Minutes
Electrical and Computer Engineering Faculty Retreat
Wednesday, September 22, 2004
American College


The meeting was called to order at 9:45 a.m.

The minutes from the previous meeting held on August 19, 2004 were approved.

All attachment pages are available on the web at http://www.ece.drexel.edu/reports/retreatpres04.html

Department Head’s Report, Nihat Bilgutay

- ECE Vital Statistics - see attached – The total amount of research award money had risen in the 2004 fiscal year by $4 million dollars compared to the 2003 fiscal year.
- New Faculty Members - see attached - This year we have added a new Tenure track faculty member and one new Research faculty member.
- Fall ’03 Freshman Enrollments - see attached – The Enrollment Statistics show that the Computer Engineering department has a higher number of confirmed students than the Computer Science department.
- Fall ’04 New Graduate Students Enrollments - see attached - The ECE department has established a Post-master’s Ph.D. Fellowship program for up to 6 in-coming students. Each fellowship will provide a $2,000 a month stipend and full tuition, with 50% being provided by faculty grants as RA match. 50% of the stipend will be provided by the Department and 50% tuition match will be provided by the University, which was approved by Interim Provost Ali Houshmand. We will initiate the recruitment for these Fellowships immediately. The following doctoral fellowships will be available for incoming graduate students in the fall of 2005: two Colehower Doctoral Fellowship, two PECO Doctoral Fellowship, and two ECE Doctoral Fellowship. 50% of the Fellowship will come from the ECE department and the other 50% of the tuition comes from a Research Fellowship.
- FY ’04 Research Awards - see attached.
- ECE FY ’04 Research Awards - see attached.
- FY ’04 Research Expenditures - see attached.
- FY ’04 ECE Proposals by PI - see attached.
- FY ’04 ECE Proposals by Co-PI - see attached.
- FY ’04 ECE Grants by PI - see attached.
- FY ’04 ECE Grants by Co-PI - see attached.
- FY ’04 Non-ECE Proposals by Co-PI - see attached.
- FY ’04 Non-ECE Grants by Co-PI - see attached.
- FY ’04 Research Summary for Drexel - see attached.
- FY ’04 COE Research Summary by Department - see attached.
- FY ’04 Drexel Research Summary: Top 10 Departments - see attached – There are no other Engineering departments in the top 10 other than our department. The ECE department would like to be the top department in the country.
- FY ’04 ECE Faculty Participation in Proposals/Grants - see attached.
- General Comments on ECE Research - see attached – Dr. Shankar commented as to where the research money goes. If Ph.D. students are not produced in our department, then is the money going to help support MS students? Dr. Eisenstein thinks it is strategically wrong to look at it this way because most of the money goes to the universities for expenditure purposes. Dr. Personick explained that products of ACIN are branching out into other areas. ACIN is moving toward building a research facility to employ our students. Dr. Bilgutay said that research money is helping us with our buyout. We have to figure out what our top objectives are.
- FY ’04 ECE Budget Summary - see attached.
- FY ’04 Budget Detail - see attached.
- FY ’04 Revenues & Reserve Accounts - see attached.
- FY ’04 & FY ’05 Budgets - see attached.
- Other ECE News - see attached.
- Strategic Issues & Challenges - see attached – The ECE department is searching for a person to fill the Colehower Chair Faculty position.

Undergraduate Curriculum and Teaching Issues, Kevin Scoles
- Curriculum Changes - see attached – ECE-S490 Errors and Uncertainty has been replaced this Fall by ENGR 361 Statistical Analysis of Engineering Systems.
- Fall Policy Reminders - see attached.

Advising and Retention, Kevin Scoles
- Outline - see attached.
- Enrollment History - see attached.
- CE Enrollments - see attached.
- EE Enrollments - see attached.
- Top Enrollments in COE, Biomed - see attached.
- Degree/Track at Graduation - see attached.
- Interest in Senior EE Courses - see attached.
- Senior Design Enrollments - see attached.
- Interpretation - see attached – Dr Personick suggested that we should offer classes with different content for Telecommunications classes. Dr. Niebur says that the economy is what drives the students to classes where there are more job opportunities.
- Freshman Retention Improvement Activities - see attached.
Retention Improvement (Web-based placement testing) - see attached.
Test Results for Classes Entering Fall ’03 and ’04 - see attached.
Retention Improvement (Web-based math/physics prep) - see attached.
Retention Improvement (COESS advising enhancements) - see attached.
Future - see attached.
Actions - see attached.
Recruitment Activities ’04-05 - see attached.
Actions - see attached.
Advising - see attached.
Brainstorming - see attached.

T-DEC Presentation and Report, Bruce Eisenstein
The Drexel Engineering Curriculum - Strategy for the Future - see attached.
Vision Statement - see attached.
Retention - see attached – Drexel’s undergraduate education costs students $25,000, not including room and board. Parents would like to know what their kids are getting for their money.
Relevance - see attached.
Relationship - see attached.
Goal and Objective - see attached.
Objectives - see attached.
Secondary Objectives - see attached.
Today’s Situation - see attached.
How Did We Get Here? - see attached.
Available Options - see attached.
Personal Philosophy - see attached.
MIT’s New Initiatives - see attached.
What is Drexel doing in these areas? - see attached.
Recommendations - see attached – Dr. Eisenstein recommends that the faculty teach freshmen the technology of today. Running a pilot program for students may be a good way to start.
Short Term Initiatives - see attached.

