

## Department of Mechanical Engineering Graduate Student Mentoring Plan (January 2023)

This document articulates the Department of Mechanical Engineering's expectations for graduate student advising and mentoring. The overall goal of these expectations is to:

- Provide transparency for graduate students about what they should expect from faculty advisors and mentors.
- Provide guidance to the Director of Graduate Studies (and other appropriate Departmental officials) to intervene if faculty (or students) fall short of meeting shared expectations.

This mentoring plan applies to MS and PhD students in Mechanical Engineering (ENME) and Reliability Engineering (ENRE) only.<sup>1</sup>

### Key Values That Guild the Department's Mentoring Expectations

This plan incorporates the following key values:

- **Demonstrate respect** for the mentor's and mentee's time, research, and professional goals. The mentor is an important source of advice and guidance, but should respect the mentee's independence and autonomy. The mentee should also similarly respect the mentor's time, research, and professional goals.
- **Engage in transparent communication** about the expectations of both parties. The mentor and mentee should have continual discussions about their expectations to ensure and build clarity, and to allow for the evolution of expectations over time. Clear communication can help reduce misunderstandings and build trusting relationships. These communications can take many forms, e.g., in-person meetings, remote meetings, emails. The particular form is up to the mentor and mentee to determine.
- **Practice professional behavior.** All parties will be professional in their interactions with each other.
- **Be responsive.** Mentors and mentees should be responsive to each other. They should agree on how quickly they will respond to each other, respect work-life boundaries, and on what topics are appropriate beyond coursework, and thesis and dissertation research.
- **Provide recourse.** Mentors are often assigned before the mentor and mentee know each other and may not always provide a good fit. Mentors and mentees should therefore have clear and straightforward options for changing how they are paired.

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<sup>1</sup> This plan does not apply to Maryland Applied Graduate Engineering (MAGE) Master of Engineering (MEng) or Graduate Certificate in Engineering (GCEN) students in programs associated with ENME or ENRE.

## **Mentoring Assignments**

Mentors help advance the academic and professional lives of their students by sharing guidance, experience, and expertise. Mentors play a vital role in socializing students into the culture of the discipline, communicating and reinforcing—often by example—what is expected of a professional scholar or practicing engineer. While the primary emphasis is on intellectual development, truly effective mentoring attends to the whole student, and is sensitive to the difficult and even painful process of reconciling a student’s personal experiences and understanding of themselves with the demands of graduate training.

In the Department of Mechanical Engineering, most students have a faculty research advisor who is guiding the student’s research and will ultimately chair their thesis or dissertation committee. For students that have a faculty research advisor, the mentor will be that faculty research advisor. For admitted students that do not have a faculty research advisor, the Director of Graduate Studies (DGS) will assign each new student an initial mentor as soon as possible after the student accepts admission to the program. If a student enters the program without a faculty research advisor, the initial mentor will be replaced by the student’s faculty research advisor once that advisor has been identified. If a student separates from their faculty research advisor during their degree, the DGS will assign a temporary mentor to the student until they identify a new faculty research advisor who will become their new mentor.

It is unlikely that any individual faculty member will be able to effectively mentor students in every aspect of their studies, assistantship duties, and professional development. Students are expected to build a mentoring network that extends outside the mentoring assignments covered in this plan, and formal mentors should actively assist with this process by introducing their mentees to other faculty (in the Department or elsewhere), to more advanced students, and to others who can contribute to the professional development of the students.

## **Mentor Responsibilities**

Mentors should contact their mentee promptly following the student’s formal admission to the program by the Graduate School and before the start of their first semester.

Mentors are expected to meet with their mentees a minimum of three times each semester, though the frequency and nature of the interactions should be mutually agreeable and revised as necessary over time. Group meetings between a faculty research advisor and multiple mentees can be conducted in place of, or in addition to, individual meetings with mentees.

The mentor’s specific responsibilities are:

1. Mentors will proactively engage their mentee, which includes:
  - i. Scheduling meetings or conversations.
  - ii. Anticipating support that may be needed and tailoring the mentoring to the needs and interests of the particular mentee.

