

**Monthly Faculty Meeting
Electrical Engineering Department**

Present: Roger Dougal, Chair

Mohammad Ali	Krishna Mandal
Andrea Benigni	Enrico Santi
Yinchao Chen	Grigory Simin
MVS Chandrashekhar	Guoan Wang
Herbert Ginn	Xiaofeng Wang
Paul Huray	Bin Zhang

Absent: Charles Brice

Recorder: Nat Paterson

The meeting was called to order by Dr. Dougal at 3:30 p.m. in EE Conference Room 3A75 on November 20, 2014

1. Announcements –

- Minutes from last monthly meeting were electronically approved with one correction on the date of the Fall 2014 IAB meeting.
- December Graduation – December 15, 2014
 - CEC Convocation at Seawell's – 10 AM
 - Doctoral Hooding at Koger Center for the Arts – 1:30 PM
 - USC Commencement – 3 PM
- Be sure to complete Fall 2014 Peer Evaluations
 - Material & Content Evaluation – due Friday December 5, 2014
- 2014 Outside Professional Activities Report – due Thursday January 15, 2015, requires paper form with original signature in blue.
- eWeek – Saturday February 21, 2015

2. Committee Reports --

I. Undergraduate Committee – Dr. Simin

Motion #1 – To remove ELCT 371 from the list of prerequisites of ELCT 332 (Wireless Communication) and add STAT 509

- Current prerequisites – ELCT 321 and ELCT 371
- New prerequisites – ELCT 321 and STAT 509

Rationale: The ELCT 332 course content addresses only a minimal amount of circuit-level material (e.g., diodes for envelope detection), but requires a substantial amount of analysis of random phenomena, e.g., noise. Hence the content of STAT 509 will be far more beneficial than the content of ELCT 371.

Concern: whether or not adding STAT 509 as a prerequisite will block students from taking ELCT 332. That is not the case. STAT 509 is suggested to the students to take in their sophomore year prior to be eligible to enroll in any 300 level courses.

Vote: all in favor

Next actions:

- Submit Course Change, Justification, and Bulletin Change forms
- The change will be effective for the 2016-2017 Undergraduate Bulletin

Dr. Simin presented the following items that under discussion in the Undergraduate Committee.

Discussion #1 – To remove CSCE 146 and CSCE 212 from EE BS Program

CSCE 146's content is not particularly related to our program and our students have questioned the point of taking it, as have many of our faculty, because the emphasis is more on data structures and business-related programming than on engineering programming. It does not appear to build skills that are needed in any subsequent EE classes, even though it is a prerequisite for CSCE 212, which is in the EE BS program. The EE faculty agrees that our students need better programming skills, particularly for embedded systems and particularly using C/C++.

Next actions:

- Create a list of programming skills our students should learn and put it into a form of syllabus
- Present that draft syllabus to CSE to see if they can assist us in teaching such a course
- The outcome shall be presented in the December Faculty Meeting

Discussion #2 – To eliminate ELCT 102 from EE BS Program

We have discussed eliminating ELCT 102 from the EE curriculum. But ELCT 102 is required in the Computer Engineering program. Dr. Simin met with the CSE undergraduate director and Dr. Vidal to discuss the effects. CSE didn't believe that eliminating ELCT102 would be an issue if there is another course for their students to take.

Discussion #3 – To add EMCH 201 to the EE BS Program

Dr. Simin suggested adding EMCH 201 (Mechanical Engineering) in place of ELCT 102. This course covers more mathematical skills and will help prepare our students for ELCT 221 and ELCT 222. Dr. Simin has discussed with Mechanical Engineering whether they have capacity to add our students and ME appeared to welcome our students in this course.

Concern: Will these changes to the EE program have any adverse effect on total course hours in various categories are required by ABET? Dr. Simin consulted with Dr. Santi, the Assessment Committee Chair. Dr. Santi believes that by dropping these 3 credit hours from the curriculum would not present any issues since we have more than the minimum number of hours when considering the core technical courses (45 hours) and the three EE electives in the career plan courses (15 hours).

