

# Investing in Engineering Faculty – A Comprehensive Faculty Development Program

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**Abstract** – This paper outlines efforts under way in the Bagley College of Engineering at Mississippi State University to build a faculty development program that helps new faculty, untenured faculty and all faculty advance their skill base in the areas of teaching, research and service. The paper will focus mainly on the first year program with some details on the other programs. This program provides advice on teaching, research, service and career development for both faculty and administrators.

*Keywords:* Faculty development, New Faculty, Mentoring

## INTRODUCTION

A new faculty member has worked hard to compete for a tenure track faculty position. They have negotiated their start-up, moved to their new university and arrive the first day with high expectations for themselves and the university. The joy of landing the job is often replaced with anxiety as they start their new position. First year faculty members face many new challenges. Whether a new PhD or someone who has worked in industry, a new faculty member at a university is faced with balancing many different issues. The new faculty member must learn the procedures at the university, teach their classes, and get their research program up and running. Often perceived tenure pressures seem overwhelming and time management is a challenge.

Many universities have orientation programs for new faculty. Some last half-day; others may be a week or two and some last through the first year. Besides these programs, universities have developed formal and informal mentoring programs where new faculty are paired with senior faculty to help them learn the ropes. Other references on faculty development and mentoring are available from ASEE and other sources [1-13].

This paper describes several aspects of a comprehensive faculty development program underway at Mississippi State University. Efforts are underway here to combine mentoring and support at the department level with activities at the college level to help new faculty transition into their positions as well as advance the careers of mid-career and senior faculty. This paper is an extension of a previous paper by the authors [14]. The Mississippi State Bagley College of Engineering is in its second year of developing a comprehensive faculty and administration development program that provides support for fostering careers in many areas for its faculty. An administrator within the College of Engineering Dean's Office organizes the faculty development program.

The next section will discuss activities for first year faculty. Integrated in this program are also activities for first and second year faculty as well as all untenured faculty. The following section will outline activities planned for all faculty as well as administrator training. The last section outlines efforts at the university level.

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## **FIRST YEAR FACULTY DEVELOPMENT PROGRAM**

The first two to three years of a faculty member's career are key to success for their careers as well as retention. Our first year program is designed to create a smooth transition into our community and university. We combine socials and seminars early in the semester to allow the new faculty member to meet many new people as well as feel welcomed to the university.

To start the communications and introduction process, we develop a listserver for all the new faculty. This allows easy dissemination of information. Additionally we develop a New Faculty Directory as seen at [http://www.engr.msstate.edu/faculty\\_staff/faculty\\_development/new\\_faculty.pdf](http://www.engr.msstate.edu/faculty_staff/faculty_development/new_faculty.pdf). A paper version of this directory is distributed to new faculty, engineering department heads, research center directors, the Provost's Office and the Office of the Vice President for Research. This helps the new faculty get to know each other and helps university administrators get to know the new faculty.

The new faculty development program is multi-faceted to engage as many faculty as possible. The program involves some one-on-one interactions, small group interactions (about 6 people) and then large group, ranging from 10-30 attendees. The program can be tailored depending on a department, college or university's needs and size.

### **First Year Mentoring**

Each new faculty member is assigned a mentor when they arrive on campus. The department head makes the assignment. The mentor is a senior member from the new faculty member's department. During the first week of class we had a Mentor-New Faculty lunch where the mentor and new faculty enjoyed lunch together and then the group participated in a series of questions and discussions on topics related to teaching and research.

Other interactions for the mentor/new faculty member are left up to the pair. In the first semester, mentors are encouraged to visit with their new faculty member at least every two weeks, while many interact weekly. A listserver was developed with the mentors' e-mails so a regular reminder was sent to them encouraging them to check on their new faculty member.

To facilitate a small group interaction, three mentors and new faculty are paired together into a mentor cluster. The College of Engineering pays for one lunch per semester for the cluster. This allows for small group discussion so the new faculty benefits from two other mentors as well as discussions with their other first year colleagues.

The mentoring program is formalized during the first year and it is optional to the faculty if they would like to continue a formal relationship after that. About 50% of the new faculty said they would continue to use their assigned mentor, while the other 50% said they had found additional mentors during their first year and would use those mentors more.

