

Advanced Topics in Toxicology (0.5) TOX*6200 Winter 2016

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Calendar Description:

Advanced topics in toxicology will include presentations by students, and faculty members in the Graduate Toxicology Program. The emphasis will be on advanced concepts and techniques in toxicology research with particular relevance to mechanistic, molecular and interpretive toxicology.

Course Requirements and Grading:

Student grades will be assigned in the following proportions.

3 paper critiques	30%
Seminar	30%
Term Paper	40%

Guest Lectures:

Class begins with a lecture by a faculty or guest covering an area of research or applied toxicology in which the speaker works. The lecturer will distribute (ideally before the lecture) a published paper or similar document on a topic relevant to the seminar. The paper(s) will be provided in an electronic PDF format and will be distributed on courselink. Students are responsible for reviewing/critiquing **three of the papers** (only one per faculty, if more are provided by a faculty) to demonstrate an understanding of the subject area and scientific writing. Critical comments are expected (similar to a journal reviewer comments). A general guide to critiquing will be provided.

Seminar:

Each student is required to give one seminar up to 20 min in length to the class followed by 5 minutes of questions (2 graduate student seminars/class). The topic must be discussed with Abigail before it can be finalized. During the presentations students will evaluate fellow students. An example of the Seminar comment/evaluation form is appended to this outline. Students will then receive constructive comments from both their peers (Student Seminar evaluation forms) and from Dr. Manderville as soon after the seminar as possible. We want the students to have access to the seminars, either to follow along on the computer or to printout before class. Send an electronic copy of your seminar (either Power Point or PDF) to Abigail by 5pm prior to the day of your presentation so the PDF can be posted on courselink before class starts.

Paper Critique

Students are required to write 3 critiques for papers that are assigned by guest lecturers. Each critique should be no more than 2 pages double spaced in length. Submit each critique in class one week after the guest lecturer.

Your Critiques will be evaluated using three criteria:

1. Did the student demonstrate a clear understanding of the paper (objectives, methods, conclusions, etc.)? This should be reflected in some form of review of the salient points and methods used in the critique. (50%)
2. Did the student offer some level of critical thinking (critique)? The focus of critical comments could be editorial (writing, format and organization), methodological, breadth, and depth of subject coverage, etc. Note: a critique may offer both positive and negative comments on a paper. (30%)
3. Writing. Was the critique well written, organized, and did it possess logical flow (organization)? (20%)
4. The maximum critique length is 2 pages double spaced (not including references), 12 pt font, 1.5 cm borders. Number pages and separate the critique using headings: i.e. Summary, Introduction, Critique, Conclusions, References.

Term Paper

The student must submit a term paper topic, preferably with two alternate topics, by the end of the first week of the semester to [Abigail](#). You may wish to discuss possible areas of interest with faculty, TA. Term paper topics will be reviewed and **finalized by Wednesday Jan. 20th**. Approval is given on a first come basis and appropriateness of the topic. The topic of your term paper is important, as **it is the same as the topic for your seminar**, which together constitute 70% of your grade. Students with early seminars are encouraged to choose topics as quickly as possible. Students should focus on a relevant and current issue on toxicology (environmental or biomedical), such as, endocrine modulation, mixture toxicity, or mechanism of toxicity of a class of toxicants.

Term Paper Format

This term paper should be written as a review of the topic chosen. The paper should demonstrate a critical review of the information and literature used while offering constructive suggestions of what can be done to improve our understanding of the issue. Students must demonstrate an up-to-date understanding of the topic using the most recent published articles as references. Term papers should be organized according to the following format using numerical headings:

Term Paper Length

The paper should not be longer than 10 pages double spaced excluding Figures and Tables, typed in 12-point font. Cover page should include clear title and author information. File name of electronic submission should include student name, e.g., <Doe J TOX6200 2016 term paper>.

Term Paper Introduction

This section should clearly state the importance of the topic and introduce the reader to the subject by way of general background.

Term Paper Literature Review and Discussion

A review of past work is required in the area of presented paper. The references should be as current as possible and the review should contain constructive criticism of the methodology or hypotheses where such criticism is appropriate. This should not be done paper by paper, such as in an annotated bibliography, but in an integrated way that focuses on the topic of your paper, such as mechanism of action, ADME, etc.

