

**Monthly Faculty Meeting
Department of Electrical Engineering**

Present: Roger Dougal, Chair

Seongtae Bae	David Matolak
MVS Chandrashekhar	Enrico Santi
Yinchao Chen	Grigory Simin
Herbert Ginn	Guoan Wang
Asif Khan	Xiaofeng Wang
Krishna Mandal	Bin Zhang

Absent: Mohammod Ali, Andrea Benigni, Charles Brice, Paul Huray

Recorder: Nat Paterson

The meeting was called to order by Dr. Roger Dougal at 3:30 p.m. in EE Conference Room 3A75 on November 12, 2015.

1. Announcements –

- Minutes from last month were electronically approved
- Benedict College seeking advisor for ABET Accreditation – Dr. Taan Elali, elalit@benedict.edu
- Big Friday – next week November 20, 2015
- Fall IAB Meeting – tomorrow November 13, 2015. Please plan to attend the portion from 9:30-12:00, plus lunch discussions, as your schedule permits.
- Fall 2015 Peer Evaluation –
 - Classroom evaluations overdue – NEED it asap
 - Material evaluations are due December 4, 2015

2. Guest Speaker –

Mr. Lee Goodman demonstrated the video conferencing capability in room 1A21. He encourages the faculty to take an advantage of this free of charge technology provided by the university. Mr. Goodman will forward the information and instruction on how to get started shortly.

3. Committee Reports –

- I. **Report of Chair** – Report from 2015 SECEDHA meeting in Atlanta on Friday November 8, 2015
- **GA TECH's online MS in Computer Science** – only cost \$6600 to complete the degree, expect to grow from 100 to 10,000 students in a few years. Enrolled students from all 50 states and over 100 countries. Faculty involved receives compensation for developing and delivering courses. If we don't do anything to capture similar opportunity, we could possibly lose our presence in an online education environment.
 - **GT Teaching Model** for EE for Non-majors – Using short quizzes and surveys of student confidence to assess students' understanding of each of 24 topics during the semester. Measurements were used to adjust the pace and content, and resulted in significantly improved learning of the most difficult subjects. This is the type of assessment that ABET would like to focus on.
 - **ABET Criteria changes** -- Number of criteria proposed to be reduced from 11 to 7. Though the new criteria are not yet officially approved it is likely that they will be in effect by the time of our report. There will be a phase-in period, but we might have to decide which set (old or new) to report under. There is also more emphasis on direct assessments of students' achievements. We are already well-along in implementing our own improved direct assessments, but we should strive for further improvements.

- **Workshop on Future of EE** – A working group of dept heads is targeted to changing the perception of Electrical Engineering from a tool maker/supporter to leader.

II. Preparation of 2020 Strategic Plan

Dr. Dougal presented the draft Strategic Plan to the faculty in order to get their feedback prior to presenting it to the IAB members.

Goal #1 – Increase Research Funding to \$5m/yr

- **Rationale** – increased funding will improve every other metric – i.e. graduate students, publications, reduced teaching load (course buy-out)
- **Strategies** –
 - Free up time for the faculty to pursue large-scale research funding
 - Initiate discussions with other departments to collaborate on large-scale multidisciplinary research.
- **Resources** –
 - 2 FT Instructional staff persons to cover 12 courses per year plus some outreach activities. \$200k (loaded salaries)
 - 30% of IDC returned to department - \$300k/yr – partial support of postdocs and research staff to help produce initial results and write proposals
 - Departmental Business manager to support the research activities
- **Rationale for resources** –
 - Just to manage the minimum tasks and responsibilities of teaching and service, 10 FTEs are required. Being the smallest faculty allows little time for research. Adding a small number of full time instructional staff persons will give the faculty time to supervise graduate students, and plan and develop substantial new research activities.

Goal #2 – Support an increasing Number and Quality of Undergraduate Students

- **Rationale** – for goal
 - Student body is growing, but not fast enough in view of the intended faculty size
 - Average student quality in EE is lower than in other CEC departments
- **Strategies** –
 - Raise funds and offer more and better scholarships to top students
 - Personal contact with top applicants
 - Identify and execute outreach activities that yield high quality and diverse students.
- **Resources** –
 - Space for Senior Design studio – to accommodate wide variety of interdisciplinary projects. Could be shared college-wide.
 - 2 FT instructional staff covering 12 courses/academic years and assist in outreach
 - 1 FT Senior Design Project Coordinator – could be shared college-wide
 - 3-5 more classrooms with 70+ seats
 - Capital campaign to raise at least \$2M in new scholarship funds for EE
- **Rationale for resources** – Classroom and lab space currently impose constraints on numbers of students, schedule flexibility, and faculty time. Need additional sections of classes to accommodate larger enrollments.

Goal #3 -- Continually Improve the Quality of Undergraduate Program

- **Rationale** – Self-explanatory, and required by ABET

- **Strategies** –
 - Complete improvements to development, collection, and analysis of assessment data
 - Develop course improvements as indicated by the data
 - Complete revisions to course syllabi and prerequisite definitions
- **Resources** – Part-time Assessment Coordinator – could be shared college-wide
- **Rationale for resources** – Needs college-wide coordination

Goal #4 – Regain Robustness of the Graduate Program

- **Rationale** – for the goal
 - Support the flagship role of this university.
 - Strong research drives economic development and many other metrics
- **Strategies** –
 - Increase numbers of enrolled graduate students to 60 PhD, 30 MS, 40 ME
 - Increase quality of admitted graduate students, including more domestic students
 - Offer nationally-competitive financial support (\$1600/mo) plus tuition
 - Fill out the MS in Systems Design program ready by Fall 2016
 - Offer and reuse more online classes
- **Resources** –
 - IDC return to department and faculty as flywheel/bank for the research enterprise
 - Additional graduate fellowships
- **Rationale for resources** – With no IDC the faculty has no “banked” money to jump start or carry-over graduate students, to maintain equipment, or to start new initiatives.

Goal #5 – Improve the strength of the faculty

- **Rationale** –
 - Currently below critical mass, and inadequate to support growth of the student body (graduate and undergraduate)
 - Currently unable to pursue new initiatives because time is fully-committed to the basic needs.
- **Strategies** –
 - Increase faculty size to 20, in strategic technical areas
 - Identify strategic technical areas
 - Increase national recognitions of faculty (e.g. IEEE fellow)
 - Consider re-combining CE with EE to eliminate the gaping hole between Electrical and Computer Engineering, where virtually all electronic systems now fall!
- **Resources** –
 - Authorization to hire 2 tenure-track persons each year for the next 4 years.
 - Financial support for faculty search including advertising, candidate travel expenses, etc, \$15K per position
- **Rationale for resources** –
 - Two hires per year nets only one person per year because of attrition
 - Department budget is inadequate to stand the cost of recruiting

Feedbacks from the faculty

- Need more reference data, such as retention and SAT scores vs Scholarship recipients
- Move Goal #5 to Goal #2
- Combine Goal #3 & Goal #4

- Need to include Economic Development as an approach to increase our interaction with local companies and become economic development driver for the state.
- Agree that the need for domestic students is critical.

Next actions:

- These goals will be presented to the IAB members during the Fall 2015 meeting on November 13, 2015 for their review and inputs.

Meeting adjourned at 5:45 pm