SCHOOL OF INDUSTRIAL ENGINEERING AND MANAGEMENT

Mission

The School of Industrial Engineering and Management discovers, verifies, integrates, and transfers knowledge and methodologies relating to enterprise design and management, information technology, and modeling and optimization.

Vision

The School of Industrial Engineering and Management will be internationally recognized by industry and academia for excellence in education, research, extension, and service.

Core Values

Excellence – We seek excellence in all our endeavors, and we are committed to continuous improvement.

Integrity – We are committed to the principles of truth and honesty, and we will be equitable, ethical, and professional.

Service – We believe that serving others is a noble and worthy endeavor.

Intellectual Freedom – We believe in ethical and scholarly questioning in an environment that respects the rights of all to freely pursue knowledge.

Diversity – We respect others and value diversity of opinion, freedom of expression, and other ethnic and cultural backgrounds.

Stewardship of Resources – We are dedicated to the efficient and effective use of resources. We accept the responsibility of the public's trust and are accountable for our actions.

Goals, Critical Success Factors, Objectives, and Strategies

Goal One. Academic Excellence In Instruction – Create and uphold high standards of excellence in instruction.

Critical Success Factors
- IE&M faculty receives at least three teaching awards per year.
- EAC/ABET accreditation to support baccalaureate studies.
- Educational outcome ratings average 3 out of 4 for each course taught.
- Academic year (fall plus spring) teaching loads scaled to a base of nine credit hours of instruction plus 12.5% AY external release.
- A 15 to 1 student (including BS, MS, and PhD)-FTE faculty ratio.

Objectives:

Objective 1.1: Maintain BS, MS, and PhD programs, including interdisciplinary MS programs, that are focused and relevant with respect to our constituencies (students, alumni, employers, and faculty) and current in leading edge technologies.

Strategies:
- Complete major reviews of undergraduate and graduate programs on six-year cycles.
- Develop annual continuous improvement cycles for courses and programs.
- Involve constituents in major program reviews.

Objective 1.2: Balance enrollments so as to offer students educational opportunities and mentoring at the hands of tenured and tenure-track faculty.

Strategies:
- Impose enrollment management practices to hold numbers in each program steady.
- Screen student applicants with regard to past performance and promise for future performance in IE&M.

Objective 1.3: Scale teaching loads commensurate with faculty extramural research and administrative loads.

Strategies:
- Balance program size with available faculty resources.
- Offer courses as listed in the projected schedule, provided courses have sufficient enrollment.
- Use qualified PhD students and adjuncts to take up the slack in course offerings.

Objective 1.4: Provide high quality instruction in all educational activities.

Strategies:
- Encourage instructor availability for students.

- Perform and monitor course outcome surveys every semester.
- Develop annual continuous improvement cycles for each course every time it is taught.
- Determine and maintain course enrollment limits based on course format and stated outcomes.

Goal Two. Academic Excellence In Research – Create and uphold high standards of excellence in research.

Critical Success Factors
- Average at least two extramural research proposals per FTE per year.
- Extramural research funding of an average of at least $100,000 per FTE per year.
- Average at least one publication in a recognized journal and at least one proceedings paper in a top-level conference per FTE per year.
- Average at least two society memberships and one leadership or scholarly review position per FTE per year.

Objectives:

Objective 2.1: Maintain a high level of involvement in extramural research that is relevant to our educational programs.

  Strategies:
- Encourage faculty members to write proposals.
- Encourage faculty members to develop relationships with potential funding agencies and industries.
- Reduce teaching loads for faculty members who are heavily involved in extramural research.

Objective 2.2: Maintain a significant presence in publication and presentation within leading journals and forums, respectively.

  Strategies:
- Encourage faculty members to publish both technical and education-related work.
- Reduce teaching loads on faculty members who publish profusely.

Objective 2.3: Support professionalism through society membership and participation.

  Strategies:
- Encourage faculty members to support and participate in professional societies.
- Reduce teaching load for faculty members holding high leadership offices in professional societies.

