

PUBH 8161, SECTION 1

Current Literature in Toxicology
Fall 2018

Grading Option[S/N only]

COURSE & CONTACT INFORMATION

Credits: 1

Meeting Day(s): Mondays

Meeting Time: 4:25-5:20 pm

Meeting Place: Mayo 1155

Instructor: Lisa Peterson

Email: peter431@umn.edu

Office Phone: 612-626-0164

Fax: 612-624-3869

Office Hours: by appointment

Office Location: Cancer and Cardiology Building, Room 2-126

COURSE DESCRIPTION

Students will read, discuss, and present current primary literature in toxicology, with an emphasis on modern methods in toxicology and the development of critical thinking skills.

COURSE PREREQUISITES

One course in biochemistry, one course in molecular biology or instructor's permission

COURSE GOALS & OBJECTIVES

1. To learn to think critically about experimental design and data interpretation in current approaches to toxicology.
2. To be able to develop strategies to investigate issues in toxicology.
3. To apply toxicology principles learned in other courses to real world research questions.
4. To learn to read and analyze primary literature in toxicology.
5. To learn to make scientific presentations to your peers.

METHODS OF INSTRUCTION AND WORK EXPECTATIONS

Course Workload Expectations

Current Literature in Toxicology is a one credit course. The University expects that for each credit, you will spend a minimum of three hours per week attending class or comparable online activity, reading, studying, completing assignments, etc. over the course of a 15-week term. Thus, this course requires approximately 45 hours of effort spread over the course of the term in order to earn an average grade.

The class will discuss recent research articles in toxicology. The research articles will be chosen by the instructor. Most papers will be discussed over two class periods.

During the first class period, individual students will be assigned a method used in the paper that will be discussed the following week. The students will present the biochemical and/or biological basis of the method and discuss the pros and cons (strengths/weaknesses/limitations) associated with the method. In addition, they will describe the important controls for the experimental method. Send a draft of your presentation to Dr. Peterson by end of business day on the Friday before the presentation for review/approval.

The following week, the paper will be discussed as outlined below. Everyone is expected to read the papers and be an active participant in the discussion.

Guidelines for paper discussion:

1. Introduction
 - a. State what question is being asked – State the hypothesis being tested.
 - b. Explain why the question is being asked – describe the background leading up to the current study and how the results will advance the field. What aspects of the field have been established? What aspects of the field remain controversial?
 - c. Explain how the authors are testing their hypothesis. Describe the model system and experimental approach. Address the pros and cons of the approach taken in the publication.
2. For each figure, table or experiment, present the following:
 - a. The purpose of the experiment.
 - b. The question being asked and methods used to answer the question.
 - c. The results
 - d. The author's interpretation of the results
 - e. Your critique of the experiment: discuss appropriate controls, alternate methods, complementary experiments.
3. Discussion
 - a. General critique
 - b. List the contributions this paper makes to the field.
 - c. Discuss whether the research actually answers the questions the authors set out to address.
 - d. Describe any unanswered questions.
 - e. Give your opinion about what the next study should be.

Participation in Class Discussions: You are expected to contribute to class discussion by providing questions and comments during the presentations. Your questions and comments should demonstrate that you have thoroughly read and thought about the paper.

Learning Community

School of Public Health courses ask students to discuss frameworks, theory, policy, and more, often in the context of past and current events and policy debates. Many of our courses also ask students to work in teams or discussion groups. We do not come to our courses with identical backgrounds and experiences and building on what we already know about collaborating, listening, and engaging is critical to successful professional, academic, and scientific engagement with topics.

In this course, students are expected to engage with each other in respectful and thoughtful ways.

In group work, this can mean:

- Setting expectations with your groups about communication and response time during the first week of the semester (or as soon as groups are assigned) and contacting the TA or instructor if scheduling problems cannot be overcome.
- Setting clear deadlines and holding yourself and each other accountable.
- Determining the roles group members need to fulfill to successfully complete the project on time.
- Developing a rapport prior to beginning the project (what prior experience are you bringing to the project, what are your strengths as they apply to the project, what do you like to work on?)

In group discussion, this can mean:

- Respecting the identities and experiences of your classmates.
- Avoid broad statements and generalizations. Group discussions are another form of academic communication and responses to instructor questions in a group discussion are evaluated. Apply the same rigor to crafting discussion posts as you would for a paper.
- Consider your tone and language, especially when communicating in text format, as the lack of other cues can lead to misinterpretation.

Like other work in the course, all student to student communication is covered by the Student Conduct Code (<https://z.umn.edu/studentconduct>).

COURSE TEXT & READINGS

Primary literature and appropriate review articles. Links to the articles will be provided on the course Moodle site.

