

THREE YEAR REPORT

Submitted: July 10, 2006

Proposed New Directions

The following activities are listed in the order of importance and would require additional budget resources if pursued:

1. Increase participation in marketing and admissions activities
2. Multiple, coordinated and focused fundraising activities
3. Increase instructional and technical research
4. Integrate liberal arts in engineering curricula
5. Provide graduate programs on-line

Critical Needs

The following are present needs that are considered to be critical to the immediate and near-term health of the School of Engineering:

- Increase and stabilize enrollments
- Focus marketing on strengths
 - Engineering and Mercer
- Increase presence on World Wide Web
- Graduate programs for WR-ALC employees
- Distance learning delivery for graduate program
- Externally funded research
- Increase cooperation with employers
- Compete for and admit traditional graduate students in cooperation with MERC

SWOT Analysis

The following lists were developed and revised over the past seven years with faculty and NEAB input. They are used as part of annual review and planning processes.

STRENGTHS

- Strong innovative teaching; flexible faculty
- Focus on strong communication skills
- Flexible general education program
- Good teaching facilities; small classes
- Good students
- High percentage of females
- Strong minority students
- Strong demand for graduates
- Student success in graduate and professional schools
- National Engineering Advisory Board
- Good industry support

WEAKNESSES

- Low demand for undergraduate and graduate programs
- Not enough faculty for teaching and research
- Distribution of faculty resources uneven
- Graduate programs not covering costs
- Curriculum not co-op or transfer friendly
- Low public awareness of engineering and TCO programs despite high demand for graduates
- Faculty salaries low

OPPORTUNITIES

- Increase and stabilize enrollments
- Focus marketing on strengths
 - Engineering and Mercer
- Increase presence on World Wide Web
- Graduate programs for WR-ALC employees
- Distance learning delivery for graduate programs
- Externally funded research
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THREATS

- Inadequate management information systems
- Internal budget policies discourage entrepreneurial activity
- Inadequate information technology systems support
- Classroom technology not comparable to competition
- State supported undergraduate engineering programs at new locations
- UGA efforts to expand engineering offerings
- High tuition and fees

Accomplishments, Challenges and Plans

The following document follows the form of past Annual Reports that provide a summary of accomplishments relative to plans for the year just ended, a list of significant challenges faced as the new year begins, and a list of specific plans for the new year.

Annual Report for 2005-2006

I. Accomplishments

Actions that were planned for 2005-2006 are listed under each category with accomplishments shown for each in bold face.

Administrative

Reorganize administrative responsibilities for the graduate programs in the School. **Reorganization was delayed in anticipation of agreement with Warner Robins AFB.**

Continue development of graduate programs including the fifth year-masters to meet the needs of Warner Robins AFB, local government contractors and other local and regional business needs. **Graduate courses were developed and are being offered in Biomedical Engineering. Temporary office spaces were made for graduate students that are pursuing the thesis option. Graduate student offices will be available in the new Science and Engineering Building. Graduate course needs are being analyzed in view of expected increasing demand by Warner Robins AFB personnel.**

Reorient the Center for Excellence in Engineering Education based on response of businesses to new Early Career Development Program. **Anticipated change in the Center was delayed in view of reorganization of the Media Center at the University level. Attempts to market Early Career Development Program to three industrial employers revealed a lower level need than anticipate. This effort is on hold.**

Continue assessing program outcomes as required by of both SACS and ABET accreditation looking forward to meeting all ABET requirements by summer of 2007.

Assessment activities are strongly focused on being ready for the next ABET visit in the fall of 2007. All assessment activities as required by ABET and SACS are on schedule.

Upgrade two laboratories for non-computer needs.

Equipment for several laboratories has been or is being purchased. Our materials laboratory has received the most attention with the acquisition of a mechanical testing system. Initial purchases to begin equipping a composite materials laboratory for the new building are underway. Because of the low amount of funds available, only general needs were addressed for existing laboratories in contrast to the plan for complete upgrades.