Goal Three. Academic Excellence In Outreach – Create and uphold high standards of excellence in outreach.

Critical Success Factors

- Offer at least eight courses for interdisciplinary, distance, and outreach programs per year.
- Furnish leadership for at least one interdisciplinary academic or professional program.

Objectives:

Objective 1.7: Serve distance-based programs and practicing professionals with relevant, high quality courses.

    Strategies:
- Work with Engineering Extension/Outreach to develop relevant courses.
- Work with directors of interdisciplinary programs to develop and offer relevant courses.

Goal Four. Student Recruitment And Development – Recruit, retain, and graduate students in a collegial environment that encourages excellence, prepares for careers, enriches personal growth, fosters discovery of knowledge, and promotes leadership.

Critical Success Factors

- An Industrial Advisory Board that represents at least five different industry/service sectors.
- Complaint-free advisement that allows students to graduate in a timely fashion.
- Increase scholarship and assistantship expenditures by 25%.
- Increase participation rate for BS graduates in internships and/or co-op or similar programs by 10%.
- Increase membership rate for students in student professional societies by 20%.
- Pass rates on the Fundamentals of Engineering Exam above the national average.
- A student placement rate that averages over 70% within three months of graduation for U.S. citizens and international students with permanent resident status.
- Starting salaries above the IE (new graduate) national average.
- All PhD students are co-authors on at least one paper submitted for publication before they graduate.

Objectives:

Objective 4.1: Recruit and maintain high-quality student populations at the BS, MS, and PhD levels.

Strategies:

- Provide timely and accurate advising services to all students.
- Build scholarship funds.
- Help students apply for scholarships beyond the university walls.
- Encourage employers to consider internship and co-op programs.
- Communicate information on openings for internships and co-ops to the entire student body in a timely fashion.
- Increase research funding, especially with projects that will employ students.
- Plan and promote interesting student organization activities.
- Participate in OSU/CEAT presentations and promotions for prospective students.

Objective 4.2: Produce well-rounded BSIE&M graduates.

Strategy:

- Maintain strong cores of science, engineering science, and industrial engineering and management courses.
- Prepare students for success in the FE examination.

Objective 4.3: Encourage graduate students to produce scholarly work and publish results in the form of journal papers and conference proceeding papers.
Strategies:

- Give priority to dissertation and thesis students in TA and RA appointments.
- Require paper submission before thesis or dissertation defense.

Objective 4.4: Involve alumni and other relevant professionals in educational experiences.

Strategies:
- Support efforts to sustain a diverse Industrial Advisory Board of alumni and potential employers.
- Develop a resource list of alumni willing to interact with students.
- Plan events that will allow students to interact directly with professionals active in the IE and related fields.

Goal Five. Economic Development – Enhance the quality of life by contributing to the human, economic, and cultural development of Oklahomans.

Critical Success Factors
- At least 50% of extramural research projects involve direct interaction with Oklahoma enterprises.
- Offer at least eight courses per year to support working professionals in Oklahoma.

Objectives:

Objective 5.1: Support OSU and CEAT efforts to enhance economic development in Oklahoma and the nation.

Strategies:
- Encourage faculty members to keep in touch with Oklahoma initiatives for economic development.
- Encourage faculty members to participate in special committees/teams working on initiatives.
- Encourage faculty members to develop research programs that help support Oklahoma initiatives when possible.

Objective 5.2: Support Oklahoma industries and service providers with academic opportunities for advanced degrees.

Strategies:
- Work with Engineering Extension/Outreach to develop relevant courses.
- Work with directors of interdisciplinary programs to develop and offer relevant courses.

Goal Six. Diversity – Achieve diversity and create an environment of respect for individuals.

Critical Success Factors
- Ethnic and gender balances in the undergraduate student population that reflect Oklahoma demographics.
- Nationality, ethnic, and gender balances in the graduate program comparable to peer engineering graduate programs.
- Gender and ethnic balances in the faculty commensurate with Ph.D. graduates from U.S. universities.

