

# **Best Practices in Graduate Education for Advisors and Advisees**

## **Biological and Agricultural Engineering North Carolina State University**

Graduate education is a preparation for careers that make important contributions to society. The primary responsibility for successful completion of a graduate degree rests with the student, but advisors play an important role in guiding this progress. This document aims to set out the responsibilities and expectations of both partners in this relationship; these best practices will be most helpful when advisors and students discuss during the onboarding process and at least annually.

**Grounding Principle:** The community of scholars at NC State—faculty, students, and peers—works together respectfully regardless of race, gender, religion, sexual orientation, or national origin and strives to create and maintain an environment that is safe, free of harassment, and welcoming to all.

### **General**

1. The student and the advisor are expected to behave in a professional and ethical manner in research and personal and professional relationships.
2. Both the student and the advisor are expected to be familiar with the policies of the Graduate School and of the relevant graduate program.
3. Communication is key to many successful enterprises, including graduate education and research. Advisors and students are encouraged to discuss their preferred communication tools, expectations on response times, and adherence to appropriate work hours.
4. Disagreements and conflicts are inevitable but can be minimized with open and effective communication. Conflicts should be resolved at the lowest level possible, but students are always welcome to bring any issue to their advisory committee, the Director of Graduate Programs, the Department Head, or the [NC State Ombuds](#).
5. Faculty and students are encouraged to realize the potential for stress and anxiety, to recognize the signs of these mental health conditions, and to foster overall wellbeing and mental health. The [Counseling Center](#) is part of the Student Health Center and is available to all graduate students.

### **Mentoring**

1. Effective mentorship is important to success in graduate education. Advisors are expected to serve as lead mentor, but students are encouraged to seek additional mentorship as needed.

2. Advisors are expected to encourage and assist graduate students to define professional goals for themselves and to seek opportunities to meet those goals. Individual Development Plans (IDP) can be an effective tool for students to identify these goals and activities; advisors are encouraged to include this development process in their mentoring. More information and links to downloadable IDP tools are in the [IDP Resources](#) document in the [BAE Grad Wiki/Mentoring](#).
3. Mentorship is a valuable professional skill that graduate students may identify through the IDP process. The principles of effective mentorship are the same regardless of the status of the mentor and mentee. With effective preparation and guidance, mentoring undergraduate research assistants affords an opportunity to develop graduate student skills in this area. Resources are available from [this NC State College of Engineering site](#) and [this Center for Teaching site at Vanderbilt University](#). The national Academies of Science Engineering and Medicine also has a wealth of resources, including a report, [The Science of Effective Mentoring in STEMM](#), [an online guide](#) and a [series of podcasts](#).

### **Conduct of Research**

1. The advisor and student should communicate clear expectations at the beginning of the graduate program. Areas of discussion should include expectations regarding both outputs and process. These expectations should not change over time in a way that lengthens the time to degree for the student.
2. The advisor and student should work together to identify a suitable thesis/dissertation topic and to select the advisory committee.
3. The advisor and student should meet regularly to review progress and results and to address research difficulties. Both advisor and student should strive to maintain steady progress towards the degree, which requires advisors to provide timely, constructive feedback. The advisor should be candid and fair and committed to the advisee's best interests.
4. The advisor and student should be familiar with and follow professional standards and university policies related to research ethics, scholarly integrity, responsible conduct of research, and protection of intellectual property.
5. The advisor and student should jointly seek opportunities for professional development, such as attending conferences, planning extension events, writing and submitting proposals for research and fellowship funding, presenting research results, publicizing extension products, etc.
6. It is recommended that the advisor and student meet with the full advisory committee at least once a year to review the student's progress and status. Both should be responsive to the constructive advice and criticism of committee members.
7. At the start of each semester, the advisor and student should agree upon the standards for receiving a satisfactory grade for any research/thesis/dissertation credits in which the student will be registered. Advisors should assess progress mid-semester.
8. Both the advisor and the student should acknowledge the contributions of all

members of the research team in publications and presentations. The advisor and student should discuss the intellectual contributions of the research team and agree on the list of authors of any work submitted for publication.

9. The advisor is expected to help prepare the student for a successful career understanding the student's goals and strengths; suggesting seminars, workshops, and professional development opportunities; finding appropriate career opportunities; and providing guidance in the job search process.

### **Teaching**

1. Graduate students funded on research assistantships are expected to provide service to the department as a Teaching Assistant (TA).
2. TA responsibilities vary with class assignments but generally include grading, assistance with laboratory exercises, answering student questions during office hours, or other support as requested by the instructor.
3. Faculty and TAs should expect duties to take an average of 6 to 8 hours per week, understanding that some weeks may require more time and some may require less.
4. Instructors and teaching assistants are expected to meet before the beginning of the semester to establish expectations and responsibilities. The instructor should provide access to solution sets and evaluation rubrics needed to complete their assigned duties.
5. TAs should observe Graduate School regulations and code of conduct as it relates to their interactions with the students in their TA classes.
6. A requirement of the PhD program is to complete an information transfer activity, described [here](#) in the [BAE Graduate Manual](#). Advisors and students should select and plan an activity best suited to the students' goals. Students should complete [this form](#) to share the planned activity with the Director of Graduate Programs.

### **Safety**

1. Recognizing that risk is associated with any task, advisors should prepare students with proper training, protection, and support.
2. Advisors and students should always be aware of their surroundings. Advisors should inform the student upon potential dangers of research activities.
3. Students should bring to their advisor's attention any safety concerns or potentially unsafe situation they encounter.
4. Advisors and students should review laboratory and field safety each semester or when research circumstances change. Students should know how and when to access and use personal protective equipment for both the field and lab.

Updated August 22, 2022