- iii. Assuming a degree of responsibility for their mentee's academic and professional development and success in the program.
2. Mentors will familiarize themselves with the various resources provided by the Department, the College, and the Graduate School, and will refer their mentee to these resources, as appropriate.
3. At the end of the academic year, mentors must submit to the Director of Graduate Studies (DGS) a summary of meeting frequency with each mentee.
4. Mentors will work proactively to identify and address the needs of mentees from populations with distinct needs. Among these are students from historically underrepresented or marginalized populations, whose backgrounds and life experiences may differ from those of the mentor, and who may face additional challenges in orienting to the graduate school environment. This includes international students, who may come from cultures with different norms and bring scholarly expectations and practices informed by different educational systems. It also includes parents and others with caregiving responsibilities.
5. Mentors will provide candid feedback to their mentees within two weeks. Should that feedback be routinely disregarded, or should the mentor feel that their suggestions are not being taken in good faith, they should communicate this to the mentee. Should the situation persist, the mentor should notify the DGS.
6. Those serving as initial mentors should assist their mentee with the process of identifying a permanent mentor (faculty research advisor).
7. Mentors will produce a "Statement of Graduate Supervision" document that the faculty member will file with the Graduate Office and share with mentees. The document will include:
  - a. A satisfactory/unsatisfactory rating pertaining to both research progress and course work/plan progress from the mentor/advisor.
  - b. A brief summary of the frequency (and nature) of interactions that the mentor/advisor has with the mentee.

*Topics to avoid when mentoring:* Some topics are outside the purview of the profession. Mentors should avoid giving advice on topics such as reproduction and family formation (when to have children), marriage and domestic relationships, physical appearance, religious beliefs, politics, and issues related to sexual orientation. Mentors may share their own experiences in this area if asked directly by a student, or direct the student to other appropriate resources (other mentors, faculty, staff, campus services, etc.).

## **Mentee Responsibilities**

The mentee's specific responsibilities are:

1. Mentees should approach the mentoring relationship as a professional one, and should respect their mentor's time. Mentees should, however, freely seek guidance on matters appropriate to the mentoring relationship as established in the mentoring contract.

2. Be respectful. Just as mentors have a responsibility to treat their mentees with respect, students must also interact with faculty in a respectful and professional manner.
3. Should a mentoring relationship prove inadequate, unhelpful, or even detrimental, the mentee should immediately share this with the graduate office and DGS, who will assist in resolving the issue.
4. Mentees should use the resources they are provided, including checklists for planning mentoring meetings, to apprise their mentors of topics they would like to discuss.
5. Mentees should proactively engage with the department's faculty and staff across research areas, and should carefully build their own mentoring networks that extend beyond formally assigned mentor or faculty research advisor.
6. Mentees should respond to feedback in a constructive manner. It is essential that students recognize that mentors offer constructive criticism to improve their work; it represents engagement.
7. Mentees should recognize that they are ultimately responsible for their progress and development. Mentors play an important role in facilitating that progress and development, but responsibility ultimately lies with the mentees to ensure they are identifying and seeking out the support they need.
  - a. Mentees may seek a change in advisor when circumstances are warranted. If the mentees wish to separate from their advisor, they should contact the graduate office and DGS to discuss the situation and obtain guidance on how to proceed.

## Peer Mentoring

A peer mentor (from other students) serves as a resource—a helping hand, a sounding board, a referral service—providing both personal and professional support for students in the early stages of a graduate program. A good mentor will be familiar with departmental rules, expectations, and procedures, and, in the event the mentor cannot answer a specific question, will be able to direct students to those more knowledgeable. Although peer mentors are not expected to be equipped to deal with psychological crises, disputes with advisors, and other personal or degree related issues beyond their training and expertise, they should be familiar with the people and services available to students who face these issues.

Specific peer-mentoring programs supported by the Department include:

- TA Support Group – All graduate student teach assistants are required to attend a minimum of two TA support group meetings per semester.

## Diversity

Students from underrepresented groups face a number of additional challenges in graduate school. Mentors should actively seek to understand these experiences.<sup>2</sup> Some of these challenges may include:

- Being designated a spokesperson. Students from underrepresented groups are often

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<sup>2</sup> Mentors can find relevant resources at the following locations: <https://diversity.umd.edu/resources-page>, [https://stamp.umd.edu/mica/multicultural\\_involvement\\_community\\_advocacy](https://stamp.umd.edu/mica/multicultural_involvement_community_advocacy)

called on to speak from the perspective of their identity group. Students should be encouraged to share experience and perspectives as they desire, but not required to be a spokesperson. Faculty should avoid asking such students to repeatedly share along these lines.

- Feelings of Isolation. Students from underrepresented groups often experience greater feelings of isolation. Faculty can work to create a welcoming environment for these students by engaging with them about their interests and inviting conversations about the profession and about graduate school.