

APES Spring 2011 Weekly Schedule

The following schedule includes the topics, required readings and homework assignments, labs, and some of the other activities planned for the spring semester. Please note that this schedule is subject to change at any time. You should regularly refer to the Environmental Science whiteboard posted in the chem lab for any changes or additions to this schedule. Also, refer to the APES syllabus passed out on the first day of the course (it is also on the Maybeck website) for all other assignments and requirements not listed in this schedule.

Please Note:

- The AP Exam is scheduled for Monday, May 2
- The semester lab project due dates are in your handout and on the website. *Pay close attention to deadlines!*
- A Book Report is required and will be due on Monday, May 23 (there will be no presentations required, only a 2 to 3 page written report) *I recommend you bring a book along with you on special programs.
- Similar to last semester, you are required to attend one environmental event that meets instructor approval
- Text homework assignments, including due dates are in this handout
- Weekly articles and a vocabulary notebook are **not** required this semester

Additional Note: It is strongly recommended that you read the assigned readings for each week prior to the first class of that week. Homework assignments are due in the APES box by 4pm on the scheduled due date, unless otherwise noted in this schedule or posted on the white board in class.

****Late assignments will lose points each day they are late. Assignments that are over 1 week late will not be accepted.****

UNIT 6: Energy Resources and Consumption

Week 1 (1/31 to 2/4)

- Required reading
 - Chapter 17: Energy Basics

****Homework (due Monday, February 7):**

Page 366, Critical Thinking Questions 1 thru 4

Page 368, Study Questions 2, 3, 4, 8

Pages 368, Define the key terms “first-law efficiency,” “second-law efficiency,” “soft path,” “hard path,” “integrated energy management”

- Labs/Activities:
 - Decide on Semester Project Theme (January 31)
 - Individual topics due February 8, full report due end of semester
 - Personal Energy Audit

Week 2 (2/7 to 2/11)

***Semester Project topic due Feb. 8**

***Salinization 2nd Draft due Feb. 11**

- Required reading
 - Chapter 18: Fossil Fuels

****Homework (due Monday, February 14):**

Page 390, Study Questions 2, 4, 5, 6, 8

Page 390, Define the Key Terms “allowance trading,” “fossil fuels,” “methane hydrate,” “peak oil,” “scrubbing”

- Labs/Activities
 - ANWR Debate
 - Cleaning an oil spill

Week 3 (2/14 to 2/18)

***Salinization Peer Review due Feb. 14**

- Required reading
 - Chapter 19: Alternative Energy

****Homework (due Tuesday, February 22):**

Page 408, Study Questions 1 thru 4, 6
 Page 408, Define the Key Terms “active solar energy systems,” “passive solar energy systems,” “fuel cells,” “photovoltaics,” “tidal power”

- Labs/Activities
 - Alternative Energy Project
 - Energy Flow Virtual Lab

Week 4 (2/21 to 2/25)

***Final Salinization Labs due Feb. 22**

- Required reading
 - Chapter 20: Nuclear Energy

****Homework (due Monday, February 28):**

Page 430, Critical Thinking Questions 2, 4
 Page 432, Study Questions 1 thru 7
 Page 390, Define the Key Terms “breeder reactor,” “fission,” “fusion,” “radioactive decay,” “nuclear fuel cycle”

- Labs/Activities
 - Half Life Lab
 - Radiated Seeds

UNIT 7: Environmental Quality and Pollution

Week 5 (2/28 to 3/4)

***Semester Project Plan due March 1**

***Unit 6 Text on March 4**

- Required reading
 - Chapter 15: Environmental Health

****Homework (due Monday, March 7):**

Page 318, Study Questions 2, 4, 6, 8

Page 318, Define the Key Terms “area sources,” “point sources,” “mobile sources,” “hormonally active agent,” “persistent organic pollutants,” “thermal pollution,” “toxicology,” “carcinogen”

- Labs/Activities
 - Toxicity
 - Poisoned Waters

Week 6 (3/7 to 3/11)

- Required reading
 - Chapter 15, continued: Environmental Health

****Homework (due Tuesday, March 15):**

Page 315, Critical Thinking Questions 1 thru 3

Page 318, Study Questions 3, 5, 7, 10

Page 318, Define the Key Terms “synergism,” “LD-50,” “ED-50,” “threshold,” “tolerance,” “ecological gradient,” “dose response,” “risk assessment”

- Labs/Activities
 - Dose Response Virtual Lab

Week 7 (3/14 to 3/18)

