

EPIC Minutes
July 29, 2003

ME Mock ABET Review

Members Participating: Ron Barr, Steve Biegalski, John Hasenbein, Eric Fahrenthold, Jack Howell, Lew Rabenberg, Phil Schmidt, Harovel Wheat, Billy Wood, Sherry Woods, Dani Fournier, Stephanie Dauphin.

This was an all day Mock ABET Visit by Dr. Larry Witte, Associate Dean of Engineering from the University of Houston and an expert on the new EC 2000 ABET criteria. There were meetings with Dean Armstrong, Dave Bourell (representing Joe Beaman, who was out of town), all EPIC committee members, many PROCEED committee members, the ME UGO staff, ME students, and the LRC and Machine shop staff. To document the activities, two appendices are attached:

- A. The final agenda.
- B. A summary of all notes taken during the interviews.

Dr. Witte will supply a 3-5 page report in the near future.

**Appendix A:
Agenda for Mechanical Engineering Mock ABET Review
July 29, 2003**

<u>July 28, 2003</u>	Arrival from Houston DoubleTree Suites 303 W. 15th Street, Austin, TX 78701-1692 Tel: 1-512-478-7000 Fax: 1-512-512-478-3562	
7:00-9:00 PM	Dr. Ron Barr and Dr. Jack Howell to pick up at Hotel - Go to dinner at Siena	Siena Ristorante Toscana 6203 N. Cap. Of TX Hwy. 349-7667
<u>July 29, 2003</u>	Park in Garage 6 (PG6). Get validation sticker from Deanna Stewart in Chair's office (ETC). http://www.utexas.edu/parking/maps/index.html ETC and PG6 are in the northeast section of the campus.	ETC 5.208
8:00-8:15	Dr. Neal E. Armstrong, Associate Dean for Academic Affairs, College of Engineering; Dr. David Bourell, Associate Chair, Mechanical Engineering. Welcome meeting; review day's goals	Dr. Armstrong's office ECJ 10.326
8:20-8:55	Dr. David Bourell, Dr. Ron Barr, Dr. Jack Howell. Discuss day's agenda, and materials to be reviewed	Chair's Conf. Room ETC 5.210
9:00-9:25	EPIC committee: Dr. Eric Fahrenthold, Dr. John Hasenbein, Dr. Steven Biegalski	Chair's Conf. Room ETC 5.210
9:30-9:55	EPIC committee: Dr. Harovel Wheat and Dr. Llewellyn Rabenberg	Chair's Conf. Room ETC 5.210
10:00-10:25	PROCEED committee: Dr. Philip Schmidt and other PROCEED members.	Chair's Conf. Room ETC 5.210
10:30-11:00	Mr. Billy Wood, Undergraduate Advisor; Danielle Fournier, Stephanie Dauphin, Administrative Support. The undergraduate student experience. [Mr. Wood will escort Dr. Witte to next meeting]	Chair's Conf. Room ETC 5.210

11:05-11:35	Al Meyer, Associate Dean for Student Affairs /SAO staff (Trisha Gore). [Gretchen Dare will escort Dr. Witte to lunch meeting]	Office of Student Affairs ECJ 2.200
11:40-12:40	Lunch with undergraduate students Box Lunches provided. Students: Andrew Heidebrecht Sophomore Mark Stefenov (Graduated 5/03) Shazib Vijlee Senior Yuval Doron Junior Athulan Vijayaraghavan Junior Marwan Chaar Senior Meng Ke Senior [Gretchen Dare will escort Dr. Witte to next meeting]	Dean's small conference room ECJ 10 th floor
12:45-1:30	Tour of M.E. M.E. Labs: Peggy Berry, Computer Systems Administrator M.E. Shop: Don Artieschoufsky, Machine Shop Supervisor	ETC 3.116 ETC 1.214
1:30:2:30	Reviewer time/notes preparation	ETC 5.210
2:30-3:00	Dr. David Bourell, Dr. Ron Barr, Dr. Jack Howell, Dr. Sherry Woods, Director of Special Projects, College of Engineering Exit interview/review findings/key area concerns	ETC 5.210
3:05-3:35	Dr. Neal Armstrong, Dr. David Bourell Highlight key areas of concern	Dr. Armstrong's office ECJ 10.326
3:35-	Departure to Houston	

Appendix B:

