One of the key goals of the Texas Tech ECE Industrial Advisory Board (IAB) is to promote an ongoing, constructive dialog among students, faculty, and staff. For many years, the IAB has hosted an annual students-only, friendly forum to solicit feedback from the ECE student body. The IAB then works with the ECE faculty to address concerns, as well as pass along positive comments.

This past Fall, nine members of the IAB met with approximately 7-8 students on the Thursday evening of our on-campus visit. Here’s what we heard (department response comments in blue font):

**ISSUES - GENERAL**

1. We need better promotion of the IAB/Student feedback meeting. Only 7-8 students attended vs. 9 IAB members. We also need earlier room scheduling and better communications (posters, social media, flyers). Students thought that the notice should be more descriptive about what the meeting was about. As a side note, HP had a meeting with the students at the same time as the feedback meeting and the potential for job information was probably a stronger motivational factor than the IAB feedback meeting for students. Promotion of the meeting should be easy to fix. This is the second time that there has been a conflict with a job info session from a major company during the same time slot as the IAB meeting.

**ISSUES - LABS, COMPUTERS & EQUIPMENT**

2. The value of newly required safety training for chemical access seems questionable. This is probably overkill for undergraduates. Test is now required for anyone who is required to use a laboratory (labs with more than just computers). The test accuracy was also called into question since it seemed like some answers taken from the study material would still generate a wrong answer. I agree. The reason for this policy was this: [link](http://www.csb.gov/videos/experimenting-with-danger/)

3. Electrical safety training might be more appropriate for ECE. We are planning to use this book for all labs: [link](http://www.crcpress.com/product/isbn/9781466571495)

4. Lab equipment is improving significantly under the direction of Richard Woodcock who has organized things, getting equipment calibrated, more accommodating to students, more parts available, etc. There are still some issues with the wrong equipment getting checked out vs. experimental needs (e.g. “overkill” with a low frequency experiment using a large BW spectrum analyzer, etc.). Some o-scopes are outdated but they are trying to do what they can. Lab 3 cables are sometimes an issue since cables get lots of abuse and are not easy to track given the different variety/type/etc. They are re-doing the database to try and help. Finally, temperature control/thermostats in the basement are being managed to keep temperatures there much more tolerable. They are now putting covers on thermostats to avoid abuse but at least it works better overall. Richard Woodcock has been recognized for doing a great job.
ISSUES – CURRICULA & FACULTY

5. There were questions from IAB members about students being grilled. There was an example from one student who gave a presentation but was admittedly not prepared. There were questions he was unable to answer and he therefore got flustered. He felt somewhat grilled by the professor in question but believed that it was a one-time occurrence and students acknowledge that it was intended to be part of overall learning experience. The issue is being addressed but I think it is also important (in moderation) to prepare the students for actual presentations in industry where a lot is at stake if you are not prepared.

6. Comments about a professor making a statement during a group interaction in a social setting. A single student just felt it was directed specifically towards him (based on their perceptions of what was causing his class performance) but he felt it was generally inappropriate and thought others there were somewhat offended by this remark. The issue is being addressed.

7. Issues were identified with learning disabilities and the response from faculty, TAs, etc.. “Blue slips” are required to be presented to teachers. They are often supposed to get extra time for homework and tests but tests must be administered by a professor, TA, or at test center. Test center seems to have limited access and doesn’t return completed test in timely manner (through intra-university mail where in some cases it has gotten lost). Need more efficient means of getting test back. Student would like accommodations without the staff being condescending. The teaching staff (professors and/or TA’s) often don’t know what their response is supposed to be and what accommodations are supposed to be provided. Students are not getting grade info/feedback back in time to support next normally scheduled test. In some cases, students not providing blue slip early enough. Student would like an advocate in the department, better efficiency in testing center and getting results back in a timely manner, and would like to be treated with more respect. We will schedule an info session at a faculty meeting on ADA. In that case TA’s would have to attend. A good option is to let the student take the exam in class with the other students to maintain maximum confidentiality and then give the test back to the student after the exam for further work.

8. Students desire more interaction between graduate students and undergraduates (what do they work on, what do they do, how do you apply to grad school). They didn’t know that they could take graduate courses while in the undergraduate program. A website page with procedural info would probably be helpful. It might also be good to have a seminar in EE 1301 or 1304 with some real world stuff (seminars from graduate students, professors, etc.). It was also suggested to get input from women students too on what would motivate them and what they would like to see (maybe more on social purpose/benefit, projects with a purpose, impact on humanity/society). They could also do film clips of faculty and what they do and post on social media (Facebook) pages. We just voted that students can take up to 12 hours of graduate credit as undergraduates and we need to advertise this better. We could have undergraduates attend (certain) graduate seminars for “Lab Points” credit.
9. Information on changing courses from grades to pass/fail criteria would also be helpful since this was not obvious to some students. “Pass-Fail” is not an option for Engineering courses.

