

Document Type:	MINUTES		
Date of Meeting:	October 31, 2014	Time:	10:00 AM
Meeting Facilitator:	Dr. Roger Dougal	Location:	Swearingen Center room 3A75

IAB member Attendees			
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Lee Xanthakos	South Carolina Electric and Gas	pxanthakos@scana.com	803-217-1821 (M)

Faculty and Staff Attendees		
Name	Title	E-mail
Dr. Roger Dougal	Professor and Chair	dougal@cec.sc.edu
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Dr. Andrea Benigni	Assistant Professor	benignia@cec.sc.edu
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Valuncha Paterson	Assistant to the Chair	valuncha@cec.sc.edu

Approval of Spring 2014 Meeting
Minutes

The minutes were approved as distributed by email.

State of the Department - Dr. Dougal

- **Undergraduate Enrollment** – up 60% over past 5 years
- **Faculty losses/retirement** – lost one to retirement, one to competition, and gained one new hire since fall 2013. Expect one more retirement at end of the 2015-2016 academic year.
- **Faculty Search** – seeking to fill two (2) Assistant Professor positions to begin in the 2015-2016 academic year.
- **Financial Status** – better base funding than last year, but not yet received any return of IDC on research grants/contracts

Followup on Recommendations from Last Meeting

- **Undergraduate Program:**
 - **Website** –
 - **Issue:** the website can use improvements to attract new students
 - **Update:** Wholesale revision of our website is underway, driven by USC-wide content and appearance requirements.
 - **Advisement** –
 - **Issue:** Advisement process may not be clear to all students, especially freshmen and transfer students.
 - **Update:**
 - The curriculum was reviewed with incoming Freshmen during New Student Day to being familiarizing them with the curriculum and advisement process.
 - A new process was developed to assist students in scheduling appointments with their advisors.
 - An Advisement Tips sheet was developed and provided to faculty advisors to remind them of important items to discuss with students.
- **Graduate Program:**
 - **Course Scheduling** –
 - **Issue:** Some students reported difficulty in scheduling or planning their program of study
 - **Update:** The department developed a forward-looking five-semester course schedule, which will be available on the website, to assist with planning student's program of study.
 - **Partnerships with other universities** –
 - **Issue:** There may be a lack of opportunities for grad students to partner with other universities or labs
 - **Update:** still under consideration due to resource limitations (generally, collaborations require coordination of funding through collaborative proposals), but we are already exploiting several available options in each research group.
 - **Research Lab Equipment** –
 - **Issue:** There appears to be a lack of sharing of lab equipment among members of research groups or outside of groups.
 - **Update:** We are attempting to develop funding to hire a Lab Manger for each major research group to help manage equipment use and maintenance, to

facilitate broader sharing of equipment and facilities, focusing first on semiconductor device fab labs.

- **Interactions among students** –
 - **Issue:** There may be a lack of opportunities to socialize with other students to exchange ideas.
 - **Update:** A few social events were held since last spring. Turnout was not high but we will continue to encourage students to attend.

Undergraduate Program –

I. Undergraduate Curriculum

- Dr. Dougal described some outcomes from the May 2014 faculty retreat that focused on the undergraduate program, how to improve the program, and how to improve assessment of the program.

II. Program Assessment Process

- Dr. Dougal described the current assessment process as last reported to ABET in 2011, possible shortcomings in that process, and proposed new approaches that rely more on assurance of quality in the educational processes (ala ISO 9000) and perhaps less on direct measurements of student performance in narrow areas.
- **Feedbacks from IAB:**
 - One IAB member noted that sampling (spot checks) is still an effective way to monitor execution or confirm compliance with policies.
 - If the current process was acceptable last time, be sure that any change to a more holistic approach does not risk ABET accreditation.
 - The Capstone Design project could be used more broadly than it is to measure students' competency or attainment of learning outcomes, though there may be some concerns about how to measure individual performance in group projects.

III. Discussions and Recommendations

- **Student Advisement Topics** – create one or more large-group sessions to cover some of the advisement items, rather than covering all individually with each student.
- **Computer requirement for freshmen** -- This makes the item expensable in 529 plans and in scholarships. This does not impose any new burden because all students already bring computers with them.
- **Capstone Design Project** -- consider having each student, or each team, prepare a brief report that describes how their team applied their a-k abilities while completing their projects.

Discussion with Dean Tony Ambler

I. Questions asked to the Dean:

- a. **Space:** with increasing enrollment what are the plans to accommodate burgeoning space needs? The Dean described a new building that is under discussion for Engineering.
- b. **Faculty growth:** How will the College support growth of EE faculty to the critical number of 20? Will seek support from administration for start-up costs for new faculty.

- c. **Assessment:** Would the various departments benefit from College-level coordination of Assessment Processes (ABET)? The answer skirted the issue of assessment of undergraduate programs, but described a well-defined process for evaluating the quality of faculty.

IAB Internal Discussion

- I. **There is demand for power system graduates** – how will EE continue to cover these courses after Charles Brice retires. Answer: Three options 1) hire adjunct instructors having experience in the power industry, 2) use the FEEDER course sharing agreement with other universities, 3) some of the existing faculty can still cover some of the courses, even if their main interests are not in the traditional power system topics.
- II. **Feedback on use of Capstone Design Project evaluation as measure of EE Program effectiveness**– IAB suggested developing a short list of checkpoints (a rubric) for use during evaluation of each presentation. Ratings will be provided to the instructor. A main criterion will be the overall “hirability” of the members of the student team.

Action Items		
Action	Assignee	Due Date
Develop a rubric for IAB members to use when evaluating Capstone Design project teams as a representative measure of the quality (employability) of our graduates	Dougal	January 2015
Create ELCT 404 assignment: each student team to prepare three items for the review: a poster, a stand-alone hardware demo, a five-minute oral presentation (using the poster and hardware as props) in which every team member has a speaking part, and the one-page project description)	Dougal	12/15/2014
Review and provide feedback on the rubric prior to first use in April 2015	IAB members	February 2015
Send to IAB one-page descriptions of all Capstone Design projects that will be reviewed.	Nat Paterson	April 3, 2015
Recommend the next Vice Chair	Dougal	11/15/2014
Student Advisement – create one or more large-group sessions to cover some of the advisement items, rather than covering all individually with each student.	Dougal	The 3 rd or 4 th week of March 2015

Next Meetings		
Term	Date	Confirmation status
Spring 2015	April 10, 2015	Confirmed
Fall 2015	Target -- October 30, 2015 Backup –November 13, 2015	Tentative – will confirm during the April meeting