SYLLABUS: Alternatives Assessments: Choosing the right substitute chemicals

Current Concepts in Human Health Risk Assessment Journal Club

Spring Quarter 2017

ENVH 593 (Journal Club)

Credits: 1

Current Quarter Topic:

Instructor:

Elaine M. Faustman, PhD, DABT
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Office hours: By appointment

Course Times and Locations:

Tuesdays from 2:30-4:30pm

Five Sessions: April 4th, April 18th, May 2nd, May 9th, May 16th

Class will be held in 4225 Roosevelt Way NE, Suite 100 in Roosevelt 2228/212

Course Website: https://canvas.uw.edu/courses/1139056

- The Syllabus is posted on the website
- Within the files tab you will find folders containing the readings for each session.
- Please post your selection in the discussion section of canvas by 12pm the Monday before class.
- Please bring 2 completed "Literature Review Forms" with you to class to help guide the discussion.

Course Description:

In this course, we will delve deeper into the concept of chemical sustainability and policy reform by asking what success in this field looks like. How do we evaluate substitute chemicals and what are the measures of success? What short term and alternative approaches can we use to make these decisions? How can risk assessment inform the approaches used for alternatives analysis? We will explore specific timely examples including bisphenol A and phthalate assessments. We will use the recent National Academy of Sciences report, entitled "A Framework to Guide the Selection of Chemical Alternatives" to frame our discussions.

Course Learning Objectives:

Upon completion of this journal club, students shall be able to:
Demonstrate familiarity with alternatives assessments approaches from the National Academy of Sciences and discuss their relevance to risk assessment and risk management. How can principles of risk assessment inform substitution of alternative assessment?

Compare and contrast multiple recommendations for alternatives assessments from European bodies, the National Academy of Sciences, Environmental Protection Agency and others. What is missing? What is common?

Articulate scientific and policy considerations arising from alternatives assessments.

In general:

1. Think critically about risk assessment by completing reading assignments and participating in class discussions.
2. Communicate the concept of integrated risk assessment and risk communication.
3. Explain the risk assessment framework as it relates specifically to the current quarter topic.
4. Analyze assigned readings and interpret their relevance to not only the quarter topic but also their applicability and generalizability to risk assessment topics at large.
5. Summarize key points from assigned journal articles or other required readings.
6. Prepare and deliver an oral presentation(s) discussing the required reading.
7. Critique risk assessment applications as they relate to the current quarter topic.
8. Identify risk assessment strengths and challenges, as well as the role of uncertainty.
9. Develop skills to think critically about the methods and tools used for assessment, management, and communication of risk.

Academic Integrity Statement:

Students at the University of Washington (UW) are expected to maintain the highest standards of academic conduct, professional honesty, and personal integrity.

The UW School of Public Health (SPH) 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 University of Washington 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. Any suspected cases of academic misconduct will be handled according to University of Washington regulations. For more information, see the University of Washington Community Standards and Student Conduct website.

UW Disability Statement (Links to an external site.) (http://depts.washington.edu/uwdrs/faculty-resources/syllabus-statement/)

Access and Accommodations: Your experience in this class is important to me. If you have already established accommodations with Disability Resources for Students (DRS), please communicate your approved accommodations 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 accommodations (conditions include but not limited to; mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DRS at 206-543-8924 or uwdrs@uw.edu (mailto:uwdrs@uw.edu) or disability.uw.edu (http://disability.uw.edu/). DRS offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions. Reasonable accommodations 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.

Multi-cultural Inclusion Commitment from Environmental Health

The UW School of Public Health seeks to ensure all students are fully included in each course. We strive to create an environment that reflects community and mutual caring. We encourage students with concerns about classroom climate to talk to your instructor, your advisor, a member of the departmental or SPH Diversity Committee and/or the program director. DCinfo@uw.edu is a resource for students with classroom climate concerns.

We have the privilege of learning together and we have a responsibility to engage in dialogue in a way that supports learning for all of us. Many of the issues we will discuss in this course may concern issues of disproportionate risks, sensitivities, and impacts due to age, gender, race, and/or social inequalities. This is what public health hopes to address, however we know that these can be difficult topics to address, hence we thus feel it is even more important to be sensitive to our colleagues’ experiences and ideas. Here are some practices we as learning community members can strive to use in our learning process:
- My own viewpoint is important—share it. It will enrich others.
- My students’ and colleagues’ viewpoints are important—listen to them. Do not judge them.
- Extend the same listening respect to others I would wish them to extend to me. We all have room to grow to become better listeners in non-judgmental ways.
- Recognize that I might miss things others see and see things others might miss.
- Raise my views in such a way that I encourage others to raise theirs.
- Inquire into others’ views while inviting them to inquire into mine.
- Ask questions when I don’t understand something.
- Surface my feelings in such a way that we make it easier for others to surface theirs.
- Test my assumptions about how and why people say or do things.
- Challenge what was said or done, rather than make assumptions about the individual.
- Beware of either-or thinking.
- Be willing to take risks in moving outside my comfort zones.
- Affirm others

**Course Session Schedule and Readings:**

**Session 1, April 4: Introduction to the National Academy of Sciences “A Framework to Guide Selection of Chemical Alternatives”**

- Introductions- All
- Overall goals of the course and introduction to the topic- Elaine Faustman
- Coverage of Chapters 1-3

**Session 2, April 18: Problem Formulation, Physiochemical Properties and Comparative Exposure Assessment**

- Introduction- Elaine Faustman
- Presentation of Key Points from Readings- Students

*Please read the selected chapters from the NRC document “A Framework to Guide Selection of Chemical Alternatives” and one other article. Please be prepared to share five key points with the class and discuss your impressions from the readings.

**Session 2 Readings:**

5. EPA (US Environmental Protection Agency). Safer Choice online. US Environmental Protection Agency Washington DC. [https://www.epa.gov/saferchoice](https://www.epa.gov/saferchoice)


20. TURI (Toxics Use Reduction Institute). Five Chemicals Study: Alternatives Assessment

Session 3, May 2: Human Health in Alternative Assessments

- Introduction- Elaine Faustman

- Presentation of Key Points from Readings- Students

Please read the selected chapters from the NRC document “A Framework to Guide Selection of Chemical Alternatives” and one other article. Please be prepared to share five key points with the class and discuss your impressions from the readings.

Session 3 Readings:


Session 4, May 9: Lifecycle, Ecotoxicology and Identifying Alternatives

- Introduction- Elaine Faustman

- Presentation of Key Points from Readings- Students

Please read the selected chapters from the NRC document “A Framework to Guide Selection of Chemical Alternatives” and one other article. Please be prepared to share five key points with the class and discuss your impressions from the readings.

Session 4 Readings:


Session 5, May 16: Case Studies in Alternatives Assessment

- Introduction- Elaine Faustman

- Presentation of Key Points from Readings- Students

Please read the selected chapters from the NRC document “A Framework to Guide Selection of Chemical Alternatives” and one other article. Please be prepared to share five key points with the class and discuss your impressions from the readings.

Session 5 Readings:


Course Summary:

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