

GRSC 8550: Responsible Conduct of Research

Introduction:

This 1-credit hour course is a required course for incoming graduate students in the Integrated Plant Sciences Program. Students from other graduate programs in Life Sciences needing to fulfil an ethics requirement are also welcome to attend. The course is designed to guide students through the ethical issues associated with research to ensure compliance with ethics rules throughout their career. Using videos and case studies, we will discuss the importance and best approaches to manage your data, your rights with regards to this data when you leave UGA, what constitutes research misconduct and how to report it, and criteria for publishing and authorship.

All academic work must meet the standards contained in 'A Culture of Honesty'. Students are responsible for informing themselves about those standards before performing any academic work. The link to more detailed information about academic honesty can be found at: <https://honesty.uga.edu/Academic-Honesty-Policy/>.

Instructor:

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Office hours:

For appointments, e-mail me and I will set up a ZOOM call.

Miscellaneous:

When: Yearly; 1st half of Fall semester (First class is Monday August 24th)

- Mondays: 9:10 am – 10:00 am
- Wednesdays: 9:10 am – 10:00 am

Where: On-line (attendance is mandatory); to join, click [HERE](#)

Grading:

U/S

Students need to attend all classes, actively participate in discussions and complete all assignments in order to receive an S. Any absences from class need to be justified.

Use of computers and cell phones:

This class will be taught fully on-line. Students are expected to have their video on during the entire class. Consistently doing non-class related activities during the on-line class as judged by students not participating or not knowing what the question was when called upon will result in a grade of 'unsatisfactory'. Cell phones need to be switched off during class.

Tasks:

Tasks need to be completed before the start of the class under which the task is listed. For example, the tasks under '2a. Preparing a NSF-GRFP application' need to be completed before the start of class on Monday 31st August.

Tentative schedule

Mon 24 th Aug	1a. The Life of a Graduate Student – Why go to Graduate School, expectations and importance of communication.
Wedn 26 th Aug	1b. The Life of a Graduate Student (cont.) – Choosing courses, a lab, an advisor, a committee
Mon 31 st Aug	2a. Preparing a NSF-GRFP application
	<i>Tasks:</i>
	<i>1. Select one GRFP proposal most closely aligned with your research area and read through the statements; write (in bullet points) what you considered positive/negative about the proposal.</i>
	<i>2. Read through all posted GRFP reviews and make a list of what reviewers consider positives and negatives in both the personal and research statements.</i>
Wedn 2 nd Sept	2b. Preparing a NSF-GRFP application (cont.)
Mon 7 th Sept	Labor Day – No class
Wedn 9 th Sept	3. Scientific Record Keeping
	<i>Task:</i>
	<i>Bring in photocopies corresponding to work done on two consecutive days from the lab notebook of a fellow graduate student (or post-doc, or technician) in your lab or working in a similar research area.</i>
Mon 14 th Sept	4. Data Ownership and Management
Wedn 16 th Sept	5. Prepublication Data Release: Can I ...?, Should I ...? What if ...?
	<i>Task:</i>
	<i>1. Critically read pages 1-6 and page 10 in the paper by Thursby et al. (2018) Scientific Advances 4:eaar2133; Make notes regarding the observations made by Thursby and colleagues regarding the questions listed on slide 4 in the 'Prepublication data release' presentation.</i>
	<i>2. Critically read the Opinion paper on 'Prepublication data sharing'; consider the questions on slide 9 in the 'Prepublication data release' presentation.</i>
Mon 21 st Sept	6a. Research Misconduct – What is it? Why is it important?

	<i>Task:</i>
	1. <i>Critically read Gunsalus and Robinson (2018) Nine pitfalls of research misconduct. Nature 557:297-299</i>
Wedn 23 rd Sept	6b. Research Misconduct (cont.) – Contemporary Examples
	<i>Task:</i>
	<i>Prepare brief discussion on selected misconduct case and resulting administrative action</i>
Mon 28 th Sept	6c. Research Misconduct (cont.) – Reporting Misconduct
	<i>Task:</i>
	<i>Critically read Michalek et al. (2010) The costs and underappreciated consequences of research misconduct: A case study. PLoS Medicine 7:e1000318</i>
Wedn 30 th Sept	7. Is Harassment a Form of Research Misconduct?
	<i>Tasks:</i>
	1. <i>Critically read Marin-Spiotta (2018) Harassment should count as scientific misconduct. Nature 557:141</i>
	2. <i>Fact finding: Is harassment a problem in academia?</i>
Mon 5 th Oct	7. Authorship on Publications
Wedn 7 th Oct	8. Journal choice: Traditional, Open-access, Predatory
	<i>Task:</i>
	<i>Critically read Bowman (2014) Predatory publishing, questionable peer review, and fraudulent conferences. Am. J. Pharm Educ 78: Article 176</i>
Mon 12 th Oct	9. Peer Review
Wedn 14 th Oct	10. Round Table Discussion
	<i>Task:</i>
	<i>Each student prepares one scenario on a questionable research /publication practice for discussion in class. Case studies are e-mailed to the instructor before the start of class.</i>

Learning outcomes:

By the end of the course, the students will have learned:

- What is expected of a graduate student, and what a graduate student should expect from their Faculty mentor
- How to manage the data they generate and what happens with the data when they leave UGA. Proper record keeping is crucial to scientific research, and it is

important for legal reasons. We will discuss the best way to keep records, and the policies regarding lab notebooks, electronic data and other data when students graduate.

- What constitutes research misconduct, specifically plagiarism, data falsification, data fabrication and harassment.
- How to report suspected cases of research misconduct, and what happens after a report of research misconduct has been made.
- What are acceptable publication practices (for example, can the work reported in a conference paper be submitted to a peer-reviewed journal; is it acceptable to publish incremental amounts of research).
- What contributions earn co-authorship on a publication. Criteria applied can vary in different countries/cultures, and the US guidelines will be discussed.
- The importance of journal choice in communicating scientific results.