Course Syllabus

PubH 8160
Advanced Toxicology
Fall 2009

Credits: 2
Meeting Days: Wednesday
Meeting Time: 4:00 pm – 6:00 pm
Meeting Place: 1155 Mayo
Instructor: Elizabeth Wattenberg, Ph.D., Associate Professor
Division of Environmental Health Sciences
Office Address: 1110 Mayo
Office Phone: 612-626-0184
Fax: 612-626-0650
E-mail: watte004@umn.edu
Office Hours: e-mail to make an appointment
Instructor: Lisa Peterson
Office Address: 760D Cancer Center Research Bldg, Mayo Mail Code 806
Office Phone: 612-626-0164
Fax: 612-626-5135
E-mail: peter431@umn.edu
Office Hours: by appointment

I. 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.

II. Course Prerequisites
   One course in biochemistry, one course in molecular biology

III. Course Goals and Objectives
   Learn to think critically about experimental design and data interpretation in current approaches to toxicology
   Develop strategies to investigate issues in toxicology
   Apply toxicology principles learned in other courses to real world research questions
   Learn to read and analyze primary literature in toxicology
Learn to make scientific presentations to your peers
IV. Methods of Instruction and Work Expectations

Class Presentations:
Each week, one student will be responsible for choosing a review article on a specific topic and one current primary publication on a specific aspect of that topic. The presenter should try to select high-quality papers. The papers must be accessible through the University of Minnesota Biomedical Library e-journal system. The citations of the papers must be given to the other members of the class at least one week in advance.

The presenting student must summarize and outline the topic in a manner that gives the class a general understanding of the background, including the significance of the paper, what hypothesis is being tested, what has been established in this particular area of scientific inquiry, and what questions remain controversial. The presenter must then explain and critique the paper. This includes:
1) explaining the purpose of the study; 2) for each figure, explaining the purpose of the experiments, the experimental approach, the results, the conclusions, and potential pitfalls of the experiments; and 3) giving a critique of the paper (for example, were all of the proper controls included in the experiments, do you agree with the author’s interpretation of their data, are there alternate explanations for the results, what other types of experiments should be done). You may need to do additional reading on your own to prepare for your presentation.

Participation in Class Discussions: All students are expected to contribute to class discussion by providing questions and comments during the presentations. The questions and comments should demonstrate that each student has thoroughly read and thought about the paper.

Structure for Presentation of Journal Articles

Everyone is expected to read the papers and be an active participant in the discussion.

Introduction
Explain why you chose this paper. Why does it interest you?
State what question is being asked – State the hypothesis being tested.

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?

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.

For each figure, table or experiment, present the following:
The purpose of the experiment
The question being asked and methods used to answer the question
The results
The author’s interpretation of the results
Your critique of the experiment: discuss appropriate controls, alternate methods, complementary experiments

Discussion
General critique
List the contributions this paper makes to the field.
Discuss whether the research actually answers the questions the authors set out to address.
Describe any unanswered questions.
Give your opinion about what the next study should be.

V. Course Text and Readings

Primary literature and appropriate published review articles
VI. Course Outline/Weekly Schedule

September 9, 16, 23 – no class. select papers and prepare presentations

<table>
<thead>
<tr>
<th>Date</th>
<th>Student</th>
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<tbody>
<tr>
<td>September 30</td>
<td>Brad Peterson</td>
</tr>
<tr>
<td>October 7</td>
<td>Jeanette Peterson</td>
</tr>
<tr>
<td>October 14</td>
<td>Leah Peterson</td>
</tr>
<tr>
<td>October 21</td>
<td>Jeffrey Peterson</td>
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<tr>
<td>October 28</td>
<td>Karen Peterson</td>
</tr>
<tr>
<td>November 4</td>
<td>Brad Wattenberg</td>
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<tr>
<td>November 11</td>
<td>Jeanette Wattenberg</td>
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<tr>
<td>November 18</td>
<td>Leah Peterson</td>
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<tr>
<td>November 25</td>
<td>Jeffrey Wattenberg</td>
</tr>
<tr>
<td>December 2</td>
<td>Brad and Jeanette Wattenberg</td>
</tr>
<tr>
<td>December 9</td>
<td>Leah and Jeffrey Wattenberg</td>
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<tr>
<td>December 16</td>
<td>Karen Wattenberg</td>
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VII. Evaluation and Grading

