

**Biomedical Engineering Program Bylaws
North Dakota State University**

Administrative Home: College of Engineering

Academic Home: College of Engineering

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Approved by Dean of College of Engineering on: _____

Approved by Dean of College of Graduate and Interdisciplinary Studies on: _____

I. Objectives

- A. Degree offered: M.S. and Ph.D in Biomedical Engineering (BME).
- B. Discipline: Biomedical Engineering.
- C. Mission of the Program: These interdisciplinary graduate programs aim to achieve the following:
 - Meet the academic needs of students interested in biomedical engineering.
 - Attract women and under-represented minorities into a developing field.
 - Educate and train students through courses and research focused on biomedical research and device development.
 - Advance the biomedical knowledge base through collaborative research directed by faculty from NDSU's College of Engineering, as well as UND's School of Medical and Health Sciences, College of Engineering and Mines, and other qualified researchers from the two universities.
 - Through biomedical research and device development, develop intellectual property to generate company spin-offs, attract new companies, and subsequent economic development.

II. Participation

- A. Graduate Faculty participating in the BME graduate programs may be tenured, tenure track or non-tenure track NDSU faculty. Appointments of non-tenure track faculty are subject to the limitations and definitions in this document under section A.4 below. All Graduate Faculty shall be appointed for a 3-year, renewable term as per the process outlined in section B below. All Graduate Faculty of BME with active 3-year appointments are eligible to vote on program issues.

1. BME Graduate Faculty Appointments and Home Academic Units
Graduate Faculty activities in the BME programs are recognized as part of the faculty's normal workload at their home academic department.
2. Disciplinary Expertise
Graduate Faculty participants within BME are expected to have a PhD or equivalent doctoral-level degree in a field of science or engineering. In addition, they must have demonstrated disciplinary expertise in biomedical engineering, interest in mentoring and teaching of graduate students in this field, and/or relevant professional accomplishments.
3. Appointment as BME Graduate Faculty
BME Graduate Faculty must be actively involved in research and teaching relevant to Biomedical Engineering. Evidence of this activity should include recent external grant or contract support, relevant peer-reviewed publications within the last 3 years, graduate student mentoring in the BME program within the last 3 years, teaching of relevant graduate level courses for the BME program, and/or other relevant professional accomplishments.
4. Non-Tenure Track Graduate Faculty
 - a. Internal to NDSU
Non-tenure track faculty appointments internal to NDSU include research, clinical, and affiliate faculty. These faculty may be appointed as BME Graduate Faculty if appropriately qualified by their academic and research achievements. Once appointed, they are entitled to act as co-chairs or members of graduate student committees; teach graduate courses; and supervise research. When serving as co-chair of a student committee, they must work with a tenured or tenure-track faculty member who has a current appointment with the BME Graduate Faculty. These faculty members may vote on Program matters but may not serve on the Advisory Council or serve as the Program Director.
 - b. External to NDSU
Qualified affiliate faculty external to NDSU may co-chair or serve on BME graduate student thesis committees, but may not vote on program matters, serve on the Advisory Council, or serve as Program Director. These individuals may be approved to serve as BME committee members on graduate committees on a case-by-case basis through the process described below in section II.A.5. When serving as co-chair of a student committee they must work with a tenured or tenure-track faculty member who has a current appointment with the BME Graduate Faculty. Upon being approved to serve as co-chair of a thesis committee, these individuals will be appointed as affiliate BME Graduate Faculty following the same procedure as that for Graduate Faculty appointments, as described in sections II.B and II.C below.

5. External Individual Committee Members
 - a. **Individual Committee Member Internal to NDSU:** Individuals not officially participating as Graduate Faculty within BME may serve on graduate committees for BME students as long as they are active participants within the Graduate Faculty in their own program or discipline and their committee appointment is approved by the Program Director of BME.
 - b. **External Individual Committee Members:** Individuals not officially participating as Graduate Faculty within any graduate program at NDSU (for example, a faculty member from another university or research entity) may be approved to serve as a thesis/dissertation committee member for an individual student on a case-by-case basis. The committee chair for that student should forward the name and curriculum vitae of the desired committee member to the BME Program Director. With approval of the Program Director, the nomination (with accompanying CV or other documentation of expertise) is forwarded to the Dean of the Graduate School for final approval. All external individuals must be appointed as affiliate graduate faculty at NDSU before they will be allowed to serve on graduate student committees.

B. Application for Graduate Faculty Participation

Approval for Graduate Faculty participation in the BME program is as follows.

1. Candidates for BME Graduate Faculty should submit an application to the Program Director that includes the following:
 - a. Letter of intent sent to the program director and copied to the faculty's department Chair and Dean indicating commitment to supervise graduate students as the major advisor in the BME Program, and a willingness to participate as appropriate in administrative, teaching, and other functions of the BME graduate program;
 - b. Current curriculum vitae that includes academic experience, honors, peer-reviewed publications, external funding history, teaching history, graduate student mentorship, and professional service, with emphasis on BME related activities.

Faculty who are serving as major advisors or co-advisors of current BME graduate students are automatically appointed as BME graduate faculty without the need to submit an application.

2. The program director will review the application materials.
3. The applicant will be appointed to the Graduate Faculty if approved by the program director.

After appointment as Graduate Faculty in BME, faculty have rights and

responsibilities as described in section II.A. above.

C. Continuation of Participation

1. Graduate Faculty participation in BME shall continue for a period of three years following initial appointment. After that period and every three years thereafter the Program Director shall request a written statement of past activity and future commitment from the participant. Re-appointments as Graduate Faculty in BME will be contingent on the following, a and b:
 - a. The faculty member must have served as a thesis/dissertation committee member of a graduate student in BME during the past 3 years;
 - b. The faculty member has indicated commitment to supervise BME graduate students as the major advisor or teach BME classes.

