

CHMY 305e: Ethics, Science Writing, and Chemistry Literature – Fall 2016

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Lectures Tuesday/Thursday 12:30-1:50 pm

Office hours M/F Chem013, 11:00-noon or appointment. If not in office, we can be reached by email.

Course Website: <https://moodle.umt.edu/>

Course Description

CHMY 305e – Ethics, Science Writing, and Chemistry Literature – is an upper-division writing course and a general education course, Group VIII: Ethical and Human Values.

Learning Objectives

- Appreciation of three major Western ethical traditions (virtue, deontological, and utilitarian ethics)
- Practice of ethics in scientific research, discourse and writing
- Conveying scientific information in different formats to different audiences
- Effective use of library and internet databases
- Effective writing skills for a profession in the sciences

Course Content

- **In-class work**
 - We will work as a team and in small groups to practice skills of organization, development, language use, and style required for high-quality scientific writing.

- **Out-of-class work:**

Reading: Read assigned portions of the required textbooks and other material **before** class. These readings will inform the lecture topics, discussions, and writing assignments.

Writing: There are four major assignments:

- 1 Write a short guide on use of a laboratory instrument. (Lab Guide)
- 2 Prepare a résumé and cover letter for a job application. (Résumé & Cover Letter)
- 3 Write an analysis of an ethical violation in science (Ethics Violation Essay)
- 4 Research a current public issue involving science. Write two three-page essays: first, write a persuasion essay to convince your peers about your view; second rewrite the persuasion essay for the general public. (Persuasion Essay)

Textbooks

- Michael J. Sandel, “Justice: What’s the Right Thing to Do?”, Farrar, Straus, and Giroux, NY, 2010.
- “The ACS Style Guide. Effective Communication of Scientific Information”, 3rd ed., Coghill and Garson, eds., American Chemical Society, 2006.

Course Materials

- Assignments and other material will be posted on Moodle.
- Online lecture at <https://www.youtube.com/watch?v=kBdfcR-8hEY> by Michael J. Sandel, Dept. of Government, Harvard University.
- Read sections 1 and 2, including case study and questions, from “Free Research Ethics Online Course” at: <http://www.umt.edu/ethics/courses/researchethics/default.php>
- Read “What is Ethics in Research & Why is it Important?” at: <http://www.niehs.nih.gov/research/resources/bioethics/whatis/>

The Writing Center / Sidecar

Final Assemble a technical portfolio consisting of your written work for the semester.

Attendance

1. Make every effort to attend each class because lectures, in-class exercises, discussions and guest lectures are all arranged to enhance your skills. Missing classes is likely to adversely affect your ability to progress through the assignments. This, in turn, can affect your grade negatively.
2. Contact Dr. Ross or Dr. Arouca prior to missing a class or immediately after an illness.
3. Each student will meet with Dr. Ross or Dr. Arouca by appointment during the weeks of October 3 and November 14 to review progress in the course.

Evaluation

1. In-class evaluation will be based on:
 - a. class participation
 - b. participation in the writing and library workshops
 - c. quiz
2. Out-of-class work will be judged by:
 - a. ability to improve each draft
 - b. improvement in all writing skills over the course of the semester
 - c. incorporation of appropriate ethics discussion in Ethics Violation Essay and Persuasion Essay
 - d. portfolio

Disability

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and [Disability Services for Students](#). If you think you may have a disability that can affect your academic performance adversely, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154, (406)-243-2243. We will work with you and Disability Services to provide appropriate accommodation.

Legal Notice

This syllabus is not a contract; it is an outline of course policies, requirements, and initial schedule. Changes may be made during the semester at the discretion of Dr. Ross.

Academic Misconduct

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by a course instructor and/or disciplinary sanction by the University. All students must be familiar with the conduct code: http://www.umt.edu/vpsa/policies/student_conduct.php.