10. Comments about a professor brought up in past feedback sessions are now more positive. I talked to this professor and it seemed to have helped a lot. No issues in comments in teaching evaluations.

11. Mentioned in general that professors also may not be aware that they can obtain a photo ID roster of all classes from the university office to help with identifying students with names.

12. The students had many general comments on material presentation. They don’t really like slides (too much info left out in between slides, some professors write notes as they present but it’s not available unless you photograph the display and that is generally frowned upon). In some cases, the professor’s notes are used almost exclusively without an official textbook and it is not easy to follow. Dr. Saed and Dr. Sari-Sarraf both do a good job of using a tablet to display materials and then pull up examples of problems using MATLAB. In some cases, students had been questioned if they had their cell phones out (whether or not they were being used to photograph or video the presentations). Students would just like a consistent department policy on whether they can video/photograph presentation materials or otherwise obtain/copy the material. Normally individual instructors control what students’ can record and how. Instructors should post materials on blackboard. Also new smart-boards can help capture materials.

13. Distance learning classes. Students appreciate the video and the ability to pause, rewind, and review again. Having access would be good even if you aren’t taking the distance learning version of the class. Typically all students have access to online materials for distance learning classes.

14. Class locations maybe a little better. Non-major classes taught in Biology building. Feedback taught in Civil or other engineering building. New buildings (such as BA) seem to have ability to restrict classes there for five years to their own classes without allowing other subjects to use the building. Brian Nutter is doing a good job of early scheduling of classes to get them into the building. However many of our classes are bigger than what can legally fit into ECE 121/122 etc.

15. Student IEEE (and other student group) meeting access is still somewhat of an issue. In one case, they ended up in Civil Engineering basement for one meeting when the Seacat room was empty at the same time. The IEEE meetings typically have 50-80 attendees, more for popular meetings (hosted by TI, NI, etc.), and less towards the end of the semester. There are two central booking systems (one for classes and one for extra-curricular meetings) with a big disconnect between the two. Sometimes rooms seem to be double-booked with bookings generated from the two different reservation/booking systems. Sometimes rooms are reserved but not used and not opened up to other groups (there still seems to be no penalty for non-use so there is little/no motivation to make it available to someone else if a meeting is cancelled). If there is a change, it might involve a website notice if rooms become available. If there is an e-mail notice, it likely goes to the faculty sponsor instead of the student in charge of the organization where it would be more useful. Finally, the Engineering Opportunities Center (EOC) seems to book many of the prime rooms for an entire semester “just in case” and then won’t release the rooms if they are not needed. The department is working to address the issue. One individual is coordinating
classrooms and another one is coordinating events. An additional problem is that many groups leave projectors on all night after their meetings.

16. The student IEEE group would like the ability to accept credit card payments for IEEE membership. However, this has to go through University “Org Sync”. How can student groups take CC payments to make it easier for students? This can’t be casual due to the potential for abuse.

17. Senior electives. Numerical analysis would be valuable but is not allowed in the EE program. All computer science courses are really not feasible either since they require pre-requisites that are not normally taken. This is being referred to the curriculum Committee.

18. General curriculum. Higher math for Engineering (differential equations 2). A math professor taught this course as if the students had taken linear algebra even though linear algebra was not listed as a pre-requisite. The class seems to be primarily attended by (~90% EE) students. This may have been an issue with an online class taught by one professor during one semester (she might have been the only professor who was available and she was on maternity leave). However, this was a general issue though since the class is required for their EE course schedule. This is being referred to the curriculum Committee.

POSITIVE FEEDBACK

19. There were positive comments about student involvement in voting for the professor of the year. They were very positive about Dr. Michael Helm. Students like that he makes EE interesting and keeps students wanting to continue in that major. Dr. Helm just got a “Professor of the Year” award from the students.

20. Students were very positive about the IEEE 3D printer that can be used for free for ECE students. Supply costs seem to be minimal (~$125/semester). Proposing to offer to other departments if they subsidize cost. The printer is controlled well and students must complete some training before submitting jobs to be generated. Dr. Gale’s Robo-Raider Group is doing a good job managing it.

21. Free access to the B&W laser printer is also good and appreciated. They have now addressed abuse by other TTU departments by restricting access and monitoring heavy use (printing of books, etc.). Color printers available in library for $0.05/page so not too bad. Richard Woodcock is doing a good job monitoring excessive use.

22. Seeing more “yellow shirts” at the Engineering kickoff at the beginning of the fall semester. Yellow shirts are worn by EE students to get access to the kickoff and get information on their major, student organizations, etc. So the number of yellow shirts seems to be more visible. There also seems to be a noticeable increase in the number of female EE students too. The yellow shirts are popular!

23. There were very positive comments about Dr. Li, Dr. Bayne, and Dr. Fan. They are all doing well.