council Minutes
Engineering Technology—Combined Meeting
Friday, November 3, 2006
Marcum Conference Center, Oxford, Ohio

Minutes

Attendees: (see lists from breakout sessions)

1. We had **brief introductions** by each member in attendance. Ayo thanked all faculty, staff, and Advisory Council members for a job well done in developing ENT over the years. Special thanks were extended to the outgoing ENT Chair, Rob Speckert for his many years of service.

2. Ayo reviewed ENT faculty and staff positions and programs offered.

3. The following **program updates** within the department were highlighted:

- TAC/ABET accreditation of bachelors completion programs in EMET and MET.
- TAC/ABET reaccreditation of associate and bachelors programs in fall 2007.
- Importance of spring senior design day and board members encouraged to participate.
- Long range department plan and how it integrates with plan for regional campuses.
- Competing for students that might be away from Miami by invading institutions.
- On-going expansions of ENT distance sites across Ohio.
- Restructuring of several labs.
- MET Students won National Design Competition in 2005.

4. Assessment and program improvement plan:

- Acceptable continuous improvement plans are in place.
- Program outcomes included within courses.
- Department education objectives were presented and discussed.
- Changes were pointed out that resulted from input from council members.

5. Challenges

- Re-Accreditation by ABET.
- Improved Assessment Plans.
- Enrollment (Recruiting in Local High Schools and Industry).
- Additional Lab Equipment.
- Additional Resources for Distance.
- Implementing all Articulation Agreements.

6. Enrollment

- 147 majors.
- Fall 2006 slightly lower than Fall 2004.
- Student credit hours - Approx. 804 Fall 2005; Approx. 661 Fall 2006.

7. Breakout Sessions

We then broke into 3 sessions: ECET-AD, MET-AD&BS, and EMET-BS.

Submitted by Ayo Abatan

Advisory Council

November 3, 2006

Minutes of EMET Session

Attendance: Greg Pollitt-Gateway Copper, Susan Pandin-Student, Chuck Faulkner-Miami University and Cincinnati State, Anton J. Lipps-Student, Ken Warfield-Shawnee State, Ken Ekegren-North Central State, Mark Miller-G.E. Schmidt, Dave Hergert-Miami University, Rob Speckert-Miami University

1. Dave reviewed the *minutes from the April 2006* meeting and updated the group on the action items. He mentioned the changes to the curriculum have been implemented including the addition of a PLC course per advisory council recommendation.
2. Dave talked about the other *curriculum and lab changes* in response to ABET. More details later in these minutes.
3. We discussed the *impact of TAC/ABET* on students' ability to take FE/PE. Council suggested offering FE to ENT 498 students and simply make it optional.
4. **Assessment:** Dave mentioned that the pre and post tests were not effective since students tended to blow off the tests. The advisory council liked the idea of using portions or all of the FE in ENT 498 as one assessment tool.
5. Rob went over *ENT 311*. We discussed the DAQ card and LabView. He handed out data sheets and sample labs and explained how this is the first of a three course sequence. Dave talked a little about ENT 401 and 418 which are the next two courses following ENT 311.
6. Dave reviewed *ENT 407*. He handed out the syllabus and a sample lab. He explained how the students will be building a Boe-Bot in ENT 401 and using it in ENT 407. The advisory council was supportive of ENT 407 and said it reflects what they felt was needed in the program.
7. We then spent some time discussing subjects requested by Dr. Ayo Abatan, Chair, ENT. We asked, *what is an urgent need for Industry?* Council's reply is:
 - PLC programming
 - Robotics
 - PLC installation, I/O, networking
 - Safety
 - Ergonomics

What can we do now to help meet those needs?

- Implement PLC and 407 hours
- Project Management-already in place as a result of advisory council recommendations.
- Add safety design issues in ENT 407

We completed the assessment of the meeting and adjourned at 3:30P.M.

Submitted by: Rob Speckert

MET (AS & BS) Advisory Council Minutes – November 3, 2006

Attendees: Douglas Cheek, Kerry Willet, Will Willet, Dan Hellenbrand, Doug Young, Julio Pulido, Dave Lippert, Mauro Losz, Michael Harrison, Jim Bachmann, Rick Albrecht, Gary Drigel, and Vipul Ranatunga.

