

CHARTER

PROFESSIONAL ADVISORY BOARD Department of Mechanical Engineering The University of Idaho Moscow, ID

Summary:

The Advisory Board is an external group of industry professionals who support the Chair of the Department of Mechanical Engineering in the College of Engineering at the University of Idaho. The Board serves a vital role in linking and aligning the department's strategic objectives and activities with the interests of external industrial and academic stakeholders.

The Board is comprised of alumni, engineering professionals, and other experts in their fields who provide guidance to the Department. The Board's makeup is designed to provide ideas, constructive criticism, industry perspective, professional experience and insight, assistance in launching outreach/development initiatives, and serve as ambassadors for the Department, College, and the University. Board actions satisfy an important ABET requirement and thereby help the department maintain its accreditation.

Objectives of the Department: (Owned and revised by each new Department Chair)

The Department's objectives are based on the needs of our constituencies. We focus on the professional and personal development of our undergraduate and graduate students. We continuously assess and improve our ABET-accredited undergraduate curriculum. Our department is a college and university leader in the use of innovative teaching methods, in horizontal and vertical curriculum integration, and in the use of applied design projects. Students interact frequently and personally with the faculty and are mentored and advised by the faculty. The strengths of our mechanical engineering program are:

- *A superior engineering science foundation as demonstrated by outstanding, decades-long performance in the Fundamentals of Engineering Exam (FE/EIT)*
- *Strong hands-on engineering experiences featuring design and construction of prototypes*
- *Significant laboratory experiences featuring hands-on usage of state-of-the-art instrumentation, a broad exposure to metrology, data acquisition principles and techniques, and the design of experiments*
- *Numerous teamwork experiences, including opportunities to lead and to serve in team roles*
- *Substantial use of appropriate engineering tools including the best available software*
- *Multiple communication experiences including written and oral presentations and, increasingly, a presence in technical-social media including distance and cross-discipline collaboration.*

We maintain and continuously improve a graduate curriculum focused in five sub-areas:

- 1. Computational and Experimental Solid Mechanics*
- 2. Robotics and Controls*
- 3. Computational and Experimental Fluid Mechanics*
- 4. Energy, Environment, & Sustainability*
- 5. Design & Manufacturing*
- 6. Materials testing and characterization*

We conduct research in relevant areas of engineering. Graduate students receive quality mentoring and advising. We provide engineering services (teaching, consulting, outreach, materials testing and research) to support industry and national laboratories. We support education throughout Idaho and beyond by providing quality distance education through the Engineering Outreach Program. We collaborate with faculty at other educational centers. We provide service to professional societies, the college and university, and the region.

We encourage our graduates to support the improvement of our program in formal and informal ways, including referrals, donations of time, of equipment, of money, and through periodic evaluation of the Department and its performance as gauged by their professional success.

Objectives of the Advisory Board:

The principal function of the Board is to interact with the faculty, research professionals, staff, and students of the Department in an advisory capacity with particular emphasis on the educational facet of the Department's mission. It is anticipated that Advisory Board members' experience in a wide range of engineering activities will help to enhance the Department's productivity and contributions to the constituencies the Department serves. The Board's objectives shall include, but not be limited to, the following:

- Review and assist with the development of contemporary curricula that are responsive to the needs of mechanical engineering practice and research, as well as to society overall.
- Strengthen the links between the Department and its engineer-practitioner constituencies.
- Assist in curriculum quality control as reflected in outcomes assessment and related issues involving program accreditation through ABET.
- Assist, when appropriate, in the creation of internship and cooperative educational opportunities for undergraduate and graduate students in order to increase student involvement in engineering practice.
- Work with the Department to identify projects and funding for the Capstone Design course.
- Provide suggestions on current and evolving needs in research.
- Develop and implement strategies for providing the Department with state-of-the-art scientific and manufacturing equipment.
- Generate ideas for, and obtain, external financial support for the Department.

Makeup of the Board:

Members will be selected from varied backgrounds, experiences and perspectives. They will be recruited to ensure well rounded representation in terms of discipline, experience, geography, and industry while promoting equitable social diversity and inclusion.

The Mechanical Engineering Department Chair, the Dean of the College of Engineering, and the Mechanical Engineering Department Manager are *ex-officio* members.

The Board shall be comprised of 15 – 20 members, not including the *ex-officio* members.