D. Discontinuation of Participation

Upon request of a Graduate Faculty participant, that individual's appointment in the BME Program may be terminated. If that individual's research and graduate training activity should change, they may apply for re-appointment as Graduate Faculty at any time.

III. Administration

- A. The BME graduate programs are administered through the College of Engineering at North Dakota State University and report to the Dean of the College of Engineering. Its academic home resides within the College of Engineering.
- B. The BME Program Director (see next section) is responsible for leadership of the Program with the assistance from the Advisory Council.
- C. Advisory Council: The Advisory Council shall serve to advise the Director on academic and administrative issues.
 1. The Advisory Council shall consist of four faculty members appointed by the Director. The four faculty members should be on the Graduate Faculty of BME.
 2. The BME Program Director shall preside at all meetings of the Advisory Council.
 3. Members of the Advisory Council shall serve a two-year term, which will be renewable upon mutual consent of the committee member and the Director.
 4. Areas in which the Advisory Council may assist and advise the Director include:
 - a. Serve as a sounding board for new ideas or proposed changes in academic or administrative issues.
 - b. Assist with student admissions and selections of BME graduate assistantship awards.

- c. Nominate members for service on other committees.
 - d. Assist with BME program review/assessment process when needed.
- D. Industrial Advisory Board (IAB): The IAB shall advise the Program Directors at NDSU and UND on key strategic decisions related to the overall direction of the BME program.
- 1. The IAB shall consist of the two program directors, one from NDSU and one from UND, and representatives from the Biomedical Engineering industry including healthcare organizations. The two directors shall name the representatives from industry. The IAB membership is on a three-year term with renewability.
 - 2. Meetings of the IAB shall be held twice annually, one of which will be at the annual BME symposium, while the location and schedule of the other meeting will be determined at least one month prior to the meeting. BME director(s) will preside at all meetings. The meeting agenda will be set by the BME director(s) and will be sent to the IAB members at least a week in advance of the meeting. Special meetings of the IAB, besides the annual meetings, may be called by the BME director(s) in the cases of emerging issues or opportunities that call for somewhat immediate responses.

IV. Graduate Program Director

- A. The Director of the BME graduate program shall be appointed by the Dean of the College of Engineering.
- B. Duties of the BME Program Director.
 - 1. Provide overall academic and administrative leadership for BME.
 - 2. Develop and implement policies for BME.
 - 3. Represent the interests of BME to the campus and University administrators.
 - 4. Call and preside at meetings of the Advisory Council and Industrial Advisory Board.
 - 5. Call and preside at meetings of the Graduate Faculty of BME.
 - 6. Be responsible for coordinating all BME administrative matters within the Graduate School.
 - 7. Submit course or curriculum change or approval forms.
 - 8. Submit by-laws change or approval forms.
 - 9. Manage the review of graduate student applications and make decisions on admissions and refusals with the assistance from the Advisory Council when needed.

V. Committees

- A. Advisory Council
Selection and duties of the Advisory Council are discussed in Section III.

- B. Industrial Advisory Board
Selection and duties of the IAB are discussed in Section III.
- C. Other Committees
Other ad hoc committees may be appointed by the Program Director and/or Advisory Council as needed.

VI. M.S. and Ph.D. Committees

- A. The initial selection, or subsequent changes, of a graduate student's committee shall be determined jointly by the student and the student's advisor.
- B. The M.S. committee shall consist of a minimum of three members, and Ph.D. committee shall consist of a minimum of four members, following the rules outlined in the Graduate School's Policies. At least one of the committee members must be a Graduate Faculty from UND with a current appointment in the BME Program. See section II.A.5. for policies on internal or external committee members.

VII. Faculty Meetings

- A. The Director shall call Program faculty meetings as needed, but at least once per year.
- B. Efforts will be made to communicate items of interest, including notification of a faculty meeting, to the faculty via e-mail.
- C. Program faculty may request that the Director call a special meeting if the request is supported by at least 25% of the program faculty.

VIII. Quorum

- A. For all general graduate faculty meetings and votes unless otherwise indicated, a quorum shall be defined as a minimum of 33 percent of the Program membership. Votes cast via proxy, e-mail or phone, communicated to the Director prior to a meeting, shall be equivalent to voting by attendees of the meeting, and shall count towards satisfying the quorum requirement.
- B. Unless otherwise indicated, a simple majority of the total number of ballots cast are required to pass a motion.
- C. In the event of a tie vote in which the entire graduate faculty is eligible to vote, the Program Director will decide the outcome of the vote. For tie votes that occur within programmatic committees, the committee chair will decide the outcome of the vote.

IX. Amendments to Program Bylaws

- A. The Program Bylaws document shall be reviewed annually by the Director and every 3 years by the Advisory Council.
- B. Amendments to the Bylaws may originate from the Director or Advisory Council or by petition of any 5 BME Graduate Faculty participants. Proposed amendments must be forwarded to the BME Advisory Council and Program Director. After discussion, amendments shall be forwarded to the BME Graduate Faculty electronically at least 2 weeks prior to a faculty meeting at which the amendments will be discussed. Votes on amendments may occur at the faculty meeting or electronically. Amendments to the BME Bylaws require a simple majority of all votes cast (see the definition of a quorum in Section VIII above).

X. List of Graduate Faculty Participants

The Director of the BME Graduate Program will maintain a current list of BME Graduate Faculty participants and give an annual update to the Dean of the College of Engineering.