ENVIRONMENTAL STUDIES 50

Introduction to Pollution Prevention, Hazardous Waste and Environmental Justice

Instructor: Kristin Jensen Sullivan

ES -50-.01
Spring 2010

Call # 2524
4.0 Units

De Anza College, Division of Biological, Health, and Environmental Sciences, Environmental Studies Department
Kirsch Center for Environmental Studies- Director Pat Cornely in KC 218, (408) 864-8628

“Be the change you want to see in the world”.  Mahatma Gandhi

There is growing concern at De Anza College about critical environmental issues:  1)  We are continuing our 20+ year work in the Environmental Studies Department with critical issues and urge you to get involved by exploring our four degree/certificate areas and/or by engaging in stewardship projects/events.  2)  The College Environmental Advisory Group (CEAG) is continuing with the implementation of De Anza’s Sustainability Management Plan.  You may help with the implementation of this important environmental plan.  3)  Earth Day events will be occurring on 4/22, 4/28 and nearby weekends (Earth Day is really every day), stay tuned.  We hope that you will join us as we move along our sustainability path.  We live in a hopeful time, but ACTION by all of us is necessary!

INSTRUCTOR INFORMATION:  Kristin Jensen Sullivan

Office Hours Held:  MW 2:30-3:30pm; TTh 12:30-1:30pm; and many other times by arrangement in KC 214.  I have office time for all of you.

Phone/Voicemail #:  (408) 864-8625

Office Location:  KC 214

E-mail Address:  sullivankristin@fhda.edu

Personal Webpage:  http://www.deanza.edu/faculty/sullivankristin/

ES Dept Website:  http://EnvironmentalStudies.deanza.fhda.edu/es/

1)  DESCRIPTION
What kind of effects do hazardous wastes have on our health and the health of the environment?  How will California, with its increasing population, provide public leadership and innovative solutions regarding environmental justice, green chemistry, and other political, social, and environmental issues?  These above topics will be explored with respect to pollution prevention and environmental statutes.  Requirements and applications of federal, state and local laws and regulations relating to hazardous materials will be discussed.  Cultural, ethnic, socioeconomic, and gender groups will be discussed in depth especially with respect to environmental injustice and racism.

2)  ADVISORIES
EWRT 100B, Reading 100, or LART 100, ESL 173.  A good attitude and a willingness to learn by problem solving are essential to receiving desirable grades.
3) COMPETENCIES
After completing reading assignments, assessments, journals, projects, field assignments, and attending class, you should be able to:
1. Understand the relationship between hazardous wastes, human health and the health of the environment.
2. Examine chemicals policy and its effects worldwide, emphasizing Europe and the United States (especially California).
3. Examine leadership and innovative solutions regarding environmental justice, green chemistry, and other political, social, and environmental issues.
4. Discuss hazardous materials technology and hazardous wastes regulations.
5. Examine the role of environmental studies in a changing society such as its significance in industry, the health field, waste management, energy technology, agriculture, and transportation.
6. Analyze the impact of hazardous wastes on various cultural, ethnic, socioeconomic, and gender groups.
7. Understand how to integrate regulatory compliance, sustainable ethics and employee training into institutions and businesses.
8. Explain various sustainable career opportunities in pollution prevention, environmental justice, green chemistry, hazardous materials technology.

4) COURSE MATERIALS
Required: Readings will be available on my webpage (downloaded, linked) or handed out in class.

5) SCHEDULE
Please see the Tentative Class Schedule list. Note that the readings are to be read in advance of the corresponding class meeting date.

6) SUGGESTIONS/TEACHING METHODS
This course will cover a large amount of material in a short amount of time. Therefore, it is imperative that you attend all lectures (you will be keeping a journal and journal entries will be a daily event), take good notes, and complete the readings prior to attending the lectures. Additionally, I would suggest that you take advantage of the effective and efficient learning strategies that I will present periodically throughout the course. My teaching style is designed to engage you in a more active fashion. In order to meet this goal, I will combine the following teaching methods: hands-on lectures which make use of videos, overhead transparencies, handouts, and slides; hands-on activities such as active group/discussion sessions (participation is crucial) and learning games; and, the use of various effective learning tools such as time management, note taking, memory techniques, concept mapping/timelines, the PQ3R method of reading, and cooperative study groups. To assure your success, please read and implement the information presented on the two study strategies handouts (available on my web page). Also, the BHES Division Student Handbook is available on line at http://bhs.deanza.edu/StudentHandbook.pdf as well as in the BHES Division Learning Resource Center (SC3101) in hard copy. The information in the Student Handbook applies in this course and students are held accountable for this information; it contains many helpful resources on success and classroom behavior.