### **First Year Seminars and Activities**

The other key part of the first year program is the seminars and activities planned for the new faculty. By doing this program at the college level, we achieve a critical mass. Appendix A shows the fall semester faculty development newsletter with all our faculty development activities. First year activities can be divided into four groups: social activities, seminar activities, university level activities and sponsor trips.

Mississippi State is located in a university town. One of the keys for retention of faculty is to help the faculty and their families feel welcome. The first weekend of the semester, the Dean of Engineering holds a dessert reception for the new faculty, department heads, mentors and their guests. This is a very informal time but it allows the new faculty to meet other department heads. It also allows the guests to meet and learn about various aspects of the university and community to help with the transition. Additionally this year we had a reception the second week of classes between the first and second year faculty and their guests. This provided an additional support group for the first year faculty as the second year faculty could provide a recent perspective. Additionally in the spring we have a picnic for the new faculty and their families.

The seminar activities have been very successful and well attended the last two years. Table 1 below outlines the major topics in these seminars for first year faculty.

Table 1: First Year Faculty Seminars

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|---|---|
| ○ Start-Up Issues for New Faculty: MSU Policies | ○ Tips for Getting Your Career Started with the Provost         |
| ○ Networking with Other New Faculty             | ○ Tips for Getting Your Career Started with the VP for Research |
| ○ Meet Sponsored Programs                       | ○ Understanding Federal Relations at MSU                        |
| ○ Working with Mentors                          | ○ Effective Service for Building Your Career                    |
| ○ Planning your academic career                 | ○ Working with Mentors  |
| ○ Proposal Writing                              | ○ ABET Primer – What you need to know?                          |
| ○ Preparing for a Visit to NSF or other Sponsor |   |
| ○ Managing Graduate Students                    |   |

During the semester, some of these activities were for only the new faculty, some for first and second year faculty and others for all untenured faculty. This allowed the new faculty to visit with other untenured faculty within the College.

While the university had orientation activities in the past for new faculty, these were mostly focused on human resources and benefit issues. This year the Provost's Office and Office of the Vice President for Research revised their events to provide more faculty development opportunities. The Provost's Office had a one-day orientation the week classes started. This provided talks from excellent teachers and researchers on campus, a historical perspective on the university and its mission, and a panel on promotion and tenure. After the session, there was a reception for the new faculty and their guests to meet the upper administration including the President, Provost, Vice Presidents and Deans. This was very well attended and received excellent reviews. After several weeks the VP for Research Office sponsored a research orientation that included information on the key resources and people in the process of proposal writing, routing and funding as well as a panel of successful researchers on keys for jumpstarting your career.

One of the highlights of the spring semester is a day and a half long trip by the new faculty to the National Science Foundation as a group. Figure 1 shows the new faculty with the Director and Deputy Director of NSF during our visit there in April 2004. The administrator in the Dean's Office helped coordinate the visit for the new faculty. She set up group meetings with the Director and Deputy Director, Directors of the Engineering (ENG), Computer Information and Science Engineering (CISE) and Education and Human Resources (EHR) directorates, and various divisions within ENG and CISE. New faculty were responsible for contacting their own program managers and visited with them. The trip was extremely productive. Over two-thirds of the new faculty have been on NSF review panels since our visit. The faculty are now asking the Faculty Development Program to sponsor trips to other agencies as well.

## FACULTY DEVELOPMENT IN OTHER AREAS

### Faculty Development for All Faculty

While the major focus of the faculty development activities has been on the new and untenured faculty, we have also included activities for all faculty. Each semester we have two brown bag "Teaching and Learning" sessions with award winning engineering faculty facilitating discussion on a topic of interest to faculty. Additionally we have one to two panels a semester that are open to all faculty. Topics covered in the past have been "Increasing Your Research Opportunities", "Turning Research into Publications", and "Working with Research Centers".

We have also started some activities for our research faculty. These socials have allowed the research faculty to get to know others in departments and research centers around the college. Additional activities including discussions on guidelines for promotion for research faculty are planned for the future.



Figure 1: Nine first-year faculty from Mississippi State visited with NSF in April. Here they are pictured with NSF Director Arden Bement (seven from left) and NSF Deputy Director Joseph Bordogna (far left)

### **Administration and Committee Chair Development**

This year we have expanded our professional development program to include administrators and committee chairs. The department chairs and Dean's Office had a workshop on "Effective Meetings" chaired by one of MSU's prominent alumni from industry. Mississippi State recently changed its promotion and tenure process. With these changes, the College had a Workshop for P&T Committee members to discuss the changes and outline tips on creating an effective review process for the committees and candidates.

