

ENGINEERING 138

Introduction to Environmental Engineering

Spring 2003

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Grading:	Homework	15%
	WebQuest	25%
	Exam I	30%
	Exam II	30%

Homework: Homework will be due at the end of the class on the due date.

WebQuest: A WebQuest is an inquiry-oriented activity in which most or all of the information used by learners is drawn from the Web. WebQuests are designed to use learners' time well, to focus on using information rather than looking for it, and to support learners' thinking at the levels of analysis, synthesis and evaluation. We will be designing WebQuests, which have an environmental engineering/science focus for middle-school students at Truman Middle School (TMS), a magnet school for science and mathematics in Fontana, California. The WebQuests will be required to address how these environmental topics affect society, how society affects the handling of environmental problems, or both. All students will be required to give a presentation on their WebQuest during class. Successful WebQuests will then be used by the middle-school students at TMS and potentially at other middle schools. Links to informational pages on WebQuest design will be available on the E138 course webpage. *This will satisfy the Integrative Experience requirement.*

Exams: They will be traditional problem-solving exams.

Course Webpage: <http://www3.hmc.edu/~cardenas/e138.html>

ENGINEERING 138: Spring 2003--Tentative Schedule

Jan 22	Introduction
Jan 27	Balance equation
Jan 29	Fluids; mass transport
Feb 3	Examples: rivers, lakes, estuaries
Feb 5	Water pollution chemistry
Feb 10	Water pollution
Feb 12	Surface water pollution
Feb 17	Surface water pollution
Feb 19	Groundwater pollution
Feb 24	Groundwater pollution
Feb 26	Exam I
Mar 3	Hazardous waste
Mar 5	Hazardous waste
Mar 10	Risk Assessment
Mar 12	Risk Analysis
Mar 17	Break
Mar 19	Break
Mar 24	Air pollution
Mar 26	Air pollution
Mar 31	Photochemical smog
Apr 2	Global warming
Apr 7	Global warming
Apr 9	Ozone layer
Apr 14	Ozone layer
Apr 16	Exam II
Apr 21	Webquest presentations
Apr 23	Webquest presentations
Apr 28	Webquest presentations
Apr 30	Webquest presentations