7) REQUIREMENTS
- Attend all lectures and BE ON TIME (two late days, regardless of minutes, = at least one absence).
  1. **Journal and Active Class Participation**: Journal entries will be a daily class event and will include special 12:30-12:40 pm assignments (be on time), concept maps, lecture notes, group work, videos/DVD’s, stories, Internet searches and writings, discussions, thoughts, and video questions. Active participation is obviously crucial for completing journal entries. The journal should include all
discussion topics assigned by the instructor during class time (specifically, journal entry number, date, discussion questions, guest lecturers/panels, webinars, summaries). Journal instructions will be provided during the first few class meetings. The journal assignments are worth a total of 20% of your grade. Class Participation means exactly that and not the following: texting, using the Internet (SRC class time is an exception) or other electronic devices; these behaviors will impact your grade as these practices are inconsiderate and they distract other students and the instructor.

- If you are late, points will be taken off of your participation grade. If you miss a day, you must make up the missed lecture in the SRC (Stewardship Resource Center) for participation credit.

2. **Group Power Point Oral Report and Panel Discussion:** You will be required to complete a group PowerPoint oral report and panel discussion from your research on a case study, committee, initiative, law/policy, governmental agency, non-profit organization, document, book, or etc.. This project will require approximately 6 hours of researching and preparing for your class oral report and panel discussion; the guidelines will be discussed in full as you will receive further oral and written instructions. The group PowerPoint oral report and panel discussion is worth a total of 20% of your grade.

3. **Community-Based Assignment:** Attend a city council meeting, a conference, an event, or a community meeting (or watch a webinar) that relates to any of the class topics. In order to measure your understanding from your meeting, you will be required to complete a reflections report on what you learned. Lastly, you will be required to write and send a letter to a legislator based on your experience from your meeting. The assignment guidelines will be discussed in full; you will receive further oral and written instructions. This assignment is worth a total of 20% of your grade.

4. **Instructor-Guided Field Trip:** There will be one field trip that will take place out-of-class time (two days of class are cancelled in lieu of your attending this day-long field trip). The date for the out-of-class field trip will be on ______________ (on a F, S, S in May, most likely); Mark your calendars! Soon, this field trip will be discussed in full; you will receive further oral instructions. Additionally, there is a question sheet that will require completion after attending the field trip. The answers to these questions must be completed in your journal for full credit. Transportation is not provided and students will meet at the field trip destination; maps will be provided. Field trips are worth a total of 12% of your grade. For concerns about the field trip, please see the instructor.

5. **Environmental Career Opportunities Presentation:** Students will present in a “round table” (this will be low-key) class discussion on environmental career opportunities in the areas of pollution prevention, environmental justice, green chemistry, and hazardous materials reduction. Students will explore various websites to identify and assess current employment outlook (mainly in CA). The assignment guidelines will be discussed in full; you will receive further oral and written instructions. This assignment is worth a total of 10% of your grade.

6. **Final Assessment:** One final assessment that will cover material presented from class (journal entries) lectures, videos, handouts, discussions, stories, group work, etc. Unless otherwise stated, assessment questions will NOT come directly from the readings. One week prior to the final assessment you will be provided with an in-depth study guide that will further assist you in preparing for the assessment. The final assessment is worth a total of 18% of your grade.

8) **GRADING CRITERIA**

- Journal and Active Class Participation (journal complete, cooperative group work)= 20% (graded week 9) 90-100= A
- Group Power Point Oral Report and Panel Discussion = 20% (20 hours) 80-89= B
- Community-Based Assignment 20% (20 hours) 65-79= C
- Instructor-Guided Field Trip 12% 55-64= D
- Environmental Career Opportunities Presentation 10% 0-54 = F
- Final Assessment = 18%

100% TOTAL
9) ADDITIONAL INFORMATION/POLICIES

1. **General Information**: Please be prepared to dedicate sufficient time and energy to this course (attending class and using and studying the course materials). Students are expected to check the lecture schedule daily.

2. **Fundamental values of academic integrity**: This class is based upon honesty, trust, respect, fairness, and responsibility. I always appreciate your cooperation. As in all classes, cheating and plagiarism are **not tolerated**; there will be consequences!

3. **Safety and Evacuation Procedure**: Please know the correct procedures to follow in the case of an earthquake or another emergency.

4. **Final Assessment, Assignments, Add/Drop Rules, Grades**:
   a. The final assessment must be taken during the scheduled time (except under extraordinary circumstances).
   b. You **cannot pass** the course without taking the final assessment. In the event of an illness or emergency on the day of the final assessment, you have 24 hours to notify me of your circumstances on my office phone.
   c. Assignments are due on the dates listed in the lecture schedule. Late assignments will not be accepted (except under extraordinary circumstances). **Please see “flex” matrix on page 4.**
   d. Add/drop: See policies and procedures in the “Schedule of Classes.” It is your responsibility to follow add and drop rules (Please remember this: if you drop correctly= W, incorrectly= F).
   e. You may access your final grades through the Star System [408-777-9394 or 650-917-0509] or the Internet [https://regserv.fhda.edu/da-grades.html].