Objectives:

Objective 6.1: Encourage gender and ethnic balances within our student and faculty populations.

Strategies:
- Encourage faculty members to respect and support efforts to recruit and retain a diverse student body.
- Support University and College initiatives and incentives to obtain diversity.
- Support University and College initiatives and incentives for diversity.
- Encourage minority applications in all searches.

Goal Seven. Human Resources – Recruit, retain, and develop an outstanding faculty and staff within a collegial atmosphere that recognizes diverse contributions.

Critical Success Factors
- At least 50% of the faculty are nationally recognized experts in their specialty/field.
- At least 33% of the faculty are fellows in their respective professional societies.
- At least 50% of the faculty are licensed engineers.
- Average one significant faculty member/staff member opportunity for professional development per FTE per year.

Objectives:

Objective 7.1: Recruit and hire the best faculty talent, regardless of rank.

Strategies:
- Sponsor nation-wide searches for faculty and regional searches for staff.
- Use national networks to locate potential faculty members.
- Work to obtain applications from qualified faculty candidates at all ranks.

Objective 7.2: Provide faculty and staff opportunities to grow and develop professionally.

Strategies:
- Maintain a positive reputation within our profession by taking the lead in moving the profession ahead in technical development as well as professional practice.
- Develop innovative programs and program delivery processes.
- Make faculty and staff development and faculty sabbaticals a priority in annual planning and budgeting.

Goal Eight. Fiscal Resources and Infrastructure – Leverage and focus financial and physical resources to achieve strategically targeted national prominence.

Critical Success Factors
- Invest at least 10% of total budget in new equipment, software, and facilities each year.
- Reinvest at least 50% of returned F&A, AY release, and outreach funds to seed new research and outreach projects.

Objectives:

Objective 8.1: Develop and maintain recognized areas of expertise.

    Strategies:
- Encourage faculty members to develop research centers/programs that address recognized needs in creative ways.
- Encourage faculty members to develop educational programs/courses that address recognized needs in creative ways.

Objective 8.2: Invest in new (and update existing) infrastructure on a regular basis.

    Strategies:
- Plan and monitor spending.
- Provide reduced teaching loads for AY salary release.

Goal Nine. Partnerships and Collaborations – Strengthen relationships with constituents and partners to improve support for programs of instruction, research, and outreach.

Critical Success Factors
- Increase private and corporate giving of money and in-kind by 25%.
- At least three industrial partner/collaborator on the education/outreach side.
- At least five industrial partners/collaborators on the research side.

Objectives:

Objective 9.1: Seek out sources of funds and in-kind giving in the corporate and private communities.

Strategies:
- Encourage faculty members to work with corporate entities.
- Strengthen relationships with alumni.

Objective 9.2: Develop opportunities for outside funding (investing) that are innovative and attractive to potential donors.

Strategies:
- Develop and package plans going forward.
- Work with Foundation representatives to help secure higher levels of contributions.

Goal Ten. Image Development – Communicate an image that reflects achievement and pride.

Critical Success Factors
- At least two national or international awards regarding recognition for outstanding student, faculty, staff, and/or alumni achievements per year.
- At least two feature articles/interviews related to faculty, students, alumni, or programs per year.
- Average at least one publication in a recognized journal and at least one proceedings paper in a top-level conference per FTE per year.
- Average at least two society memberships and one leadership or scholarly review position per FTE per year.

Objectives:

Objective 10.1: Recognize and celebrate student, alumni, staff, and faculty achievements.

Strategies:
- Nominate faculty members, staff, students, and alumni for distinguished awards associated with CEAT, OSU, and professional societies.
- Photo-document all significant activities and events.
- Publicize student, staff, faculty, and alumni awards.
- Post faculty, staff, and student write-ups from newspapers, journals, ..., on the Web site and on display boards.
- Post pictures of activities on the Web site and display boards.
- Develop a student-faculty-alumni-staff gallery/archive where accomplishments can be displayed.