

## **Ethical Scientific Conduct (Spring 2022)**

- SGS Course No. 16:115:556
  - [Registration form](#) for those who are not graduate students
- (Please complete and return this form to Tina Marottoli in the SGS office – New Brunswick/Piscataway, [tina.marottoli@rutgers.edu](mailto:tina.marottoli@rutgers.edu))

The class will be held synchronously via Zoom. The Zoom for each week will be: <https://rutgers.zoom.us/my/alderja> Passcode: Janet  
Phone only dial +1 646 558 8656 Meeting ID: 419 868 7830

This course discusses the definitions and ethical problems caused by fabrication of data, falsification of results, plagiarism, and other behaviors inconsistent with ethical scientific conduct.

**Participants:** This course is required for all SGS Biomedical PhD students and Masters of Science in Biomedical Sciences students. The course complies with NIH guidelines for RCR training. Students will receive 1 credit for successfully completing the course. Postdoctoral fellows as well as F33 and K award recipients are invited to participate in the course and will receive a certificate of completion after attendance at a minimum of eleven one-hour weekly meetings. Students in their 5<sup>th</sup> year graduate school must take a refresher training course (16:115:558).

### **Course Objectives:**

1. To describe the relationship and responsibilities in the compact between mentor and mentee
2. To identify cases of plagiarism and copyright infringement
3. To explain proper methods for data acquisition and laboratory book maintenance
4. To describe policies for handling research misconduct
5. To explain how authorship should be decided and how publications should be prepared
6. To describe situations of professional or financial conflict of interest and how to handle them
7. To identify cases of inappropriate behavior between individuals and how to act as responsible member of society
8. To explain the relationship between academia and industry
9. To explain appropriate methods for peer review of manuscripts and grant proposals
10. To describe policies for the use of animals in research
11. To describe policies for including human subjects in studies
12. To describe some of the environmental and societal impacts of scientific research
13. To identify cases that involve intellectual property and technology transfer and the approach for dealing with these situations

**Course Format and Location:** The course meets via Zoom on Mondays from 4:00-5:00pm starting January 24, 2022. The format of the course will generally consist of lecture by a content expert from 4:00-4:30pm followed by small group case discussions

from 4:30-5:00pm in breakout rooms. Students are expected to attend both the lecture and the small group discussion for each topic. There are a couple of weeks in which the lecture will take the whole time and there will be no small groups. A detailed syllabus is provided on this Canvas site.

**Zoom Details:** Students are expected to have the most current desktop version of Zoom downloaded on their computers and sign into their Rutgers Zoom account when joining the class. Students are expected to have their video on and unmute to participate actively in case discussion. The link to the Zoom will be the same each week

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**Small Group Assignments:** Students are expected to attend both the lecture and the small group discussion for each topic. The students will stay in the same groups each week. The faculty facilitating the small group discussions will vary from week to week. The detailed list of student and faculty assignments can be found in a separate attachment on this Canvas site.

**Course Materials:** Each lecturer will post his/her slides and cases prior to the lecture. These can be found on the Canvas site under “Files”. **You are responsible for accessing the assigned case and other material.**

Some of the cases for the course come from:

Korenman, SG and Shipp, AC, Eds. Teaching Responsible Conduct of Research Through A Case Study Approach: A Handbook for Instructors. Washington, DC: Association of American Medical Colleges, 1994.

National Academy of Sciences, National Academy of Engineering, Institute of Medicine On Being a Scientist: A Guide to Responsible Conduct in Research, Third Edition. Washington, DC: The National Academy Press, 2009.

Macrina, FL Scientific Integrity, 3<sup>rd</sup> Edition. Washington, DC: ASM Press, 2005.

Students are not expected to obtain these books.

Another resource is “The Lab, Avoiding Research Misconduct” prepared by the Office of Research Integrity of the Department of Health and Human Services which is an interactive movie that allows the viewer to chose the outcome of the film based on ethical decisions facing the four characters. The movie can be accessed online at <http://ori.hhs.gov/The Lab>.

Webinars on Scientific Rigor and Reproducibility are found here  
<http://neuronline.sfn.org/tmedr>  
<https://www.nih.gov/research-training/rigor-reproducibility/training#Modules>

**Grading Policy and Weekly Assignments:** This course is graded P/F, with attendance as well as weekly written assignments required.