COURSE OUTLINE/WEEKLY SCHEDULE

Week	Topic	Readings	Activities/Assignments
Week 1: September 10, 2018:	<ul style="list-style-type: none"> Introduction 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Come prepared to suggest toxicology topics that interest you
Week 2: September 17, 2018	<ul style="list-style-type: none"> Student presentations on scientific methods in paper 1 	<ul style="list-style-type: none"> Paper 1 and other resources 	<ul style="list-style-type: none"> Student presentations
Week 3: September 24, 2018	<ul style="list-style-type: none"> Paper 1 	<ul style="list-style-type: none"> Paper 1 	<ul style="list-style-type: none"> Class discussion led by Lisa Peterson
Week 4: October 1, 2018	<ul style="list-style-type: none"> Student presentations on scientific methods in paper 2 	<ul style="list-style-type: none"> Paper 2 and other resources 	<ul style="list-style-type: none"> Student presentations
Week 5: October 8, 2018	<ul style="list-style-type: none"> Paper 2 	<ul style="list-style-type: none"> Paper 2 	<ul style="list-style-type: none"> Class discussion led by Lisa Peterson
Week 6: October 15, 2018	<ul style="list-style-type: none"> Student presentations on scientific methods in paper 3 	<ul style="list-style-type: none"> Paper 3 and other resources 	<ul style="list-style-type: none"> Student presentations
Week 7: October 22, 2018	<ul style="list-style-type: none"> Paper 3 	<ul style="list-style-type: none"> Paper 3 	<ul style="list-style-type: none"> Class discussion led by two students
Week 8: October 29, 2018	<ul style="list-style-type: none"> Student presentations on scientific methods in paper 4 	<ul style="list-style-type: none"> Paper 4 and other resources 	<ul style="list-style-type: none"> Student presentations
Week 9: November 5, 2018	<ul style="list-style-type: none"> Paper 4 	<ul style="list-style-type: none"> Paper 4 	<ul style="list-style-type: none"> Class discussion led by two students
Week 10: November 12, 2018	<ul style="list-style-type: none"> Student presentations on scientific methods in paper 5 	<ul style="list-style-type: none"> Paper 5 and other resources 	<ul style="list-style-type: none"> Student presentations
Week 11: November 19, 2018	<ul style="list-style-type: none"> Paper 5 	<ul style="list-style-type: none"> Paper 5 	<ul style="list-style-type: none"> Class discussion led by two students
Week 12: November 26, 2018	<ul style="list-style-type: none"> Paper 6 	<ul style="list-style-type: none"> Paper 6 	<ul style="list-style-type: none"> Class discussion led by two students
Week 13: December 5, 2018	<ul style="list-style-type: none"> Paper 7 	<ul style="list-style-type: none"> Paper 7 	<ul style="list-style-type: none"> Class discussion led by two students
Week 14: December 12, 2018	<ul style="list-style-type: none"> Paper 8 	<ul style="list-style-type: none"> Paper 8 	<ul style="list-style-type: none"> Class discussion led by two students

SPH AND UNIVERSITY POLICIES & RESOURCES

The School of Public Health maintains up-to-date information about resources available to students, as well as formal course policies, on our website at www.sph.umn.edu/student-policies/. Students are expected to read and understand all policy information available at this link and are encouraged to make use of the resources available.

The University of Minnesota has official policies, including but not limited to the following:

- Grade definitions
- Scholastic dishonesty
- Makeup work for legitimate absences
- Student conduct code
- Sexual harassment, sexual assault, stalking and relationship violence
- Equity, diversity, equal employment opportunity, and affirmative action
- Disability services
- Academic freedom and responsibility

Resources available for students include:

- Confidential mental health services
- Disability accommodations
- Housing and financial instability resources
- Technology help
- Academic support

EVALUATION & GRADING

[Enter a detailed statement of the basis for grading here. Include a breakdown of course components and a point system for achieving a particular grade. Include expected turnaround time for grading/feedback. Please refer to the University's Uniform Grading Policy and Grading Rubric Resource at <https://z.umn.edu/gradingpolicy>]

Grading Scale

The University uses plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following, and you can expect the grade lines to be drawn as follows:

% In Class	Grade	GPA
93 - 100%	A	4.000
90 - 92%	A-	3.667
87 - 89%	B+	3.333
83 - 86%	B	3.000
80 - 82%	B-	2.667
77 - 79%	C+	2.333
73 - 76%	C	2.000
70 - 72%	C-	1.667
67 - 69%	D+	1.333
63 - 66%	D	1.000
< 62%	F	

- A = achievement that is outstanding relative to the level necessary to meet course requirements.
- B = achievement that is significantly above the level necessary to meet course requirements.
- C = achievement that meets the course requirements in every respect.
- D = achievement that is worthy of credit even though it fails to meet fully the course requirements.
- F = failure because work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I (Incomplete).
- S = achievement that is satisfactory, which is equivalent to a C- or better
- N = achievement that is not satisfactory and signifies that the work was either 1) completed but at a level that is not worthy of credit, or 2) not completed and there was no agreement between the instructor and student that the student would receive an I (Incomplete).

Evaluation/Grading Policy	Evaluation/Grading Policy Description
<p>Scholastic Dishonesty, Plagiarism, Cheating, etc.</p>	<p>You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis (As defined in the Student Conduct Code). For additional information, please see https://z.umn.edu/dishonesty</p> <p>The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: https://z.umn.edu/integrity.</p> <p>If you have additional questions, please clarify with your instructor. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.</p> <p>Indiana University offers a clear description of plagiarism and an online quiz to check your understanding (http://z.umn.edu/iuplagiarism).</p>
<p>Late Assignments</p>	<p>None</p>
<p>Attendance Requirements</p>	<p>Attendance is required.</p>
<p>Extra Credit</p>	<p>None</p>