Course Description: The course is intended to provide students and postdocs with a forum for discussion of various aspects relevant to their careers here at NYU as their future careers as responsible science professionals. The class will meet once per week on Friday for approximately two hours (often less), covering topics ranging from ethics in scientific publication to safety to federal grant policies to teaching undergraduates. Questions and discussion are strongly encouraged.

Course Web Site: See NYU CLASSES for course details

Lectures: Friday 1:00 PM – 3:00 PM

Location: Location: GCASL_279

Instructor: Michael D. Ward (MDI laboratories, Brown 554, mdw3@nyu.edu)

Textbook: None

Reading Material: We will rely on material in the literature, case studies, and other public domain sources, as well as NYU content related to the training of graduate students and Responsible Conduct in Research (RCR). Material will be made available on the CLASSES site for the course.

Enrollment: First-year Chemistry graduate students and new postdoctoral research associates.

Grading: There will be no graded assignments or examinations. Students are expected to review all reading material provided by the instructor and participate actively in the discussion of all topics. Students are encouraged to bring relevant material to class and participate actively in class. New postdocs are required to attend the RCR sessions, and are invited to attend other sessions and offer advice to graduate students from their experiences.

Absences: Attendance is MANDATORY for all Department of Chemistry first-year graduate students, including NYU Abu Dhabi and NYU Shanghai students. Students and Postdocs must sign the attendance audit sheet, which is needed for RCR certification, at the beginning of each class. Graduate students missing more than two sessions without a documented and justifiable reason will fail the course. Postdocs and graduate students missing more than two RCR sessions will be required to complete the University RCR certification, regardless of the reasons for the absences.

IMPORTANT: Please arrive on time for the course. Many sessions will be presented by guest speakers, and it is rude to arrive late.
Course Objectives

The course is intended to provide students and postdocs with a forum for discussion of various aspects relevant to their careers here at NYU as well as their future careers as responsible science professionals, while offering basic training in Responsible Conduct in Research (RCR) and scientific integrity. The contents of this course fulfill the RCR requirements mandated by NYU and the Federal government so that graduate students and postdoctoral research associates are permitted to conduct research when supported on Federal grants. Graduate students will receive an RCR certificate on September 1 of the following academic year, after completion of their first summer research term. Postdocs will receive an RCR certificate immediately following the course.

NOTES

(1) Because the course schedule includes guest speakers, last-minute changes to the schedule are possible. Notifications will be sent to all students through the CLASSES site.

(2) Graduate students, including NYU Abu Dhabi and NYU Shanghai students, are expect to attend ALL sessions.

(3) Classes required for Responsible Conduct in Research Certification are indicated by (R). ALL graduate students, including NYU Abu Dhabi and NYU Shanghai students, and recently arrived postdocs must attend the RCR sessions to receive certification, which is required for financial support through federal grants.

(4) Graduate students are encouraged to attend career workshops (often with pizza!) that will be scheduled in evening hours throughout the semester, usually with the Department of Chemistry Chemists Club Chapter. Events are updated regularly at www.thechemistsclub.org. Postdocs also are invited to these events.

SCHEDULE OF TOPICS

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic (R = RCR approved and required)</th>
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<tbody>
<tr>
<td>September 6 (R)</td>
<td><strong>Course Overview and Responsible Conduct in Research.</strong> Why do we offer this course and what will we do? Facilitator: Mike Ward</td>
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<td>September 13</td>
<td><strong>Research Fellowships and Proposals.</strong> A Roundtable on fellowship and grant opportunities with Department NSF Fellows, including a discussion of developing competitive scientific proposals, from the conception of the idea to anticipating unexpected results. Formulating objectives and hypotheses, articulating significance, and developing a research plan. If time permits, a discussion about responsibilities, credit, and authorship in collaborative research from the student perspective. Guest Speakers: NSF Fellows Cicely Shillingford, Jordan Hosfelt.</td>
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<td>September 20</td>
<td><strong>Safety in research and instructional laboratories.</strong> Discussion of the safety aspects of conducting and leading chemical experiments in the research and instructional laboratories. Protective equipment and emergency response procedures. University policies and resources for the safety training of research personnel. This session is intended to better prepare graduate students for research rotations and thesis research, as well as introduce new postdocs to safety practices in the Department. Guest Speaker: Keegan Garcia, Department of Chemistry Director of Research Laboratories.</td>
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September 27 (R)  **Federal funding.** Principles of federal grants. A general overview of the federal agencies and the mechanisms used to support scientific research. Rules governing grant writing and the policies regulating the use of federal funds in laboratory research. Round Table on Guest Speakers: Ms. Nancy Daneau, NYU Office of Sponsored Projects, Mr. Nicholas Reed, Grants Administrator, Department of Chemistry.

October 4 (R)  **Publication and peer review (or not).** The importance of disseminating your research, in scientific journals and other venues. Manuscript preparation and an overview of the editorial process and what happens to a manuscript after it is submitted. A general description of the publication and peer review process, as well as the ethical responsibilities of all parties involved. Emerging alternative mechanisms for publishing scientific results also will be discussed, ranging from open access journals to social media. **Facilitator:** Mike Ward

October 11 (R)  **Scientific integrity and misconduct I: Pathological Science vs. Fraud.** Pathological Science vs. intentional falsification and fabrication. Procedures for handling allegations of scientific misconduct. Case studies and ramifications of misconduct. Recognizing conflicts of interest. Data management, and Federal policies on retention of and access to research data. **Facilitator:** Mike Ward

October 18 (R)  **Responding to Sexual Misconduct and Complying with Title IX.** This course will provide an overview of NYU policy and procedures with respect to responding to allegations of sexual misconduct, relationship violence, and stalking. Participants will also learn about Title IX and related federal/state laws. Additionally, participants will learn about University requirements for reporting such allegations, as well as various resources available both on and off campus. **Guest Speaker:** Lauren Stabile, *Office of Equal Opportunity*.