Evening Studies Report, E. Gerber
Dr. Gerber stated that the number of students graduating from the Goodwin College have gone down dramatically.
A large number of full-time students are taking evening classes.

National Trends: Engineering Education Departments, P. Herczfeld
Educational Innovation in Engineering - see attached.
Purdue Counters Trend, Engineers Education from the Ground Up (article) – see attached.
A New Framework for Academic Reform in Engineering Education (article) – see attached.
New Bioelectronics Program, A. Rosen
  • Drexel Accelerated BSE/MD, BSE/Ph.D. Programs - see attached.
  • Seven Year Accelerated Program Year 1 - see attached.
  • Year 2 - see attached.
  • Year 3 - see attached.
  • Year 4-7 - see attached.
  • Other Considerations - see attached.

New Bioelectronics Program, K. Scoles
  • What are we considering? - see attached.
  • Motivations - see attached – Can Bioelectronics fit into our curriculum like Signal Processing?
  • Dept. of Biomedical Engineering, Washington University in St. Louis – see attached.
  • Bioelectronics Eng, MIT Dept. of Electrical Engineering & Computer Science - see attached.
  • Doesn’t our BMES School do this Already? - see attached.
  • What can ECE do? - see attached.

Facilities Department, Wayne Hill
  • Current Report - see attached.
    ▪ Renovated Areas - see attached – Faculty member’s new office locations will be determined by where their lab facilities are located.
    ▪ Bossone Report - see attached.
    ▪ General Report - see attached.

Promotions and Recognition Committee Report, B. Eisenstein
  • The committee is evaluating Dr. Oh of the MEM department for a joint appointment with the ECE department.
  • The Recognition Committee has starting promoting professors for awards to help promote our department. Please let the Recognition Committee know if you are qualified for an award or recognition. All professors in our department and executive senior members of IEEE are eligible.

Graduate Program Report, L. Hrebien
  • Graduate Program Priorities - see attached.
  • Confirmed Admissions - see attached.
  • Graduate Student Support - see attached.
  • What needs to be done - see attached.
  • Problems - see attached.
  • Faculty Involvement Essential - see attached.
Faculty Recruitment Committee Report, Nihat Bilgutay reporting for Moshe Kam

- Recruiting Committee Objectives - see attached - The Committee will meet to discuss the need for top notch faculty and to recruit faculty from other schools. We are hoping to receive 2 new faculty member slots for our department this year.

- Statistics for 2003-04 - see attached.
- Challenges (1) - see attached.
- Challenges (2) - see attached.
- Challenges (3) - see attached.
- Challenges (4) - see attached.
- Challenges (5) - see attached.
- Possible Improvements - see attached.

Strategic Planning Committee, Dagmar Niebur and Oleh Tretiak

- Background - see attached.
- Talk Outline - see attached.
- Drexel Plan - see attached.
- Drexel’s Strengths - see attached.
- Challenges to Drexel - see attached.
- Strategic Priorities (Objectives) - see attached.
- Plan Document Structure - see attached.
- Plan Highlights - see attached – Retention Rate.
- ECE Strategic Plan - see attached.
- ECE Plan Goals - see attached.
- ECE Department at Drexel - see attached.
- US News & World Report University Comparison for AY 02/03 - see attached.
- Strong and Weak Points for Drexel - see attached.
- US News & World Report CoE Comparison for AY 02/03 - see attached.
- Strong and Weak Points for CoE - see attached.
- ECE by Numbers from AY 96/97 – 03/04 - see attached.
- ECE Comparison with US News Grad School Rating Spring 03 - see attached.
- Good News for ECE - see attached.
- ECE Department at Drexel - see attached.
- ECE Action Items
  - Retention Rate
    - The ECE department needs to reach out to freshmen by taking advantage of the UNIV 101 classes, in addition to one-on-one meetings with students.
    - We also would like to use the student chapters such as Eta Kappa Nu, IEEE, and Tau Beta Pi as peer mentoring programs for students.
- ECE faculty members need to implement a roadmap to advise students as to what classes they should be taking for their curriculum.
  - Dr. Scoles would like to organize a committee for the Bioelectrical Engineering Initiatives.
  - Dr. Rosen is also contacting the Dean’s of the College of Engineering, the Medical School, and the Biomedical Department to help with the Bioelectrical Initiatives.
  - The Graduate Committee will be working on strategies to help the ECE department produce more Ph.D. students. The committee should suggest that faculty members talk to students about the possibility of taking the Ph.D. candidacy exam. A faculty member suggested that we propose a way to fund a Research Institute, which would be separate from the College of Engineering.
  - Dr. Eisenstein suggested that we adopt a program called Individual Activities Program. This program originated at MIT. It is a volunteer program made up of faculty and students who present models of courselets.
  - Dr. Fromm and Dr. Eisenstein would like to draft a letter of support on behalf of the ECE department in order to reconstruct the tDEC program which would be presented to the Provost and to the Dean of the College of Engineering.

- The Future - *see attached.*

The meeting was adjourned at 5:10 p.m.