### **University Level Faculty and Administration Development Efforts**

Efforts underway by the Bagley College of Engineering were recognized by the Provost's Office in the spring of 2004. In an effort to extend these activities around the university, a committee was developed with an Associate Dean from each college. At these meetings, different colleges shared their best practices and discuss avenues for cooperation between units to minimize duplication and create the biggest impact on campus. This committee recommended to the Provost that the university support department chair development. Based on these recommendations the Provost's Office provided financial support for first and second year department chairs to attend the Mississippi Academic Chairs Leadership Conference in October. Efforts are underway to expand the activities provided by this committee.

Appendix A attached shows the various programs and semester newsletter on faculty development.

## SUMMARY

Faculty and administrators are a precious resource for universities. Providing professional development of these resources to enable faculty to improve their teaching, research and service capabilities benefits everyone. The Bagley College of Engineering at Mississippi State University is working to develop a comprehensive faculty development program that provides support for faculty at all levels so they can expand their career for both professional and personal enrichment.

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### Noel N. Schulz

Professor Schulz is an Associate Professor of Electrical & Computer Engineering at Mississippi State University. From May 2003 through December 2004, Dr. Schulz was the Director of the Women in Engineering and Faculty Development in the Bagley College of Engineering at Mississippi State University. Prior to teaching at Mississippi State, she was on the faculty at Virginia Tech, the University of North Dakota, and Michigan Technological

University. She is active in the IEEE Power Engineering Society, where she serves as Secretary. She is also very involved with ASEE.

**Kirk H. Schulz**

Professor Schulz is the Dean of Bagley College of Engineering at Mississippi State University, and is the holder of the Earnest W. and Mary Ann Deavenport, Jr. Chair. Dr. Schulz has been department head of Chemical Engineering at Mississippi State University and Michigan Technological University. Prior to teaching at Mississippi State, Dr. Schulz was on the faculty at Michigan Technological University and the University of North Dakota.

# Engineering Faculty Development Fall 2004

September 1, 2004

## *Events for All Faculty*

- ? **Brown Bag Lunch** on Teaching and Learning with Masoud Rais-Rohani, ASE and Donna Reese, CSE; 12:00 p.m.—1:00 p.m., Sept. 29, 2004; Elton King Room, 150 McCain Hall.
  
- ? **Time Management Seminar** with Tommy Stevenson; 8 a.m.—noon, Oct. 19, 2004; Dunn Conference Room, 235 McCain Hall. RSVP to Mary Beth Langston by Oct. 1 at langston@engr.msstate.edu.
  
- ? **Panel Discussion “Increasing Your Research Opportunities”** with Roger King, ECE; James Newman, Jr., ASE; Ray Vaughn, CSE; and Tom White, CE. 3:00—4:30 p.m., Oct. 25, 2004; 185 McCain Hall.
  
- ? **Brown Bag Lunch** on Teaching and Learning with J.W. Bruce, ECE and Keith Hodge, ME; 12:30—1:30 p.m., Nov. 2, 2004; Elton King Room, 150 McCain Hall.

## Welcome Back Faculty Members!

Welcome to the Faculty Development Newsletter! The purpose of this newsletter is to inform you about events on and off-campus that can provide professional development opportunities for faculty within the Bagley College of Engineering. Our initial plan is to publish the newsletter twice a semester, as well as have a website with information about workshops, seminars and panels.

In this issue, the newsletter introduces you to the new faculty within the College of Engineering. It also outlines events we have planned for various groups around the College. From first-year faculty to department heads, there is something for everyone.

We have a busy schedule this fall and hope that you can find several

activities that interest you. If you have suggestions for future events related to faculty development, please feel free to contact me (nschulz@engr.msstate.edu; 325-3047).

Best wishes for a great Fall semester! Besides helping students, departments and the College move towards their goals, remember to set some time aside to help yourself move toward your professional goals.

