



**Agenda, Meeting #68**

**CEER 210**

**9/7/2005, 6:00 PM**

1. Welcome and Call to Order J. Karpowicz
2. Approval of Minutes of April meeting J. Karpowicz
3. Treasurer's Report W. O'Donnell
4. Dean's Report B. Johnson
5. Alumni Report
6. Department Liaison Reports
  - a. Chemical Engineering
  - b. Civil/Environmental Engineering
  - c. Electrical Engineering
  - d. Mechanical Engineering A. Fleischer
7. Old Business
  - a. Action Items from last meeting All
8. New Business
  - a. Goals J. Karpowicz
9. Next Meeting



## Minutes

### Welcome:

- President Karpowicz called the 68<sup>th</sup> meeting of the Engineering Alumni Society to order at 6:05 pm.
- President Karpowicz welcomed Vince Wagner, John Cacciola and Matt Bochanski, the Engineering Student Council President.

### Minutes:

- The minutes to the 67<sup>th</sup> EAS Meeting (April 6<sup>th</sup>, 2005) were approved without change.
- Pat Dougherty has accepted a transfer within Urban Engineers to central Pennsylvania and has resigned as Secretary.
- Al Fazzini was unanimously elected Secretary.

### Treasurer's Report:

- Bill O'Donnell distributed the Treasurer's Report.
- The Treasurers report was accepted by the Board.

### Dean's Remarks:

Dean Johnson discussed the plans for the 100<sup>th</sup> Year Celebration to include:

- Student Bar-B-Que on September 30<sup>th</sup> at 2:30 at CEER
- An Alumni Black-Tie Gala at the Franklin Institute on December 3<sup>rd</sup>, where the guest speaker will be Gentry Lee from JPL, who worked with Carl Sagan
- Mass for Faculty and Staff on April 29<sup>th</sup>, 2006
- Distinguished Speakers Series, speakers include:
  - Nancy Dicianni
  - J. Paul Jones

Dean Johnson reviewed the College's Five Year Goals. The 5 goals were originally set in October 2002. The Dean reports twice per year on the status of these goals.

#### Goal #1 Innovative Undergraduate Programs: On Schedule

- Wireless laptops now incorporated to  $\frac{3}{4}$  of the student population.
- Establishing an Honors degree within the College that will require 5-7 classes



Goal #2 Increase Graduate Programs/Students: Ahead of Schedule

- Currently offering 13 distance education courses at 93 sites
- Offering a Master of Technology Management

Goal #3 Distinctive Ph.D. Program: Ahead of Schedule

- Currently 5 PhD candidates, expect 1<sup>st</sup> PhD in 2 years.

Goal #4 Leadership in Research: On Schedule

- \$6.5M in the current year – have exceeded the previous year each of the last three years. 3 years ago it was \$1.5M.
- \$100K per faculty member.

Goal #5 Diversity: Behind Schedule

- Initiated a program last year where 10 African American students from Roman Catholic came to Villanova every Saturday and for two weeks during the summer.
- Now qualify for GEM grants from the government.
- 2 Minority Faculty members were recently hired:
  - Al Ortega accepted the Birlle endowed chair. Formerly at the University of Arizona. He is an expert in Heat Transfer.
  - Rosalyn Wynne in Electrical and Computer Engineering.
  - Three years ago there were no minority faculty members. Today there are four within the college.

Dean Johnson announced that he is retiring as of May 31<sup>st</sup>

- Plans to: (1) write a book; (2) be an associate at the Fraunhofer Society in Munich, Germany; and (3) spend more time with his family at their homes in Arizona and London.

### **Alumni Association Report:**

No Report. Gary Olsen was out-of-town on Alumni Association business.

### **Department Liaison Reports:**

Chemical Engineering: No Report

Civil & Environmental Engineering: No Report

Electrical Engineering: No Report.

Mechanical Engineering: Amy Fleischer presented the attached report.

Student Council: Matt Bochanski discussed the following topics: Development of a constitution for the Engineering Student Council, Engineers Week and National Society of Engineering Student Councils



### **OLD Business:**

President Karpowicz reviewed the items in the **ACTION LIST** from the April '05 Meeting. All actions/items have been resolved.

### **New Business:**

President Karpowicz presented the following goals for the 2005/2006 year.

1. Increase membership from 320 members to 500 members.
2. Increase income to \$20,000/year
3. Improve contact with members through regular emailings
4. Build on the success of this past year's reception with increased attendance, more student projects on display and increased sponsorships.
5. Increase member participation in EAS events. Run two receptions similar to the Gettysburg event and promote the Centennial Gala.

The Board brought up the following new business items:

- Capture rate of recent graduates to EAS
- Memorial for fallen student, Brian Anderson. (John Cacciola will research the cost/procedure of planting a tree with the grounds superintendent).
- Life time memberships and corporate memberships. (There was discussion on shirts for lifetime members).
- Intern opportunity clearinghouse
- Career opportunities for recent graduates

Sara Carlson has agreed to cover the Awards Reception. Lynda Capuzzi offered to help her since Lynda is on campus now. John Happ will also provide assistance. Pat Dougherty offered to help in the transition and an early meeting was strongly recommended to get the ball rolling.