- Required reading
 - Chapter 22: Water Pollution

****Homework (due Monday, March 21):**

Page 493, Study Questions 1, 3, 4, 7, 9, 10, 13

Page 493, Define all Key Terms

- Labs/Activities
 - Testing Water Quality
 - Wastewater Treatment

Week 8 (3/21 to 3/25)

***Semester Project 1st Draft due March 25**

- Required reading
 - Chapter 24, Sections 24-1 thru 24-6: Air Pollution

****Homework (due Monday, March 28):**

Page 562, Study Questions 1 thru 6
 Page 562, Define the Key Terms “acid rain,” “air toxics,” “atmospheric inversion,” “stationary sources,” “mobile sources,” “criteria pollutants,” “primary pollutants,” “secondary pollutants,” “smog,” “photochemical smog”

- Labs/Activities
 - Acid Deposition
 - Dispersal of Air Pollutants

Week 9 (3/28 to 4/1)

***1st Draft Peer Reviews due March 30**

- Required reading
 - Chapter 24, Sections 24-7 thru 24-9: Air Pollution

****Homework (due Monday, April 25):**

Page 562, Study Questions 8 thru 12
 Page 562, Define the Key Terms “air quality standards,” “Clean Air Amendments of 1990”

- Labs/Activities
 - Measuring Ozone

NOTE: Review your Environmental Science notes and tests, as well as the text, over the break as prep for the AP Exam. The exam is scheduled for Monday, May 2

Week 10 (4/25 to 4/29)

***Prepare for next week’s AP Exam**

- Required reading
 - Chapter 25: Indoor Air Pollution

****Homework (due Friday, April 29):**

Page 578, Critical Thinking Question 1, 3, 4, 5

Page 580, Study Questions 1, 3, 4, 6

Page 580, Define all Key Terms

- Labs/Activities
 - Indoor Air Pollution Inventory
 - AP Exam Review

Week 11 (5/2 to 5/6)

***AP Exam on May 2**

- Required reading
 - Chapter 29: Waste Management

****Homework (due Monday, May 9):**

Page 664, Study Questions 2, 3, 6, 8, 10

Page 664, Define all Key Terms

- Labs/Activities
 - Cell phone life cycle
 - Waste management

UNIT 8: Global Change

Week 12 (5/9 to 5/13)

***Unit 7 Test on May 9**

***Semester Project 2nd Draft due May 13**

- Required reading
 - Chapter 23, Section 23-4 thru 23-8: Global Warming
 - Chapter 24, Section 24-10 thru 24-11: Ozone

****Homework (due Tuesday, May 17):**

Page 523, Study Questions 5, 6

Page 523, Define the Key Terms “greenhouse effect,” “polar amplification,”

Page 562, Study Questions 13, 14
Page 562, Define the Key Terms “Dobson Unit,” “ozone,” “ozone shield,”
“CFC’s,” “HFC’s,” “HCFC’s,” “UV Index,” “UVA,” “UVB,” “UVC”

- Labs/Activities
 - Global warming virtual lab
 - Precautionary Principle

Week 13 (5/16 to 5/20)

***2nd Draft Peer Reviews due May 16**

- Required reading
 - Chapter 14: Wildlife, Fisheries and Endangered Species

****Homework (due Monday, May 24):**

Page 293, Study Questions 2, 3, 5, 9
Page 293, Define the Key Terms “historical range of variation,” “logistic carrying capacity,” “maximum sustainable yield,” “minimum viable population”

- Labs/Activities
 - The Cove
 - Fish population virtual lab

UNIT 9: Urbanization

Week 14 (5/23 to 5/27)

***Written Book Reports due May 23**

***Unit 8 Test on May 25**

- Required reading
 - Chapter 28: Urban Environments

****Homework (due Monday, May 31):**

Page 636 Critical Thinking Questions 1 thru 4
Page 638, Study Questions 1, 5, 8
Page 638, Define all Key Terms

- Labs/Activities
 - Green building

- e²: Bogota
- Lottery for Lab Presentation days

UNIT 10: Natural Disasters and Catastrophes

Week 15 (5/30 to 6/3)

***Final Semester Project Report due June 3**

***Semester Project Presentation this week**

- Required reading
 - Chapter 16: Natural Disasters

****Homework (due Friday, June 3):**

Page 349, Study Questions 1, 4, 6, 10, 15

- Labs/Activities
 - Semester Project Presentations
 - Review for Final

***Final Exam (Includes Units 1 thru 10, with an emphasis on Units 6 thru 10)**