Grading Criteria

A/F letter grade will be determined by total effort as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>92-100</td>
<td>(4.0) Represents achievement that is outstanding relative to the level necessary to meet course requirements.</td>
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<tr>
<td>A-</td>
<td>88-91.5%</td>
<td></td>
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<tr>
<td>B+</td>
<td>84-87.5%</td>
<td></td>
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<tr>
<td>B</td>
<td>80-83.5%</td>
<td>(3.0) Represents achievement that is significantly above the level necessary to meet course requirements.</td>
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<tr>
<td>B-</td>
<td>76-79.5%</td>
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<tr>
<td>C+</td>
<td>72-75.5%</td>
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</tr>
<tr>
<td>C</td>
<td>68-71.5%</td>
<td>(2.0) Represents achievement that meets the minimum course requirements.</td>
</tr>
<tr>
<td>C-</td>
<td>64-67.5%</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>60-63.5%</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>56-59.5%</td>
<td>(1.0) Achievement below minimum course expectations but sufficient to be awarded credit.</td>
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<tr>
<td>D-</td>
<td>52-55.5</td>
<td></td>
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<tr>
<td>F</td>
<td>&lt;51.5</td>
<td>Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) not completed and there was no agreement between the instructor and the student that the student would be awarded an I.</td>
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S/N option must complete all assignments to a C- level (70%):

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<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>S</td>
<td>Achievement that is satisfactory will be expected to complete all assignments and receive a minimum of 70% to receive a passing score (achievement required for an S is at the discretion of the instructor but may be no lower than a 70%).</td>
</tr>
<tr>
<td>F</td>
<td>Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) not completed and there was no agreement between the instructor and the student that the student would be awarded an I.</td>
</tr>
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Course Evaluation
Beginning in fall 2008 the SPH will collect student course evaluations electronically using a software system called CoursEval. The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade. All students will have access to their final grades two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

Incomplete Contracts
A grade of incomplete “I” shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an “I” requires that a contract be initiated and completed by the student before the last day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student’s college). For more information and to initiate an incomplete contract, students should go to: www.sph.umn.edu/grades.

University of Minnesota Uniform Grading and Transcript Policy
A link to the policy can be found at onestop.umn.edu.

VIII. Other Course Information and Policies

Grade Option Change (if applicable)
For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at onestop.umn.edu.

Course Withdrawal
Students should refer to the Refund and Drop/Add Deadlines for the particular term at onestop.umn.edu for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Student Services Center at sph-ssc@umn.edu for further information.

Student Conduct, Scholastic Dishonesty and Sexual Harassment Policies
Students are responsible for knowing the University of Minnesota, Board of Regents’ policy on Student Conduct and Sexual Harassment found at www.umn.edu/regents/polindex.html.

Students are responsible for maintaining scholastic honesty in their work at all times. Students engaged in scholastic dishonesty will be penalized, and offenses will be reported to the Office of Student Academic Integrity (OSAI, www.osai.umn.edu).

The University’s Student Conduct Code defines scholastic dishonesty as “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; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.”

Plagiarism is an important element of this policy. It is defined as the presentation of another's writing or ideas as your own. Serious, intentional plagiarism will result in a grade of "F" or "N" for the entire course. For more information on this policy and for a helpful discussion of preventing plagiarism, please consult University policies and procedures regarding academic integrity: http://writing.umn.edu/tww/plagiarism/.

Students are urged to be careful that they properly attribute and cite others' work in their own writing. For guidelines for correctly citing sources, go to http://tutorial.lib.umn.edu/ and click on “Citing Sources”.

In addition, original work is expected in this course. It is unacceptable to hand in assignments for this course for which you receive credit in another course unless by prior agreement with the instructor. Building on a line of work begun in another course or leading to a thesis, dissertation, or final project is acceptable.
Disability Statement
It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have a documented disability (e.g., physical, learning, psychiatric, vision, hearing, or systemic) that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to contact Disability Services to have a confidential discussion of their individual needs for accommodations. Disability Services is located in Suite180 McNamara Alumni Center, 200 Oak Street. Staff can be reached by calling 612/626-1333 (voice or TTY).