

## SCHEDULE AND READING ASSIGNMENTS

### Chemistry 8066, Spring Semester 2016

#### Professional Conduct of Chemical Research

January 19–February 23, 2016, Tuesdays, 4:40–5:55 pm, 331 Smith

#### Instructor: Donald G. Truhlar

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Office hours: stop in any time

Preferred method of contact:

in person, unless directed otherwise or where in-person is not practical

TA: none

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#### Class 1: Tuesday, January 19, 2016, 4:40 pm - 5:55 pm

##### Class organization day

Presented by instructor (D. G. Truhlar)

Presentation of schedule

Presentation of syllabus

Presentation of reading assignments

Assignment of teams for classes 4-7

Questions

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#### Class 2: Tuesday, January 26, 2016, 4:40 pm - 4:45 pm - 5:55 pm

##### Topic: Industrial perspective

Guest lecturer: Nathan Schultz, PhD, 3M Center, St. Paul

Required reading for week 2 (not directly related to the week 2 lecture, but central to the whole course):

“On Being a Scientist: A Guide to Responsible Conduct in Research,” 3rd ed., Committee on Science, Engineering, and Public Policy of the National Academy of Sciences, National Academy of Engineering, and Institute of Medicine of the National Academies (The National Academies Press, Washington, DC 2009).

To download a free copy, go to:

[www.nap.edu/catalog.php?record\\_id=12192#toc](http://www.nap.edu/catalog.php?record_id=12192#toc)

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**Class 3: Tuesday, February 2, 2016, 4:40 pm-4:40 pm - 5:55 pm (Groundhog Day)****Topic: Professional issues around copyright**

Guest lecturer: Nancy Sims, JD, Copyright Program Librarian, University of Minnesota

Required reading before class 3 (not necessarily related to the guest lecture but important background reading selected by the instructor):

"The 'Fair Use' Rule: When Use of Copyrighted Material is Acceptable," Nolo,  
<http://www.nolo.com/legal-encyclopedia/fair-use-rule-copyright-material-30100.html>

"Frequently Asked Questions About Copyright," American Chemical Society Joint Board, Council Committee on Publications, Subcommittee on Copyright  
[http://pubs.acs.org/page/copyright/learning\\_module/module.html](http://pubs.acs.org/page/copyright/learning_module/module.html)

"Licenses, Copyrights, and Permissions," Royal Society of Chemistry,  
[http://comp.chem.umn.edu/courses/RSC\\_Licenses.pdf](http://comp.chem.umn.edu/courses/RSC_Licenses.pdf)

"ECopyright Form – AIP Publishing," American Institute of Physics  
[http://comp.chem.umn.edu/courses/AIP\\_Copyright.pdf](http://comp.chem.umn.edu/courses/AIP_Copyright.pdf)

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**Class 4: Tuesday, February 9, 2016, 4:40 pm - 4:40 pm - 5:55 pm****Topics: Publication guidelines, publication ethics and responsibilities**

Discussion leaders: from the class

**4a. Professional conduct and ethics for journal editors and peer reviewers**

Required reading:

<pubs.acs.org/userimages/ContentEditor/1218054468605/ethics.pdf> - parts A, C

Required viewing:

[https://www.youtube.com/watch?v=E13mWgsp\\_og](https://www.youtube.com/watch?v=E13mWgsp_og)

**4b. Professional conduct and ethics for authors**

Required reading:

<pubs.acs.org/userimages/ContentEditor/1218054468605/ethics.pdf> - parts B, D

<pubs.acs.org/page/policy/ethics/index.html>

Required viewing:

[www.youtube.com/watch?v=yny\\_gcvTjv4#t=15](http://www.youtube.com/watch?v=yny_gcvTjv4#t=15)

**4c. A more detailed look at plagiarism**

Required reading:

"ORI Policy on Plagiarism," The Office of Research Integrity of the Secretary of Health and Human Services

[ori.hhs.gov/ori-policy-plagiarism](http://ori.hhs.gov/ori-policy-plagiarism)

"Avoiding plagiarism, self-plagiarism, and other questionable writing practices: A guide to ethical writing," M. Roig,

[ori.hhs.gov/sites/default/files/plagiarism.pdf](http://ori.hhs.gov/sites/default/files/plagiarism.pdf)

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**Class 5: Tuesday, February 16, 2016, 4:40 pm -4:40 pm - 5:55 pm**

**Topic: Adviser/advisee/group relationships; data backup and data sharing; safety**

Discussion leaders: from the class

5a. Adviser/advisee / group relationships

Required reading: chapter 5 at

"How to Get the Mentoring You Want," Rackham School of Graduate Studies, University of Michigan,

[www.sph.umich.edu/students/current/HowtogetthementoringYouWant.pdf](http://www.sph.umich.edu/students/current/HowtogetthementoringYouWant.pdf)

"Rules of etiquette and professional conduct for group meetings,"

[comp.chem.umn.edu/courses/GroupMeetings.pdf](http://comp.chem.umn.edu/courses/GroupMeetings.pdf)

5b. Sharing data and results; backing up data; storage and security of records; data ownership

Required reading:

"Chapter 6: Data Management Practices," The Office of Research Integrity of the Secretary of Health and Human Services

[ori.hhs.gov/ori-introduction-responsible-conduct-research](http://ori.hhs.gov/ori-introduction-responsible-conduct-research)

"Advice to PIs on Data Management Plans," Directorate of Mathematical and Physical Sciences Division of Chemistry, National Science foundation

[www.nsf.gov/bfa/dias/policy/dmpdocs/che.pdf](http://www.nsf.gov/bfa/dias/policy/dmpdocs/che.pdf)

5c. Safety

Required watching: at least two of the videos at:

[chemistry.rice.edu/uploadedFiles/Chemistry/Research/Dow%20Safety%20Video%20C hecklist\\_w\\_links.pdf](http://chemistry.rice.edu/uploadedFiles/Chemistry/Research/Dow%20Safety%20Video%20C hecklist_w_links.pdf)

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**Class 6: Tuesday, Feb. 23, 2016, 4:40 pm - 4:40 pm - 5:55 pm**

**Topics: Conflicts; scientific misconduct**

Discussion leaders: from the class

6a. Conflict of interest; personal and intellectual conflicts; conflict of commitment

Required reading:

"Chapter 5. Conflicts of Interest," The Office of Research Integrity of the Secretary of Health and Human Services

[ori.hhs.gov/ori-introduction-responsible-conduct-research](http://ori.hhs.gov/ori-introduction-responsible-conduct-research)

"4. Conflicts of Commitment and Interest" in :Relationships Between Students (Including Postdoctoral Scholars)," Senate of the Academic Council, Stanford University,

<https://doresearch.stanford.edu/policies/research-policy-handbook/non-faculty-research-appointments/relationships-between-students>

"Deeper Ties to Corporate Cash for a Doubtful Climate Scientist," J. Gillis And John Schwartz, New York Times, Feb. 21, 2015

[http://www.nytimes.com/2015/02/22/us/ties-to-corporate-cash-for-climate-change-researcher-Wei-Hock-Soon.html?\\_r=0](http://www.nytimes.com/2015/02/22/us/ties-to-corporate-cash-for-climate-change-researcher-Wei-Hock-Soon.html?_r=0)

6b. Fabrication, falsification, fraud, whistleblowing

Required reading:

"Honor in Science," Sigma Xi,

<https://www.sigmaxi.org/docs/default-source/Programs-Documents/Ethics-and-Research/free-pdf.pdf?sfvrsn=2>

6c. Filling out the class evaluation and feedback forms

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**End of course**