**PLEASE NOTE**: There is a fine line between my helping you to be successful and my enabling you on late assignments. **I want you to be successful** and will be available to help you as needed. Remember, at work, you cannot be late with deadlines. Therefore, see my policy on your turned-in assignments below. Please keep this handy in your journal by making a copy of this section (the matrix below) of your syllabus:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
<th>Points off</th>
<th>Last accepted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group PowerPoint Oral Report and Panel Discussion (must present on the day that you signed up for in class)</td>
<td>Varies</td>
<td><strong>CANNOT BE LATE</strong></td>
<td>When signed up</td>
</tr>
<tr>
<td>Community-Based Assignment</td>
<td>5/10/10</td>
<td>10% off per day</td>
<td>5/17/10</td>
</tr>
<tr>
<td>Journal and Active Class Participation</td>
<td>6/2/10</td>
<td><strong>CANNOT BE LATE</strong></td>
<td>6/2/10</td>
</tr>
<tr>
<td>Environmental Career Opportunities Presentation</td>
<td>6/7/10</td>
<td><strong>CANNOT BE LATE</strong></td>
<td>6/7/10</td>
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</tbody>
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“I don’t really know why I care so much. I just have something inside me that tells me that there is a problem and I have to do something about it. And I’m sure it’s the same voice that is speaking to everyone on this planet, at least everybody who seems to be concerned about the fate of the world, the fate of this planet.”

Wangari Maathai, Kenya’s Green Belt Movement and 2004 Nobel Peace Prize Recipient
**Week:**

<table>
<thead>
<tr>
<th>ASSIGNMENT DUE DATES</th>
<th>This Week’s Topics</th>
<th>My Webpage (links, downloads), Websites, and/or Handout Reading Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• 4/7- Hazardous wastes, human and environmental health: Examine and discuss written documents from the Committee on Environmental Safety and Toxic materials (Bill Monning is one committee member); National e-waste law?</td>
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<tr>
<td></td>
<td>*Student PowerPoint oral reports and panel dates vary depending upon the topic. See your date on sign-up sheet. Journal Entry (JE) #1</td>
<td>• National e-waste law?</td>
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<tr>
<td><strong>Week 2: 12, 14 April</strong></td>
<td>• 4/12- Chemical Law and Policy: Examine chemicals policy, overview, California green chemistry laws, the Take Back Initiative Partnership (California Universal Waste Law of 2006)</td>
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<tr>
<td>Journal Entry #2</td>
<td>• 4/19- Class canceled in lieu of future class weekend field trip</td>
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<td><strong>Week 3: 19, 21 April</strong></td>
<td>• 4/26- DTSC: websites, webinar, calendar of events; guest lecturer: Environmental Justice</td>
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<td>• 4/28- Purpose of hazardous materials technology? Role of environmental studies in a changing society (industry, health, waste, energy, agriculture, transportation); Pollution prevention, Precautionary Principle; Environmental Justice: What should policy response be? How do we plan differently?</td>
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<td>Journal Entry #3</td>
<td><strong>5/3- Cont.:</strong> What detailed instructions would you use to implement these green chemistry laws?; Webinar- U.S. EPA: Design for the environment</td>
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<td>• 5/5- Guest Lecturer: Ed Quevedo, Paladin Law Group: Describe hazardous materials and wastes regulations; Distinguish among the various air, water, soil, and health and safety regulations/statutes. Hands-on: Analyzing contaminants of concern- two lists: clean-up site verses multi-vitamins</td>
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<td><strong>Week 4: 26, 28 April</strong></td>
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<td></td>
<td>• DTSC</td>
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<td>• EDF (studies evaluations of REACH and compares with TSCA)</td>
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<td>Journal Entry #4</td>
<td><strong>5/10- Local Case Study:</strong> NPR: Hazardous chemical concentrations in the soil, ground water; pathways: how much exposure, risk assessment</td>
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<td><strong>Week 5: 3, 5 May</strong></td>
<td>• 5/12- Other Local Case Studies: S.F. Bay oil spills, Lehigh Cement Plant, Bayview-Hunters Point, West Port of Oakland; our food systems</td>
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<td></td>
<td>• 5/10- Local Case Study: NRP: Hazardous chemical concentrations in the soil, ground water; pathways: how much exposure, risk assessment</td>
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<td>Journal Entry #5</td>
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<td><strong>Week 6: 10, 12 May</strong></td>
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<td>• Local case study: NRP</td>
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<td></td>
<td>• Other local case studies</td>
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<td><strong>DUE 5/10:</strong> Community-Based Assignment</td>
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<td>Journal Entry #6</td>
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**Assignment Due Dates**