Next actions:

- Complete Academic Program Change, Justification, Bulletin Change forms to remove ELCT 102 from EE curriculum and present them at the December faculty Meeting for final vote
- Complete Academic Program Change, Justification, Bulletin Change forms to add EMCH 201 to EE curriculum and present them at the December faculty Meeting for final vote

Discussion #4 – To offer ELCT 201 Lab to Computer Engineering students

Computer Engineering has asked if ELCT 201 could be opened to their students because their students will benefit from more hands-on hardware experience.

Concern: Dr. Dougal agreed that opening ELCT 201 to students outside of EE would be a good opportunity for those students. However we must be aware of capacity and financial limitations. As of this semester, we are at the maximum capacity for the space while just accommodating our own students. Adding more students will require more TA hours, perhaps more instructor hours, and most significantly, it will require scheduling two lab sessions per afternoon and these two lab sessions will have to be worked in so that they do not interfere with other classes that our students usually take.

(i.e. additional lab sessions cannot be offered in the mornings, and even in afternoons, we must avoid other required classes or labs.)

Next actions:

- Develop cost and effect analysis and present at January 2015 meeting.

Report #1: Summary of Student Advisory Board Meeting was presented by Dr. Mandal. The report of the meeting is attached.

II. Graduate Committee – Dr. Ginn

Report #1 – Spring 2015 Graduate Program applicants

Dr. Ginn presented a list of the applicants for Spring 2015.

Concerns:

- The current process doesn't allow the faculty to directly see which applicants have been admitted and is very limited in ways of searching the best applicants.
- The faculty have been receiving emails directly from prospects which might not get reviewed properly because they are not in any "system".
- It may be beneficial for the faculty to establish a more central process for prospective students to submit their information and for the faculty to be able to search and review the applicants at their convenience that is separate from the Graduate School process. The application fee for the graduate school may actually be detrimental to our objectives to find the very best students.

Discussion:

Find a better and more efficient way to consider all prospective applicants, using big-data analysis methods. Then instruct the best to actually apply to the Grad School for official admission. This should work better than each faculty person keeping track of their own email inquiries at the rate of, perhaps, hundreds per year.

Next actions:

- Dr. Ginn will ask David London to investigate what is required to create a web form on EE website where the faculty can refer prospects to submit their information and to see where a database should be stored.

Report #2 – Fall 2014 PhD Qualifying Exam

The exam is scheduled on Friday December 5, 2014. As of now, there are 4 students who will take the exam.

Report #3– Bulletin changes – Dr. Ginn reported that bulletin changes were submitted but not yet approved.

III. Faculty Development Committee -- Hiring Committee – Dr. Ali

- 5 Skype Interviews have been scheduled
- 3 Completed
- Dr. Seongtae Bae: Nanotechnology/Seoul National U, S Korea
- Dr. Hani Mehrpouyan: Wireless Comm & Signal Processing/California State U at Bakersfield

- Dr. Ahmed Islam: Nanomaterials/Air Force Lab
- 2 Upcoming –
- Dr. Sandeep Negi: Nanotechnology/U of Utah
- Dr. Miao Pan: Communication/Texas Southern U

Next Action:

- Each faculty is assigned to reach out to their colleagues in other universities seeking good applicants – especially recent doctoral graduates. Each is requested to provide a name of a potential candidate, especially female or minority, to Dr. Ali by next Faculty meeting.

IV. Report of the Chair –**1. Summary of October 2014 IAB meeting**

- Program Assessment improvements:
 - Need a more holistic approach to assess our BS EE program
 - The “flow” of the EE program was illustrated. We should consider this and ensure that our program and course content are defined so that courses optimally complement one another.
- The IAB recommended that we use group sessions to cover some aspects of Undergraduate Advisement, particularly the “opportunity” things such as Graduation with Leadership Distinction, Magellan Scholars, etc. This will eliminate the need for advisors to know all of this and to repeat it individually for every advisee.
 - Plans being developed to do this for spring advisement. Several sessions will be offered to permit most students to attend.