Sincerely,

*Noel N. Schulz*

Noel Schulz  
Director of Faculty Development  
Bagley College of Engineering

## **Events for Administrators & Committees . . .**

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| <p>? <b>Effective Meetings Session for Department Heads</b>, 1:30—3:00 p.m., Oct. 5, 2004; Brannan Conference Room, 260C McCain Hall.</p> | <p>? <b>P&amp;T Committee Member Workshop</b>, 3:00—5:00 p.m., Oct. 6, 2004; Elton King Room, 150 McCain Hall.</p> | <p>? <b>MS Academic Chairs Leadership Conference</b>, Oct. 19-20, 2004; Delta State University. For more information contact Dr. Lynn House, Dean, College of Education, Delta State University at 662-846-4400 or lhouse@deltastate.edu.</p> |
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## Research Faculty Events

- ? **Research Faculty Breakfast;** 7:30—9:00 a.m., Sept. 1, 2004; Room 121, DIAL.
- ? **Research Faculty Reception;** 1:00—3:00 p.m., Nov. 15, 2004; Room 30, ERC.

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## Untenured Faculty Events

- ? **Understanding Federal Relations and MSU** with Dr. Marty Fuller, Director of Federal Relations/VP of Research; 12:30—2:00 p.m., Sept. 16, 2004; Dunn Conference Room, 235 McCain Hall.
- ? **Panel on “Working with Graduate Students”;** 12:30—2:00 p.m., Nov. 11, 2004; Dunn Conference Room, 235 McCain Hall.

## New Faculty Events

- ? **New Faculty & Second-Year Faculty Reception;** 4:00—6:00 p.m., Aug. 27, 2004; Veranda.
- ? **Lunch with Mentors and New Faculty;** 12:30—2 p.m., Sept. 2, 2004; Elton King Room, 150 McCain Hall.
- ? **Research Orientation—Sponsored by the VP for Research Office;** 11:30 a.m.—5 p.m., Sept. 8, 2004; Bost Auditorium.
- ? **New Faculty Network;** 12:30—2:00 p.m., Sept. 9, 2004; Brannan Conference Room, 260C McCain Hall.
- ? **Meet Sponsored Programs;** 12:30—2:00 p.m., Oct. 14, 2004; Dunn Conference Room, 235 McCain Hall.
- ? **Tips for Getting Your Career Started** with VP for Research Colin Scanes; 12:30—2:00 p.m., December 9, 2004; Dunn Conference Room, 235 McCain Hall.

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## Meet our New Faculty

- ? Jeff Carver, Assistant Professor, CSE. Jeff joins us from the University of Maryland where he worked for one year. His Ph.D. is from University of Maryland. (carver@cse.msstate.edu)
- ? Jenny Du, Assistant Professor, ECE. Jenny joins us from Texas A&M-Kingsville, where she taught for four years. She has her Ph.D. from University of Maryland, Baltimore County. (du@ece.msstate.edu)
- ? Sergio Felicelli, Associate Professor, ME. Sergio joins us from Saint-Gobain High-Performance Materials in Northborough, Mass., where he worked for two years. His Ph.D. is from the University of Arizona. (felicelli@me.msstate.edu)
- ? Phil Gullett, Assistant Professor, CE. Phil joins us from Sandia National Labs in Livermore, CA, where he worked for four years. His Ph.D. is from University of California at Davis (pmgullett@engr.msstate.edu)
- ? Tom Lacy, Assistant Professor, ASE. Tom joined us in January from Wichita State University, where he taught for five years. He has his Ph.D. from Georgia Tech. (lacy@ae.msstate.edu)
- ? Wen Li, Associate Professor, ME. Wen joins us from United Technologies Research Center in Hartford, Conn., where he worked for three years. He has his Ph.D. from University of Kentucky. (li@me.msstate.edu)
- ? Carrie Olsen, Assistant Professor, ASE. Carrie joins us from NASA Marshall Space Flight Center in Huntsville, Ala., where she worked for 17 years. She is an MSU alumna and has her Ph.D. from UT-Austin. (colsen@ae.msstate.edu)
- ? Greg Olsen, Assistant Professor, ASE. Greg joins us from the U.S. Army Redstone Arsenal in Huntsville, Ala., where he worked for three years. He is an MSU alumnus and has his Ph.D. from UT-Austin. (golsen@ae.msstate.edu)
- ? Ed Swan, Associate Professor, CSE. Ed joins us from the Naval Research Labs in Washington, D.C., where he worked for seven years. His Ph.D. is from The Ohio State University. (swan@cse.msstate.edu)

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