Curriculum Reform

Pursue the second year of a multi-year reform of all undergraduate curricula.

A new general education requirement for all MUSE undergraduate programs was finalized, approved and made operational for the Fall 2006 term. The new requirement is more flexible with respect to liberal arts and music courses.

Continue development of graduate level programs including the fifth-year masters program.

New courses were offered in Biomedical Engineering with several graduate students now enrolled. New opportunities for masters theses are now available through the research interests of new faculty members. Increased demand for masters degrees in computer and software systems engineering is anticipated in response to special arrangements with WRAFB.

Student Success

Monitor overall student success in all programs of study in the School of Engineering and coordinate use of research data in curriculum reform processes to assure increased student success.

Data continues to be analyzed from all undergraduate levels with special attention to sophomore and freshman years. The impact of changes in the general education requirement will be analyzed with respect to impact on student success. Emphasis continues to be placed on early intervention for students that demonstrate the need for tutoring or other assistance.

Faculty Development and Related Issues

Encourage faculty members to pursue development of engineering practice modules for use in courses as requirement by the non-technical program outcomes.

Faculty members continue to emphasize engineering practice through the introduction of special problems and projects in existing courses. Faculty members continue to struggle with integrating materials relative to global issues and commitment to life-long learning in present engineering courses.

Encourage production of scholarly articles and proposals through a variety of mechanisms including reduced teaching loads.

Although several scholarly articles were produced by faculty members, this accomplishment was not coupled to reduced teaching loads. Proposal production was down from previous years due to the lack of an ability to reduce teaching loads and inadequate support in the School for preparing and submitting proposals.

II. Current Challenges

Teaching loads are too high for most effective teaching, development of faculty and pursuit of externally funded projects.

Efforts to increase educational relationships with WRAFB in partnership with MERC finally yielded an agreement to offer a reduced tuition to federal employees on the Base. We are now responding with a cooperative effort to enrollment a significant number of new graduate students and to accommodate their needs during the next year.

Successful efforts to reform the general education component of all undergraduate curricula in the School of Engineering is requiring new approaches to advising and cooperation with programs in the College of Liberal Arts.

III. Planned Actions for 2006-2007

Administrative

Complete and submit by June 30, 2007 accreditation self-studies for BSE and BSIDM programs and assemble all materials required for accreditation team visit in Fall 2007.

Increase graduate enrollment from 99 in Fall 2005 to 120 in Fall 2006. Increase first time freshman enrollment from 107 in Fall 2005 to 120 in Fall 2006. Increase total undergraduate enrollment from 431 in Fall 2005 to 450 in Fall 2006.

Deploy people and equipment from the present Engineering Building to the new Science and Engineering Building for full operation by August 1, 2007.

Reallocate and upgrade laboratory space in the present Engineering Building for full operation by August 1, 2007.

Refine administrative processes for graduate programs in the School to accommodate increased demand because of the new agreement with WRAFB.

Revise plans Center for Excellence in Engineering Education in view of reorganization of Media Center

Continue assessing program outcomes as required by of both SACS and ABET accreditation looking forward to meeting all ABET requirements by summer of 2007.

Participate in QEP activities including the Professionalism Project and service learning in relation Program Educational Objectives and Outcomes in the School of Engineering programs.

Upgrade two laboratories for non-computer needs.

Plan upgrade of all instructional and faculty personal computers in the summer of 2008.

Curriculum Reform

Implement and refine new general education curriculum.

Upgrade graduate programs in the School to accommodate new agreement with WRAFB.

Student Success

Monitor overall student success in all programs of study in the School of Engineering and coordinate use of research data in curriculum reform processes to assure increased student success.

Faculty Development and Related Issues

Encourage faculty members to pursue development of engineering practice modules for use in courses as required by the non-technical program outcomes.

Encourage production of scholarly articles and proposals through a variety of mechanisms including reduced teaching loads.