2. Take-aways from the 2014 SE ECEDHA Meeting in Atlanta

- Need more emphasis on recruiting women and minorities – received information on how to conduct more focused recruitment (and retention). Some ideas:
- Offer courses that will attract women from other disciplines, especially those where women abound. For example, encourage women who are interested in health professions to understand that, as an EE, they might make a larger impact on health than if they are a nurse.
- In recently visited programs, ABET inquired about:
 - Documentation of lab safety instruction
 - Documentation that shows holistic assessment of the program, not just of classes
 - Documentation of the feedback path and its effectiveness
- In one case, a computer programming class was not allowed to be counted as engineering credits (it was counted as math/science)
- Consistency in statement of program information between all sources of departmental information, including website, online catalog, etc.
- Application of industry standards in design projects – one program was requested to show where this appeared in the course content and textbook.

Next actions:

- Conduct a retention analysis on our students to understand our own retention of women and minorities
- Develop new R&R approaches using the information from ncwit.org and engageengineering.org to recruit and retain women and minorities
- Ensure that lab safety info is posted in labs, especially in ELCT 201
- Develop an EE minor track for Biomedical students, which may attract more women into EE.

3. Spring 2015 Preliminary Enrollment

Dr. Dougal pointed out that many courses are at 95% capacity. A few courses with low enrollment, especially at 800 level, might be cancelled. The faculty were encouraged to coordinate within research groups to offer the right courses to get critical mass of students in each course.

4. Planned Summer 2015 Course offerings

- ELCT 302 and 331 – to help Juniors get back on track for May graduation. Currently expecting 11 students (7 transfer students)
- ELCT 582 – Dr. Chandra wishes to teach it

Next actions:

- At suggestion of Dr. Simin, look into whether there is also summer demand for ELCT 222

Meeting adjourned at 4:54 pm.

**Student Advisory Board Meeting
Electrical Engineering Department**

Present: Krishna Mandal, Advisor
Brittany Richards, President
Amanda Elliot, Vice President

Recorder: Ashley Burt

The meeting was called to order by Dr. Krishna Mandal in EE Conference Room 3A75 on November 20, 2014 at 12:10 PM.

The SAB members met to identify problems that were mentioned by their student peers and to propose solutions to the problems.

Problems	Proposed Solutions by SAB
1. Size of SAB membership -- SAB is too small and current members are graduating. Need higher participation level.	<ul style="list-style-type: none"> • Develop a plan to recruit new members, for example by SAB officers visiting ELCT 101/102/221. • Seniors need to better communicate with freshmen so they can share their experience. • Develop a "mentor" program which matches younger students to either seniors or graduate students to guide them through the program.
2. Not enough students are members of IEEE – students apparently do not see benefits of the membership	<ul style="list-style-type: none"> • Provide incentive to be IEEE members to students • Involve more companies to sponsor IEEE activities to increase relationships between students and industry for future internships and jobs
3. Advisement -- need better way for students to find information about things, like studying abroad, graduation process, etc., other than what courses to take	<ul style="list-style-type: none"> • There should be a designated person in the department to answer all advisement questions for easy access. • Advisement training for professors so they are up to date on rules & procedures.
4. Accelerated Graduate Program – not a lot of students know about it	<ul style="list-style-type: none"> • Need the info of this program on EE website
5. Lack of departmental activities that bring together faculty and students in informal situations	<ul style="list-style-type: none"> • Need more social activities that will promote informal interaction between students and faculty. • Open the research labs to undergraduate students to demonstrate what kind of research projects are going on. For example, schedule an open lab day for students to visit all the research labs. • Arrange more seminars given by the faculty • Arrange more local field trips to visit plants and companies so students can see real world.
6. Curriculum – not enough credits for non EE course permitted.	<ul style="list-style-type: none"> • Allow more credits in the curriculum for outside courses to be considered as Career Plan.
7. Lack of student stories on the website	<ul style="list-style-type: none"> • SAB page should be created on EE website where students' accomplishment can be posted.

Meeting adjourned a 1:00 PM