Board Member Qualifications

- Board members should have an active interest in collaboration between their sphere of influence and the Department.
 - Members need not be alumni of the University of Idaho but should have a professional or personal interest in the Department, College and University.
 - Board members should have experience or current engagement, in an exemplary capacity, in an engineering or scientific discipline associated with a consulting, industrial, governmental, or academic organization.
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Member Responsibilities & Commitments

The minimum term of commitment to the Board is three years. There is no restriction on serving consecutive terms. A seat on the board will be considered vacant if the associated member is not actively involved or is otherwise absent from involvement for more than one calendar year. No restrictions apply to those members rejoining the board, space permitting. Members are expected to contribute actively to the advisory board and are encouraged to do so in as many ways possible. Examples of opportunities for involvement include:

- Advise department leadership on program matters, specifically on industry needs and expectations.
- Serve as a sounding board for new initiatives while critically evaluating the current program and its graduates.
- Advocate and promote the Department to various constituencies including alumni, donors, prospective students, and the general public.
- Support the Department by providing financial resources and/or donating equipment.
- Demonstrate personal commitment to the Board and the Department by donating annually to the Department scholarship fund. Secure matching donations from the employers of the board members whenever possible.
- Provide internships and permanent employment for the students and graduates of the program.
- Identify and recruit new board members.
- Participate in the regular meetings of the Board (virtually or in person), typically held during the fall semester and at the end of the spring semester. The spring meeting coincides with

the College's Engineering Expo event and may include a joint session with all of the engineering advisory boards.

- Participate in conference calls, e-mail, social-technical media, or other digital correspondence as the need arises.

Board Selection & Appointment

The Department Chair, the Dean, the Board members, and the faculty and staff of the Department may suggest nominees for Board membership. The Mechanical Engineering Department Chair and the Dean of Engineering in consultation with faculty shall confirm membership.

The Board shall select a chairperson from among its regular members. The term of office shall be two years. The Chair is typically voted into office from candidates nominated at the spring meeting. The outgoing Chair, the Chair-elect and the Department Chair will collaborate on the transfer of duties before the fall activities of the Board with the expectation that the new chair will lead the fall Board meeting.

Board Administration Responsibilities

The Board Chair is responsible for promoting communication and collaboration associated with board agenda items in and out of board meetings. The Board Chair shall preside at the Board meetings. The Board and the Department Chair shall define meeting procedures and agendas. Board meetings will typically be held on the Moscow, Idaho campus. The Board agenda shall be prepared by the Department Chair in consultation with the Board Chairperson and distributed in advance to the Board. and distributed in advance to the Board. Agenda items may be suggested by any member of the Board and by the Department's faculty and staff.

The Department Chair shall be responsible for the timely preparation and distribution of minutes from the meeting. The minutes shall be available to the Board, Department faculty, interested research professionals, and staff. Board records shall be organized and archived by the Department Chair. All records shall be made available to board members.

In the absence of the Board Chair, the Department Chair shall assume all Board Chair responsibilities.

Advisory Board Scholarships

Each year board members are encouraged to donate money to a fund that is intended to be distributed as a scholarship to one or more worthy and deserving students. This fund is managed by the Department Chair. A department faculty representative invites one or more stellar students to apply for the board scholarship in advance of the spring advisory board meeting. During the spring meeting, the board reviews applicant materials and collaboratively votes to choose and distribute scholarship funds. Students are chosen based on financial need, academic merit, and involvement in the department. Fund and scholarship amounts vary year by year depending on member contributions. Amount awarded per student is at the discretion of the board, but the target should meet or exceed \$1000 to be financially impactful.

Revision History

Initial Release

Proposed to the Board – April 28th, 2016

Steven Beyerlein, Department Chairman

Jeff Smutny, Advisory Board Chairman

Ratified – May 31, 2016

Revision 1

Proposed to the Board – April 29th, 2021

Jonathan Richards, Advisory Board Chairman

Approved – July 28th, 2021

Description of changes:

- Add header, footer, and page numbers
 - Move revision history to end of document, add description of changes
 - Assign Dept Chair ownership to Department Objectives section
 - Add clarification regarding diversity to Makeup of the Board section
 - Add commitment expectations and service term definition to Member Responsibilities and Commitments section
 - Create separate sections for Board Selection & Appointment and Board Administration Responsibilities
 - Add statements to Board Administration Responsibilities identifying the Department Chair as the Board Chair alternate
 - Add section regarding Advisory Board Scholarships and associated guidance
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