Term Paper Content

Your review section must be scientific; a popular approach with unsupported statements is not acceptable. You are strongly encouraged to use Tables and Figures. However, do not use pasted-in or scanned in Figures from the literature. Redraw them to illustrate the point you are trying to make. Tables and Figures should be used to improve clarity and reduce excessive description in the text. They must always be referred to in the text but information in Figures and Tables need not be fully repeated in the text. They must be appropriately captioned, labeled, and referenced to original source (redrawn from Doe et al. 2007).

Term Paper Sources of Reference

To find publications you may use books, review articles etc. available in the main library as well as the internet search engines, such as Google, and/or databases such as PubMed, CD ROMs (e.g., CCINFO Disk), Biological Abstracts, Chemical Abstracts, Weed Abstracts, Agricultural Abstracts, Pesticide Abstracts, Index Medicus, Science Citation Index, references in other papers, etc. Internet references should not be used a primary source of information unless they are a source of otherwise published papers or reports (e.g., US EPA WHO, or Health Canada reports). In addition, the 'quality' of your references will be considered in determining your final grade. Use of primary scientific articles would be preferable to review papers.

Term Paper Criteria of Evaluation

Neatness, spelling, grammar, layout, organization - 20%. Relevance of material to topic, logic of criticism, coverage of literature, references - 80%.

Term Paper References

All facts and data must be referenced either by number or author and date. The references should be typed on a separate page(s) and include the following: Author/s; Year of publication; Full title of article or book; Journal name in full; Volume number (underlined or in bold); Page numbers. References to books should not be used except in support of general statements and must include the author/s or editor/s, publisher and the place of publication and date of publication. Chapters written by individual authors should be referred to under the name of the chapter author. Do not use URLs ending in .org or .com for internet references. Note: You should not reference anything you have not read unless you cite an intermediate citation (Brown and Smith, 1945, as cited in Doe et al. 2007). Both references must be given in the bibliography.

Example from text:

Peabody and Hollander (1997) showed that the half-life of polonium-210 in plaice was 37 hours, however, other workers have shown that the half-life is between 96 hours and 24 days (Djerassi 1998; Strangelove et al. 1994).

Example from bibliography:

Peabody WW, Hollander X. 1997. Polonium uptake in the plaice. American Journal of Freshwater Research 44:69-96.

Djerassi K. 1998. The fate of trans-uranium elements in the environment. Academic Press, Toronto, 1998, 193 p.

Strangelove A, Sellers P, Pickins S. 1994. Radioactive elements in the North Atlantic. In: Love S. (Ed.) Marine Ecotoxicology, Putrid Publications, Greenland Press, Gothab Greenland, 1994 pp 101-106.

Handing in Late

Papers are due **2 weeks after your seminar date**. Papers may not be handed in late without appropriate medical or counselor certification. **Penalty** for handing in late is **5%** of the paper grade per day.

Accessibility: The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the Centre for Students with Disabilities as soon as possible.

For more information, contact CSD at 519-824-4120 ext. 56208 or email csd@uoguelph.ca or see the website: <http://www.csd.uoguelph.ca/csd/>

E-mail Communication: As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

When You Cannot Meet a Course Requirement: When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course in writing, with your name, id#, and e-mail contact. See the graduate calendar for information on regulations and procedures for Academic Consideration: http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e1415.shtml

Drop Date: The last date to drop one-semester courses, without academic penalty, is Friday, March 11. Two-semester courses must be dropped by the last day of the add period in the second semester. Refer to the Graduate Calendar for the Schedule of Dates.

Academic Misconduct: The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. The Academic Misconduct Policy is detailed in the Graduate Calendar:

http://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/sec_d0e1702.shtml

Recording of Materials: Presentations which are made in relation to course work—including lectures—cannot be recorded in any electronic media without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

Resources: The Graduate Calendar is the source of information about the University of Guelph's procedures, policies and regulations which apply to graduate programs:

<http://www.uoguelph.ca/registrar/calendars/graduate/current>