1. **Old Business:** We started our MET AS & BS concentration session circulating the minutes of the last meeting.
2. **ABET Accreditation:** Gary presented to the advisors that we will be going for our ABET reaccreditations on both AS and BS degrees during the year 2007. Jim Bachmann requested that the accreditation we have in place for BS degree must be used as a marketing tool. Also, a mailer to graduated students will be beneficial.
3. **Updates on Mechanical Programs:** Under the updates on mechanical programs, we presented the new courses, courses with new lab classes, and also the ABET recommendations. Advisory council members expressed the need for feedback from graduated students. Julio Pulido mentioned that we need to collect from our graduates what they missed during the course of study at MU. Mauro Losz posed questions on the possibility of having intensive courses; Vipul explained the possibility of conducting these courses through 'Continuing Education'.
4. **Recruiting Updates:** Gary summarized the effort of the department on recruiting. We extensively discussed the plan on recruiting qualified but Oxford-denied students through SEAS. Julio Pulido requested to have an open and direct discussion with SEAS Dean and asked to pursue on getting rejected students to our programs. The advisory council strongly recommended that, under the "one university" concept, we must try to convince the Oxford admissions office to work on a positive-looking plan on getting the rejected students to regional campus programs. Kerry Willet mentioned that the students face the same challenges and educational experience as Oxford students, with the help of experienced faculty at MUM/MUH. Ayo Abatan highlighted the new developments related to sending the modified rejection letters. He recommended that the IAC members should directly write to SEAS emphasizing the change in admission criteria/practice in sending the rejection letters. Bill Willet expressed that he can help the students to convert their service schools to Miami credits. Army and Air Force programs have a better program to place the students but Navy-related programs do not have a well-formatted guideline; since Bill has gone through this path, we volunteered to help the new recruits.

Due to the time-constraints, we had to briefly go over the **five-year plan and new business**. Gary mentioned the developments on dual admission with Sinclair. Doug Young presented that there are national support programs to encourage low-income students to get college education and we should look at places such as NSF for external funding opportunities. Kerry mentioned that there are military programs for supporting ex-service personnel. Jim Bachmann questioned about the students graduated with only AS degree. He recommended that, if we are trying to improve enrollment in upper level classes, we need to contact them and try to encourage these to complete the BS degree. We approved the minutes of the spring-2006 meeting and the meeting was concluded.

Submitted by Gary Drigel and Vipul Ranatunga

SEAS Industry Advisory Council
Electrical and Computer Engineering Technology (AD)

November 3, 2006

Members Attending: Tim VonDerHarr, Brendan Kuhl, Roger Seifried, Don Becker, Greg Goetz, Jeff Legge, Bryan Allen

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

- Suggest offering a bachelors degree in Electrical and Computer Engineering Technology
This is being pursued. See item 5 below.

- Include flux vector and closed loop with encoder as part of VFD topic
VFD and a VFD lab have been included in ENT 291.

Flux vector and closed loop with encoder have not yet been addressed.

- Add proximity sensors (shielded and unshielded), light curtains and encoders to the curriculum.

This has not yet been addressed.

- Do PLD at the schematic capture level. Altera is a good system for this.
This has been implemented in ENT 293 as an introduction to PLD.

A full semester PLD course is planned for the BS ECET.

2. Recruiting

Recruiting continues at three high schools – Hamilton, Princeton and Monroe.

36 students from Hamilton are scheduled to visit our campus on Dec. 11 and will be treated to both electrical and mechanical activities.

3. Request for additional industry advisors.

Suggestions were:

Yellow Springs Instruments

Bill Franer with Siemens Controls.

4. Reaccreditation

TAC/ABET will be here in 2007 to review the program for renewed accreditation.

Preparation is going well.

We will likely ask Advisory Council members to meet with ABET when they are here.

5. Proposed BS ECET

Plans for the BS program were reviewed. (Draft document was circulated).

The program has been approved through the Department level. The next approval is the Executive Council.

The program is a systems approach to controls and uses mostly existing courses from the EMET and CIT programs along with two new courses to be developed – Advanced Digital Logic (PLD) and Embedded Systems.

Comments from the council:

In general it looks like a good program.

Will accreditation of the program be backdated? This was not known.

Need to address the needs of industry for this type of graduate.

6. Most urgent needs of industry and how they might be addressed by the ENT programs.

1. Graduates who grasp new technologies faster. Technology changes quickly particularly in electronics and computers.

Teach students to learn on their own. Include more general open-ended problems in the curriculum.

2. Graduates with appreciation of cost and manufacturability.
Include exercises on designing for minimum cost and for manufacturability.

3. Graduates with appreciation of aspects of quality such as 6 sigma concepts.

Prepared by: Roger Seifried