ENV H 516 A Sp 21: Toxic Agents: Effects And Mechanisms

Edit

TOXIC AGENTS: EFFECTS AND MECHANISMS (ENVH 516)

Spring Quarter 2021
MWF 8:30-9:20; via ZOOM

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Join Zoom Meeting https://washington.zoom.us/j/9137594687 (https://washington.zoom.us/j/9137594687)

Date	Topic	Instructor	Reading
Monday, March 29	Introd/Pesticides	Costa	Chapter 22
Wednesday, March 31	Pesticides	Costa	Chapter 22
Friday, April 2	Pesticides	Costa	Chapter 22
Monday, April 5	Pesticides	Costa	Chapter 22
Wednesday, April 7	Pesticides	Costa	Chapter 22
Friday, April 9	Metals	Lewandowski	Chapter 23
Monday, April 12	Metals	Lewandowski	Chapter 23
Wednesday, April 14	Metals	Lewandowski	Chapter 23
Friday, April 16	Metals	Lewandowski	Chapter 23
Monday, April 19	Metals	Lewandowski	Chapter 23

Wednesday, April 21	PCBs	Kelly	Handout
Friday, April 23	Dioxins	Kelly	Handout
Monday, April 26	PBDE	Costa	Handout
Wednesday, April 28	Air pollutants	Cole	Chapter 29
Friday, April 30	Air pollutants	Cole	Chapter 29
Monday, May 3	Air pollutants	Sack	Chapter 29
Wednesday, May 5	Exam (covers material until 4/26)	Costa/Cole	----------
Friday, May 7	Food Toxicology	Meschke	Chapter 31
Monday, May 10	Food additives	Costa	Chapter 31
Wednesday, May 12	Calories	Averill	Chapter 27
Friday, May 14	Solvents	Costa	Chapter 24
Monday, May 17	Solvents	Costa	Chapter 24
Wednesday, May 19	Solvents	Garrick	Chapter 24
Friday, May 21	Animal/Plant Toxins	Garrick	Chapter 26
Monday, May 24	Animal/Plant Toxins	Garrick	Chapter 26
Wednesday, May 26	Radiation	Griffith	Chapter 25
Friday, May 28	Nanomaterials	Carosino	Chapter 28
Monday, May 31	Holiday	----------	----------
Wednesday, June 2	Occup. Toxicology	Cherry	Chapter 34
Friday, June 4	Ecotoxicology: Case Study in Puget Sound	Gallagher	Chapter 30
June 8 (8:30-10:20)	FINAL EXAM (covers material from 4/28)	Costa/Cole	----------

Chapters are from Casarett and Doull's Toxicology. 9th Edition, 2018.

General: The class is offered via Zoom. A link for class sessions is listed at the top of the syllabus page. Students are required to attend the live, synchronous sessions (M, W, F at 8:30-9:20 am) via Zoom. It is expected that the classes may be recorded and may be available for asynchronous viewing.

Course Objectives: This course (previously Environmental and Occupational Toxicology III) is the third course of the core toxicology series. The content of the course focusses on the most important classes

of toxic chemicals (as well as physical and biological agents), their toxic effects in humans and animals and the underlying mechanisms. The lectures will cover the toxicology of metals, solvents, pesticides, dioxins and other halogenated contaminants, radiation, food-born toxicants, natural toxins, and air pollutants.

After completion of the course students will have acquired a fundamental understanding of the toxic effects of different agents. They will be able to identify major issues related to the toxicity of environmental agents, recognize toxic effects induced by these agents, explain mechanisms of toxicity, identify routes and nature of exposures, evaluate types of toxic effects, have a basic understanding of the main aspects of ecotoxicology, occupational toxicology and clinical toxicology, are their role within toxicology, public health and environmental and occupational health sciences.

Guest lecturers will be an asset to the course and will assist in providing coverage of subject areas within their respective areas of expertise.

Intended Student Audience: While the ENVH 514/515/516 course sequence serves as the core of the graduate toxicology program for both Toxicology MS and PhD students in the Department of Environmental and Occupational Health Sciences, ENVH 516 is open to all graduate students from other DEOHS programs, including MPH students, and from other allied biomedical science departments (e.g. pharmacy, pharmacology, fisheries, neurobiology etc.). Prerequisites for this class include undergraduate general biology, organic chemistry, and biochemistry. Previous background in mammalian physiology is recommended.

Required Readings: The textbook for ENVH 516 is Casarett and Doull's Toxicology. The Basic Science of Poisons, 2018 Edition. **Casarett and Doull's toxicology : the basic science of poisons (https://alliance-primo.hosted.exlibrisgroup.com/permalink/f/kjtuig/CP71291982580001451)** Chapters in this textbook cover most topics taught in the class. Additional reading material, handouts with slides, etc. will be posted on Canvas.

Exams and Assignments: There will be a mid-term and a final written exam (essay-type questions) of the duration of 50 min each. Each exam will cover all material presented in the preceding lectures. The first exam will cover material until and including the April 26 lecture. The final exam will be held during finals week but will not be a cumulative exam; it will cover the material starting from the April 28 lecture. The instructor will send the exam to students by email at 8:30 am, and the students are expected to return it to the instructor, by email, by the end of the class (9:20 am)

Grading: The final grade is compiled from the average of the two in-class exams (45-45), plus 10% for class participation.

Academic Integrity: Students at the University of Washington are expected to maintain the highest standard of academic conduct, professional honesty, and personal integrity. The UW School of Public Health is committed to upholding standards of academic integrity consistent with the academic and professional communities of which it is a part. Plagiarism, cheating, and other misconduct are serious violations of the UW Student Conduct Code (WAC 478-120).We expect you to know and follow the

University's policies on cheating and plagiarism, and the SPH Academic Integrity Policy (**http://sph.washington.edu/students/academicintegrity/** **(http://sph.washington.edu/students/academicintegrity/)**). Any suspected case of academic misconduct will be handled according to University of Washington regulations. For more informations, see the University of Washington Community Standard and Student Conduct website.

Disability Resources: Your experience in the class is important to me. If you have already established accomodations with Disability Resources for Students (DSR), please communicate your approved accomodations to me at your earliest convenience so we can discuss your needs in this course. If you have not yet established services through DRS, but have a temporary health condition or permanent disability that requires accomodations (conditions include but are not limited to mental health, attention-related, learning, vision, hearing, physical or health impact), you are welcome to contact DRS at 206-543-8924 or **uwdrs@uw.edu (mailto:uwdrs@uw.edu)** or disability.uw.edu. DRS offers resources and coordinates reasonable accomodations for students with disabilities or temporary health conditions. Reasonable accomodations are established through an interactive process between you, your instructor(s) and DRS. It is the policy and practice of the University of Washington to create inclusive and accessible learning environments consistent with federal and state law.

Religious Accomodation: Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at **Religious Accommodations Policy** **(https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/)** Accommodations must be requested within the first two weeks of this course using **the Religious Accommodations Request form** **(https://registrar.washington.edu/students/religious-accommodations-request/)** ."