- **Week 1:** 5, 7 April
  - Review course syllabus
  - Introduction to Pollution Prevention, Hazardous Wastes, and Environmental Justice
  - Hazardous wastes, human and environmental health

*Student PowerPoint oral reports and panel dates vary depending upon the topic. See your date on sign-up sheet. Journal Entry (JE) #1

- **Week 2:** 12, 14 April
  - Questionnaire Due
  - Chemical Law and Policy

- **Week 3:** 19, 21 April
  - Global leaders in green chemistry
  - E.U.: REACH, WEEE Directives
  - June 8 is Election Day

- **Week 4:** 26, 28 April
  - DTSC
  - Role of environmental studies in a changing society
  - Pollution prevention, Precautionary Principle

- **Week 5:** 3, 5 May
  - Implementing green chemistry laws
  - Designing for the environment
  - Hazardous materials and wastes regulations

- **Week 6:** 10, 12 May
  - Local case study: NRP
  - Other local case studies

**Reading Topics**

- Take Back Initiative Partnership
- California Universal Waste Law of 2006
- DTSC
- SVTC
- RCRA, TSCA
- National e-waste law?

**Websites and Handouts**

- California Green Chemistry laws
- Webinar- U.S. EPA: Design for the environment
- Contaminant list website(s)
- NRP- 2003 EPA evaluation (indoor air pathway), etc.
- California Coastal Commission
- Newspaper articles and radio broadcasts
- Lehigh Cement Plant
- City of Cupertino
- Bayview-Hunters Point and EPA and EIR
- EJ websites
- West Port of Oakland: California Watch, etc.
- Food websites
<table>
<thead>
<tr>
<th>Week: ASSIGNMENT DUE DATES</th>
<th>This Week’s Topics</th>
<th>Text Chapters and Pages to Read</th>
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</thead>
</table>
| **Week 7: 17, 19 May**    | - Polluton Prevenpon: systems approach  
- Prevenon of toxic chemicals | - EWG  
- Center for Science in the Public Interest  
- Book: Slow Death by Rubber Duck  
- Book: The Body Toxic  
- The Story of Stuff |
| **Journal Entry # 7**     | 5/17- Pollution Prevention: Thinking at a systems level; manufacturing issues, concentrations, macroproduction  
5/19- Books showing examples of prevalence of toxic chemicals: “Slow Death by Rubber Duck”, “The Body Toxic” |  |
| **Week 8: 24, 26 May**    | - Regulatory compliance, ethics, and employee training  
- SMP | - Websites: FHDA, DAC: CEAG, CEAG and SMP, CEAG and STARS  
- ISO 14001, EMS, SMP’s |
| **Journal Entry #8**      | 5/24- Integrating regulatory compliance, ethics, and employee training into institutions: Case study: FHDA, DAC, CEAG and SMP/STARS—Guest panel discussion  
5/26- Guest Lecturer: Ed Quevedo, Paladin Law Group: Continue regulatory compliance, ethics, and employee training in institutions, business, government; greenwashing |  |
| **Week 9: 31 May, 2 June** | - Circular learning: putting it all together  
- June 8 is Election Day  
**DUE 6/2- Journals collected for grading!**  
Must be numbered correctly (according to the journal checklist handed out in class). No late journals accepted. | 5/31- Memorial Day Holiday- Remember, honor, and enjoy  
6/2- Circular learning: teaching one another, what have you learned thus far in class? |
| **Journal Entry #9**      | 6/7- Explore environmental career opportunities in pollution prevention, environmental justice, green chemistry, and hazardous materials reduction. CA Green Chemistry Initiative webcast on 6/9.  
6/9- CA Green Chemistry Initiative webcast. Student presentations on sustainable careers searches; Identifying and assessing current employment outlook (mainly in CA). | Various websites for exploring environmental career opportunities in pollution prevention, environmental justice, green chemistry, and hazardous materials reduction.  
CA Green Chemistry Initiative webcast on June 9th |
| **Week 10: 7, 9 June**    | - CA Green Chemistry Initiative webcast  
**DUE 6/7- Environmental Career Opportunities Presentation**  
**June 8 is Election Day** |  |
| **Journal Entry #10**     | 6/14- Sustainable careers in pollution prevention, environmental justice, green chemistry, and hazardous materials reduction; Guest Panel.  
6/16- Moving toward a better world, a truly sustainable future. | Various websites for exploring environmental career opportunities in pollution prevention, environmental justice, green chemistry, and hazardous materials reduction |
| **Week 11: 14, 16 June**  | - Exploring environmental career opportunities  
- Sustainable future |  |
| **Journal Entry #11**     | 6/21- Class canceled in lieu of past field trip  
6/22- Final Assessment- Includes class information and readings from week one through week eleven. |  |