Member recruiting letters are to go out in the middle of September and we are going to do a follow up mailing shortly thereafter. It was determined that we would try to solicit out to 15 years this year to see if we capture any additional members.

A committee was formed to evaluate student projects including Butch Acchione, Al Fazzini, Sean O'Donnell, Jim Zaleski and John Cacciola

Vince Wagner agreed to make plans and arrangements for another reception on a Navy ship as they become available.

Bill O'Donnell agreed to make a recommendation on whether we should offer lifetime memberships, or provide for members who make exceptional gifts that would be used in their name. There was a lot of discussion on the potential conflict with Development.



**Next Meeting:**

The next Board meeting was scheduled as follows:

Wednesday **November 9<sup>th</sup>, 2005 at 6:00 PM** the CEER, Room 210.



## **EAS Department Liaison Report**

Mechanical Engineering

08/23/2005

### Faculty/Students

1. The department welcomes Drs. Sergey Nersesov (Assistant Professor; dynamics and controls), Quianhong (“Shenhong”) Wu (thermal/fluids; Assistant Professor), and Venkatesh Deshmukh (solid mechanics, dynamics, controls; Visiting Assistant Professor).
2. Prof. Alfonso Ortega, currently Program Manager for Thermal Transport Thermal Processes, Chemical & Transport Systems, NSF, has accepted the position as the second holder of the James R. Birlle Chair for Energy Technology. He will begin in August 2006 and will be on leave from Villanova during his second year at NSF.
3. Update on adjuncts. The department continues to deal with staffing issues and personnel replacement. Paul Menz will be vacating the HVAC senior elective course that he has taught for many years and we have hired a new adjunct, Mike Witkowski, to replace him. Dr. Farbod Fahimi has left and we have replaced him with Venkatesh Deshmukh, who interviewed for the Dynamics/Controls slot this past year. Ed McAssey is back teaching the thermodynamics trailer that Vito Punzi has done for the past few years.
4. Enrollment: 96 sophomores, 91 juniors, 73 seniors (=260 ugrads), 41 FT MSME graduate students including 7 new students.
5. Curriculum: The Curriculum Committee continues with its benchmarking of the ME program by comparing itself with 14 other top-notch engineering colleges. Some changes to the curriculum will likely come about from this exercise. Work continues on the plans for laying the groundwork for a dual ME/ECE electromechanical systems major. This will include looking at other institutions that have established this major and the placement of three new members on our advisory committee who can help in directing these efforts. A plan to work automatic controls into curriculum has been developed and is being used for the first time this semester. We have delayed plans to re-establish the Energy Conversion course because of other pressing commitments. We will consider joint ECE/ME/ChE efforts on this task to make this senior elective course interdisciplinary.



6. The ME External Advisory Committee is being re-constituted to include members oriented more towards interdisciplinary education and research. Plans are underway to convene the 2005-2006 meeting with the the ME External Advisory Committee. Key among our discussions will be curriculum reform and the new ME/electromechanical systems major.
7. Work continues on the SAE Formula Racer (Jerry Gambbs, advisor). 14 current ME seniors are working on the various aspects of the design and construction as part of their senior capstone design project.
8. We are beginning the plans for another service-learning trip to Waslala Nicaragua over Spring Break 2006. Dr. Jerry Jones, Prof. Jim O'Brien, both of ME, and Jordan Ermilio are planning to again travel to help with: the design and construction of gravity-fed potable water systems, water quality including the design of an automatic and passive chlorination system, and photovoltaic-powered pumping of ground water in several of the communities in this central-Nicaragua location. The plans this year will be to include interested CEE and ECE faculty and students.

#### Research and Professional Development

1. Phase II of the ONR project is slated to begin in the fall with Drs. Nataraj, and Ashrafuon receiving support for their graduate students. The effort will continue to lay groundwork for the department's efforts in the area of smart ships.
2. A contract with Advanced Ceramics Research is slated to also begin this fall and will involve Drs. Jen and Santhanam.
3. Becky Hoffman is continuing her collaboration with Drs. Dinehardt, Gross, and Yost on the structural performance of castellated steel beams.
4. Drs. Fleischer, Jones, and McAssey attended and presented papers or chaired sessions at the ASME Summer Heat Transfer Conference in San Francisco in July. Dr. Fleischer served as the thermal track leader, organizing nine sessions.
5. Dr. Fleischer is slated to receive a 3 year \$260,000 grant from ONR to continue her work on the use of thermal-diffusivity enhancing carbon nanotubes for phase change cooling of high power equipment.



## Space

1. Plans for re-allocation of lab space in CEER are nearly complete. Included in the plans are a new, joint ME/ECE Dynamics/Controls lab, and 2000 sq. ft of space devoted to heat transfer and fluid mechanics including a thrust in the area of thermal management of electronics.