Students must be present and signed in to be graded as present. Students are expected to be present for the entire class period for each session attended. It is expected that students will access the case studies and actively participate in discussions. Weekly written assignments will be posted on Canvas the day of the lecture (Monday) and will be due by 4pm on the following Monday. The assignment will consist of an open-ended question related to the topic that week and requires a one-paragraph response. There will be several choices to select among for the written assignment but only ONE response is required per week. Students are required to complete a minimum of 11 of the 13 weekly assignments. The assignments are required but not assigned a letter grade. Written assignments should be uploaded to Canvas from a Word document. Students agree that by taking this course all required papers may be subject to submission for textual similarity review to [Turnitin.com](https://turnitin.com) via Canvas for the detection of plagiarism. All submitted papers will be included as source documents in the [Turnitin.com](https://turnitin.com) reference database solely for the purpose of detecting plagiarism of such papers. Use of the [Turnitin.com](https://turnitin.com) service is subject to the Usage Policy posted on the [Turnitin.com](https://turnitin.com) site. Students who do not agree should contact the course instructor immediately.

Those missing 3 or more sessions and/or 3 or more written assignments will receive a grade of Incomplete (“IN”). Note that there is no such thing as an excused absence. Incomplete grades must be remediated. Failure to remediate results in grades of IN be changed to F.

**Attendance:** Attendance (required to pass the course) will be taken each week. Each student attending must sign the class roster to document attendance.

Note: This is a course on Ethical Scientific Conduct. Any student signing for another or otherwise misrepresenting facts on the attendance sheet will be subject to disciplinary action, which can include dismissal from the university. We look forward to your active participation.

**Students with Disabilities:** Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation:

<https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

**Academic Integrity:** All students are responsible for locating, reading, and abiding by the University Policy on Academic Integrity for Graduate Students. The policy is available on-line at <https://grad.rutgers.edu/sites/default/files/2021-07/10.2.13%20-%20current.pdf> and is outlined on the SGS website. <https://grad.rutgers.edu/sites/default/files/2021-07/academic-integrity.pdf>

**Course Director:**

Janet Alder, Ph.D.

Associate Professor and Assistant Dean, School of Graduate Studies, New Brunswick/Piscataway Division

[janet.alder@rutgers.edu](mailto:janet.alder@rutgers.edu)

732-235-5392

Dr. Alder is available throughout the week. Please call or email to make an appointment.

**Course Faculty:** The large group lecture is conducted by an expert in the field who is affiliated with Rutgers University. The small groups are facilitated by Rutgers faculty actively conducting research who represent each of the joint graduate programs.

**Course schedule for Spring 2022:**

4:00-5:00 pm

- January 24 Mentor-Mentee Responsibilities and Relationships (Dr. Janet Alder, [janet.alder@rutgers.edu](mailto:janet.alder@rutgers.edu)) and Why Study Scientific Ethics (Troy Shinbrot, [shinbrot@soe.rutgers.edu](mailto:shinbrot@soe.rutgers.edu)). **Case discussion as full class. No small groups.**
- January 31 Data Acquisition and Laboratory Tools: Management, Sharing and Ownership (Joel Freundlich, [freundjs@njms.rutgers.edu](mailto:freundjs@njms.rutgers.edu))
- February 7 Research Misconduct and Policies for Handling Misconduct (Celine Gelinace, [gelinace@rwjms.rutgers.edu](mailto:gelinace@rwjms.rutgers.edu))
- February 14 Plagiarism, Academic Rules, Copyright (Yingting Zhang, [yzhang@ca.rutgers.edu](mailto:yzhang@ca.rutgers.edu))
- February 21 Responsible Authorship and Publication (Gary Aston-Jones ([gsa35@ca.rutgers.edu](mailto:gsa35@ca.rutgers.edu)))
- February 28 Peer Review (Dr. Carol Lutz, [lutzcs@njms.rutgers.edu](mailto:lutzcs@njms.rutgers.edu))
- March 7 Conflict of Interest – Personal, Professional, and Financial (Judy Neubauer, [neubauer@rwjms.rutgers.edu](mailto:neubauer@rwjms.rutgers.edu))
- March 14 Spring Break – No class
- March 21 Scientist as Responsible Member of Society (Carolyn Dellatore, [cdellato@hr.rutgers.edu](mailto:cdellato@hr.rutgers.edu))
- March 28 Collaborative Research in Academia and Industry (Vince Smeraglia [vincent.smeraglia@rutgers.edu](mailto:vincent.smeraglia@rutgers.edu))

- April 4 Contemporary Ethical Issues in Biomedical Research (Anthony Gresko, [Anthony.Gresko@pfizer.com](mailto:Anthony.Gresko@pfizer.com))
- April 11 Environmental and Society Impacts of Scientific Research (Jessica McCormick-Ell [mccormickjm@mac.com](mailto:mccormickjm@mac.com))
- April 18 No class
- April 25 Policies for Human Subjects in Research (Michelle Watkinson [michelle.watkinson@research.rutgers.edu](mailto:michelle.watkinson@research.rutgers.edu))
- May 2 Policies for Animal Subjects in Research (David Crockett, [crockett@rwjms.rutgers.edu](mailto:crockett@rwjms.rutgers.edu))