Summary of Notes from ME Mock ABET Visit 7/29/03

Student Advising, Mentoring, and Learning Environment

- Document our student advising and mentoring programs in ME. Include them in the ME Self Study.
- Be sure that we say something about how we address course prerequisite checks. It's on the honor system, but in general if students don't have the proper prerequisites their grades will reflect it. Explain this process.
- Explain advising bars that prevent them from registering if they haven't been advised. Students go to the undergraduate office for formal advising regarding prerequisites, degree plans, etc. They also have faculty mentors who can help them tailor their courses towards a specific career goal.
- Explain what is the major cause of academic probation and suspension among your students. The math and physics departments – students often aren't prepared for those courses. Our drop process involves the professor's side as well as the student's; we get input from the faculty about how the student performed in the class. It seems like you're not happy with your students' preparation even when they do pass physics and math.
- Explain the learning environment for your students. We have expanded facilities on the second floor where students can sit at large tables together and work collaboratively or alone. We also have wireless access so that students can use their computers anywhere in the building.
- Explain facilities for student societies: They have offices in our building. ASME, the College of Engineering Honor Society, and the Mechanical Engineering Honor Society all have offices on the second floor.
- Explain computing instruction offered in ME. We have a computer lab on the third floor that's open from 7:00 am to 2:00 am. Design teams have 24-hour access to the labs. We also have a laptop initiative that makes laptops available to students, faculty, and staff. Fortunately our students come to us with basic computer skills like word processing and using spreadsheets. But, it's bad that they aren't learning algorithms in high school – so we have a freshman computer course that's online and self-paced.
- Explain your formal assessment of your mentor program. Not yet; this is only the second year, but we are tracking it now. We match students with faculty mentors from the students' areas. We also have the FIG (Freshman Interest Group) program. It's one class, an extra seminar one hour per week, and there is a peer advisor. It provides study skills instruction and gives students a good network in the department. They might have calculus or chemistry classes with hundreds of other students, but a small number of them will be in the same seminar together – they can help one another.

Outcomes Notebooks

- Read the notebook write-ups carefully to be sure that no comments appear to blame outsiders for our problems.
- The outcome notebooks appear to be a good way to present the material. Focus on making them consistent, accurate, and readable. Not just be a big set of loosely related data.
- Keep in mind that we may in some cases consider and then reject changes recommended by industry or student surveys; the important thing is that we have an active feedback process, as shown in the notebooks.

The ME Self Study Document

- Include a description of how the CIS (Course Instructor Survey) is used in the document.
- Include examples of closing the loop in the ME Self Study.
- Include EPIC meeting minutes in the Self Study appendices. This shows a long-term dedication to educational improvement in ME.
- Document efforts we have made in engineering ethics, such as the short lived freshman ethics course and the student honor code discussions, even if they have not worked out as we had hoped; engineering ethics may fit best in the design course sequence.
- Explain how the EBI data is being used in the ME department for assessment.
- ME Educational Outcome #4 (participate as leaders ...) is hard to assess.
- Document equipment replacement cycle and student fees structure.
- Do a better job of discussing the Preparation versus Improvement data tables and discussion. Show we are doing something, not just surveying students. This was a major concern.
- How are we involving alumni in ABET?
- Argue that we are still gathering data (like EBI) and this assessment needs several years to demonstrate trends, which then would lead to some major changes.

Assessment and Closing the Loop

- Create a notebook that shows specific “case examples” of closing the loop in ME and make it available for the ABET reviewer.

- The Faculty Course Feedback forms are a good way to demonstrate we are closing the loop in educational improvement. The inspectors will like this program. Maximize this effort!
- Document visiting committee reviews and recommendations, and our response to that review.
- Describe and document our efforts to respond to criticisms from the last ABET review, for example in the area of design-related courses. How have we improved the curriculum since the last ABET visit in 1998.
- Document curriculum related committee deliberations, recommendations and follow-up actions. Get recent notes from the committee chair (Ralls).
- Document the chairman's exit interview program for students enrolled in 466K. The inspectors will like this program. Document Joe's comments from the senior K-group verbal exit interviews.
- Consider using the student portfolio program as a documentation tool. Incorporate it into the closing the loop.
- Consider making completion of the exit survey a requirement for graduation.
- Take full advantage of PROCEED as an organized and documented effort to improve the curriculum. The inspectors will like this program and the accompanying curriculum reform. Describe how PROCEED has driven changes in the 2004-2006 UG catalog for the ME curriculum.
- If there is any evidence from PROCEED, like QQI surveys, include it as part of the assessment process.
- Involve student organizations' activities (seminars, etc.) in the assessment and documentation process.
- PROCEED papers notebook is a good idea to show the ABET inspectors.
- Show the place where changes are made in the "ME Closing the Loop Diagram." It is incomplete as it stands now because the loop is not closed!. This is a major concern.

ME Course Syllabi

- Many course syllabi do not seem to include ABET program outcomes. Review all course syllabi. Start processing all of them into the ABET two-page format (with staff help) and then distribute electronically to faculty for incorporation into their syllabus they hand out to students.

ME Website Information

- Make sure the ME Mission Statement is easy to access from the ME home page

- Make sure the EPIC (ABET) website area is easy to access from the ME home page. Make sure that the ME Educational Objectives and ME Program Outcomes are easy to access also.
- Communication to our external constituents is important.

Comments Made by Students at Luncheon

- Students like PROCEED courses and courses that had practical applications.
- There noted inconsistency of instructors in classes taught with multiple sections.
- The administrative staff is done well.
- Physics is still a problem.
- An ethics thread in the ME curriculum is not evident.
- They do not like the web-based computer programming course.
- They would like to know/see more about faculty research.

One Final Comment

- We do not yet seem to be “immersed in the ABET 2000 culture.” Find out what this culture is like.