October 25  **TBA**

November 1  **Responding to students in distress.** Recognizing stress in students and dealing with difficult situations, including a discussion about roles and responsibilities of instructors and students, as well as instructor-student boundaries. **Guest Speaker:** Zoe Ragouzeos, Ph.D., LCSW, Executive Director, Counseling and Wellness Services, SHC.

November 8 (R)  **Scientific integrity and misconduct II: Plagiarism.** What is plagiarism, "the scourge" of academia, and why is it an unethical practice? How does it differ from copyright infringement and theft? What are the consequences of this most prevalent form of academic dishonesty, rather than data fabrication or falsification, in the scientific community? Procedures for handling allegations of plagiarism in the classroom. **Guest Speaker:** Audrey Wolfson Latourette, Distinguished Professor of Business Law, Stockton University.

November 15 (R)  **Scientific integrity and misconduct III: Fraud.** Ethical behavior in scientific research, focusing on examples of scientific integrity and fraud. **Guest Speaker:** Ivan Oransky, NYU School of Journalism, Author of Retraction Watch ([http://retractionwatch.com](http://retractionwatch.com)).
November 22  NO CLASS

November 29  THANKSGIVING RECESS

December 6  Teaching General and Organic Chemistry. An overview of the structure and operation of the General and Organic Chemistry laboratory courses, instructional resources available, and how to communicate, teach and manage large groups of students in a laboratory setting safely and effectively, with attention on issues peculiar to second-year students enrolled in a course often viewed as a gateway. Preparing and handling quizzes and homework, recognizing stress in students and dealing with difficult situations, including a discussion about roles and responsibilities of instructors and students, as well as instructor-student boundaries. Guest Speakers: Dr. John Henssler, Dr. Zhihua An, Department of Chemistry.

December 13  NO CLASS

EVENING CAREER SESSIONS with the Chemists Club
Times and Locations to be announced

Some resources (more to be added during the course and made available on CLASSES)

- DHHS Office of Research Integrity (http://ori.hhs.gov/)
- ‘The lab’ interactive movie on research misconduct (http://ori.hhs.gov/thelab)
- Website companion (http://www.scientificintegrity.net/)
- NSF Graduate Research Fellowship Program (https://www.nsfgrfp.org)
- NIH training grants (https://researchtraining.nih.gov/programs/training-grants)
- Retraction Watch (http://retractionwatch.com/)

Academic Dishonesty
This is not as relevant to this course as a more conventional one, but most of you are new to NYU and you should be aware of key policies and guidelines pertaining to academic honesty, which pertain to your own academic studies as well as undergraduates you may be teaching. Academic dishonesty is incompatible with the practice of science or any profession. If evidence of dishonesty is found, the policy of the Graduate School of Arts and Sciences will be followed. This includes any form of plagiarism, copying, collusion or cheating during an examination of any kind. All such cases are reported to the Director of Graduate Studies. University policy states: “Students who engage in such behavior will be subject to review and the possible imposition of penalties in accordance with the standards, practices, and procedures of NYU and its colleges and schools. Violations may result in failure on a particular assignment, failure in a course, suspension or expulsion from the University, or other penalties.” If suspended or expelled from the University, a notation will be made on your record as to the cause. A
notation is very SERIOUS, as it could translate to a barring of entry to a professional school of any kind, e.g. medical school, graduate school and, possibly, difficulty in landing a job.

**Disabilities**
Students with Disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic accommodation. It is the policy of NYU to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Center for Students with Disabilities (CSD) (mosescsd@nyu.edu) as soon as possible. Any student who needs a reasonable accommodation based on a qualified disability is required to register with the CSD for assistance. CSD will send the course instructors official notification of your accommodation needs. Please make an appointment with the instructor to discuss the accommodations and how course requirements and activities may impact your ability to fully participate.

**Classroom Etiquette**
Courteous and civil behavior is expected and anything apart from that will not be condoned. A university exists for the free but critical exploration of ideas and developing understanding of a myriad of topics. This can only be achieved through respect for the institution itself and among the scholars that comprise it. Anything other than polite (which does not exclude passionate or spirited debate) behavior is inexcusable. The fundamental rule is simple: Be considerate of others in the classroom.

- No foods, soft drinks (water is OK), etc. are allowed in the classroom. No food or water is allowed in the laboratory (see the laboratory syllabus for more details).
- Gum and (need I say this) tobacco chewing is prohibited.
- Any distraction to others, such as conversation, electronic devices, etc. is not acceptable.
- Unless otherwise allowed by the instructor, **NO CELL PHONES OR LAPTOPS** are permitted in this class unless instructed otherwise by the course instructor. **Please silence and store your cell phones before class.** This is especially important in this course as many sessions will be presented by guest lecturers *pro bono*, and using your cell phone is considered rude. If your cell phone makes a disturbance, you will be asked to leave the class and you will lose attendance credit.