

SYLLABUS

Chemistry 8066, Spring Semester 2016

Professional Conduct of Chemical Research

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

331 Smith

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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

Prerequisite

Graduate student in Chemistry, Chemical Physics, Medicinal Chemistry, or Scientific Computation or permission of instructor

Description and scope of the course

Chem 8066 is a one-credit course required for all Chemistry graduate students. This course is designed to provide training on ethical issues and professional conduct in scientific research. Topics that will be covered include: professional issues surrounding copyright, publication ethics, publication responsibilities, communication of results, peer review, adviser/advisee relationships, conflicts, scientific misconduct, and an industrial perspective.

Each lecture will have required readings as indicated in a separate document entitled *Schedule and Reading Assignments*. This is handed out at the first class and posted at

<http://comp.chem.umn.edu/truhlar/index.htm#courses>

In a few cases one of the required "readings" is actually an online video.

There will be two types of class periods:

- (i) guest lectures, followed by questions and class discussion;

- (ii) presentations on the subjects of the readings by a team of class members, followed by questions and class discussion.

Grading

S/N only

Attendance at lectures 2–6: 8 points each	40 points
Required readings for weeks 2–6 (done before the class): 8 points each	40 points
Team participation	20 points

S: 94-100

N: 93 or less

Team presentations

There will be three team presentations in each of weeks 4 and 5 and two in week 6 for a total of eight team presentations. Team assignments for team presentations will be done in the first class period.

Each presentation is scheduled for 24 minutes to be divided approximately as follows:

Presentation: 7-10 minutes

Discussion and questions: 12-15 minutes

Wrap-up and changeover to next presentation group: 2 minutes

Team presentations are a team effort; all members of the team should contribute to the planning and developing the presentation and discussion topics. One team member should be selected to make the presentation, typically using PowerPoint slides or a similar presentation format. One or more other team members should be chosen to lead the discussion.

The presentation and discussion should focus on the subject of the required reading and may include both review of material in the readings and related material from other sources that enhances or complements the readings.

The discussion should include discussion topics raised by the presentation team as well as participation and questions by the rest of the class; presentation teams are especially encouraged to bring up case studies, real or hypothetical, if that is appropriate to the material being covered. The team may wish to coordinate the presentation and discussion so that items to be brought forth prominently in the discussion are introduced or reviewed in the presentation.

Some possible case studies for discussion may be found at:

www.acs.org/content/acs/en/about/governance/committees/ethics/ethics-case-studies.html

www.aps.org/programs/education/ethics/upload/Ethics-Case-Studies-Teacher-

[Edition.pdf](#)
advan.physiology.org/content/29/2/59
www.niehs.nih.gov/research/resources/bioethics/whatis/

However, there is considerable leeway in case studies, and they may also be taken from other sources (with or without modifications) or proposed as original cases.

Class participation

All students are encouraged to participate in class discussion in every class.

Reading

The required reading for each week should be completed before that week's class. This is important to ensure full benefit from the presentations and discussion.

Attendance sheets

An attendance sheet will be circulated in each class. Students should indicate either

- Satisfactory: present and reading completed before the class began (S)

or

- Present: present but reading not completed before the class began (X)

Make-up essays

Students who *miss a class* with an excused absence may make up this absence by handing in a 700-word essay on the subjects of that class period, based on the required readings. These essays are due at the beginning of the next class (for the last class, they are due one week later).

Students who *do not complete the required readings prior to that week's class* may make up for the late reading assignments by handing in a 350-word essay on the reading material of that class. These essays are due at the beginning of the next class (for the last class, they are due one week later).

All essays should be printed on a printer (no handwriting) with the name of the student and the date at the top of the first page.

Students with Disabilities

Students with disabilities that affect their ability to participate fully in class or to meet all course requirements can arrange reasonable accommodations through the Office of Disability Services (612-626-1333). Students who have concerns about disabilities should contact this office within the first week of class.

Academic Dishonesty

Scholastic dishonesty is discussed under the Institute of Technology's scholastic policies. According to the CLA Classroom Grading and Examination Procedures, scholastic dishonesty is defined as "any act by a student which misrepresents the student's own academic work or that compromises the academic work of another. Scholastic dishonesty includes (but is not necessarily limited to) cheating on assignments or examinations; plagiarizing, i.e. misrepresenting as one's own work any work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another of necessary course materials; or sabotaging another's work."