

ES 120 Toxics in the Environment/ Fall 2009

THIS IS A TENTATIVE OUTLINE ONLY. PLEASE CHECK THE WEB SITE OFTEN FOR REVISED OUTLINES WITH CORRECT DUE DATES

WEEK 1

Sep 24 [Organization](#)

WEEK 2

Sep 29 [Introduction](#)

Read before class: [Syllabus](#); PE: Introduction; WEB: [Toxic Tales](#) (fun reading)

Due before class: Essay on [‘Lead’ by Primo Levi](#) (5 pts). Click [here](#) for essay requirements.

Oct 1 [Metals, Metalloids and Non-Metals](#)

Read before class: PE: 1.1; 1.4; 1.5; WEB: [Darthmouth](#) (all pages about metals: once you read ‘A Metals Primer’ continue with ‘Questions and Answers’ and ‘Stories and Histories’)

WEEK 3

Oct 6 [Organic Toxicants](#)

Read before class: PE: 1.2; 1.3

Oct 8 [Entrance and Transport of Toxicants in the Environment I](#)

Read before class: PE: 2; 3

Due before class: [Table on Metals, Metalloids and Non-Metals](#) (15 pts)

WEEK 4

Oct 13 [Entrance and Transport of Toxicants in the Environment II](#)

Read before class: PE: 4; 5.2; 5.3

Oct 15

Due before class: [Table on Organic Toxicants](#) (20 pts)

WEEK 5

Oct 20 [Bioaccumulation I](#)

Read before class: PE: 5.1 except 5.1.5 Metabolism

Oct 22 [Bioaccumulation II](#)

Read before class: WEB: [Toxicokinetics](#)

WEEK 6

Oct 27 [Biochemical and Physiological Effects of Toxicants](#)

Read before class: PE: 5.1.5, 7

Oct 29 Introduction to Case Studies and

[Biochemical and Physiological Effects of Toxicants](#), continued

Read before class: 8.1–8.4.1, 9

Due before class: [Essay on Toxicant Exchange](#) (15)

WEEK 7

Nov 3 [Effects at the Organismal Level](#)

Read before class: PE: 8.4.2-8.7 [From molecules to ecosystems through DEB models](#) (not everything; follow reading instructions marked on paper)

Nov 5 [Toxicity Testing](#)

Read before class: PE: 6; [Case studies](#)

WEEK 8

Nov 11 [Toxicity Testing](#) 2

Read before class: PE: 6

Due before class: [Proposal for case study](#) (no credit)

Nov 12 [Biomarkers and Biological Monitoring](#)

Read before class: PE: 10, 11, 12; [paper on ecological indicators](#)

WEEK 9

Nov 17

Read before class:

Nov 19 [Effects of Toxicants on Populations, Communities and Ecosystems](#)

Read before class: PE: 12, 13, 14 and 16

Due before class: [Essay on 'Erin Brokovich](#) (10 points)

WEEK 10

Nov 24 [Linking Biological Levels of Organization](#); Review

Read before class: PE: 15

Study before class: Part 1: PE 1 – 6 plus lecture notes

Nov 27 THANKSGIVING

WEEK 11

Dec 1 Presentations of Case Studies/ Review

Dec 3 Presentations of Case Studies/ Review

Study before class: All material covered

WEEK 12

Dec 10 FINAL 12:00 – 3:00 p.m.