CHMY305E – Fall 16 Schedule

1		In class and out-of-class Assignments					
Week	Date	Topic	Preparation/ Reading	Given	Due on Moodle	Sidecar	Due to instructor
1	T Aug. 30	Introduction	ACS: pp. vii-viii, 27-58, 105-128, 135-162, ISD	Lab Guide, MAO paper			
	R Sept. 1	B. Brown: science databases	class in MLSLC				
2	T Sept 6	B. Brown: science databases	class in MLSLC		Lab Guide @ 10 AM		
	R Sept. 8	J. Hansen: Writing center, analysis of lab instruction guides, orientation to Sidecar process	ACS: pp. 203-249, 255-283, 287-327, 343-374.		Homework: Anatomy of MAO paper		
3	T Sept. 13	J. Burham: Career Services, résumés and cover letters		Résumés & Cover Letters			Lab Guide
	R Sept. 15	online lecture by Sandel	Sandel, chap. 1, lecture on Moodle	Homework: Thoughts on Trolley scenarios			
4	T Sept. 20	Editing, exercises, quiz, in-class write abstract for assigned paper			R & CL		
	R Sept. 22	Utilitarianism	Sandel, chap. 2	Ethics Violation Essay			Homework
5	T Sept. 27	Utilitarianism / Sidecar 1	Sandel, chap. 2			R & CL	
	R Sept. 29	Deontology	Sandel, chap. 5				
6	T Oct. 4	Deontology	Sandel, chap. 5				R & CL
	R Oct. 6	Virtue ethics	Sandel, chap. 8				
7	T Oct. 11	Virtue ethics	Sandel, chap. 8				
	R Oct. 13	Ethics in Science	Handout				
8	T Oct. 18	Practical Ethics	See Moodle resources		E V draft 1 @ 10 AM		
	R Oct. 20	Review session	Your notes from class				
9	T Oct. 25	Sidecar 2: Ethics assignment				E V draft 1	
	R Oct. 27	Basics of peer-review process	See Moodle resources				
10	T Nov. 1	N. White: public writing					E V Draft 2
	R Nov. 3	Independent Research			Persuasion Essay topics		
11	T Nov. 8	Election Day					
	R Nov. 10	SciFinder Scholar	class in MLSLC				
12	T Nov. 15	Independent Research	class in MLSLC		P E draft 1 @ 3 PM		
	R Nov. 17	Sidecar 3: Persuasion Essay				P E draft 1	
13	T Nov. 22	H. Steele: Presentation Zen					P E Draft 1
	R Nov. 24	Thanksgiving Break					
14	T Nov. 29	J. Kyle: patents			P E draft 2 @ 10 AM		
	R Dec. 1	Sidecar 4: Persuasion Essay				P E draft 2	
15	T Dec. 6	A. Holián: grant writing					
	R Dec. 8	Student Presentations					
Final	R Dec. 15	Student Presentations	Class meets 10:10 am to 12:10 pm	Portfolio Due (including Persuasion Essay Final)			

Invited Experts

Dr. Orion Berryman, Department of Chemistry & Biochemistry
SciFinder Scholar

Dr. Barry N. Brown, Mansfield Library
Reference management, citation indexes, and comprehensive science literature searches

Jon Burham, MA, Career Counselor, Career Services
Preparing a résumé and cover letter

Jacob Hansen, MA, Associate Director, The Writing Center
Function and capabilities of The Writing Center, tutor availability and scheduling, Sidecar

Dr. Andrij Holian, Center for Environmental Health Sciences
Grant writing: stylistic, substantive, and ethics in the preparation and review of grant proposals

Jean Kyle, Esq., School of Law
Protection of intellectual property, rights conveyed by a patent, the criteria of patentability, the process of obtaining a patent, and the ethics of intellectual property protection and use

Harmen Steele, Graduate Student, Biochemistry & Biophysics Program
Presentation Zen

Dr. Nadia White, School of Journalism
Presentation of scientific ideas, accomplishments, and goals to the public reader; practice of ethics in scientific journalism