LA Valley College Spring, 2012

**Environmental Science 22:** The Human Environment: Physical Processes Lab
**Section Number:** 1294 (Wed 11:20a – 2:30p) AHS / 152

**Course Description:** Introductory lab course in which students will work individually and in teams to investigate the causes and consequences of key environmental issues. Field sampling, laboratory procedures and data analysis skills are emphasized as we explore our natural world. Particular attention is paid to water, energy, consumption, food, sustainability, waste and recycling. **(2 Units)**
**Co-requisite:** Environmental Science 1 **Transfer credit:** UC: CSU

**Instructor:** Meredith Leonard **Office:** AHS / 304
**Phone:** (818) 778 - 5595 **Student Drop-in Hours: M** 4:15-4:45p & **W** 2:30-2:45p
**Email:** leonarml@lavc.edu **Instructor web resource:** http://leonardlavc.weebly.com

**Tentative Schedule** *(subject to change—it is your responsibility to keep current)*

| **Week:** | **Dates:** | **Topic / Assignment / Readings:** |
|---|---|---|
| 01 | Feb 08 | Introduction – Water Audit* |
| 02 | Feb 15 | "Cadillac Desert", The Scientific Method |
| 03 | Feb 22 | Tujunga Wash |
| 04 | Feb 29 | Streams & Rivers |
| 05 | Mar 07 | Groundwater |
| 06 | Mar 14 | S & R, GW (continued) |
| 07 | Mar 21 | Chaparral |
| 08 | Mar 28 | Water Quality Parameters |
| **09** | **Apr 04** | **Spring Break** |
| 10 | Apr 11 | Water Quality Testing |
| 11 | Apr 18 | Recycling Center |
| 12 | Apr 25 | "A Chemical Reaction" |
| 13 | May 02 | Life Cycle Assessment |
| 14 | May 09 | "How green is our campus?" campus tour (group project) |
| 15 | May 16 | Field Mapping (GPS & Compass) |
| 16 | May 23 | Green campus presentations |
| 17 | May 30 | **Final Exam, Wed. May 30th, 10:30am – 12:30pm** |

* "LabWrite": http://www.ncsu.edu/labwrite/

**Required Materials (to be brought to <u>every</u> class):** All students are required to bring **a basic scientific calculator** to class. The calculator should perform basic data manipulation functions--such as adding, subtracting, multiplying, dividing, determining squares and square roots--and have a single, rather than multiple, memory that is easy to use. Some additional features you should look for include:

- Parentheses **( )** keys
- A $\mathbf{y^x}$ key
- A reciprocal **(1/x)** key
- Ability to do simple statistics, including means $(\bar{x})$ and standard deviations $(\sigma)$
- An $\mathbf{e^x}$ key
- A **LN** (natural log) key
- An exp or **EE** key

You should expect to spend around $20.00 or less.

Also, purchase a **stapler** & **flash drive**. Along with your calculator, bring these items to lab every time we meet. Dress comfortably; bring sunscreen, hat, walking shoes (be prepared to be outdoors).

Also, all students must have **Internet** access. There are computer labs on campus, if you don't have access at home. Also, all registered students have Internet privileges on campus (through the LAVC

Universal Internet Access System - UIA System). Several of the assignments will require web-browsing and email capability.

**Grading:** There will be only **one exam** for this class. The exam (approximately **150 points**) will consist of multiple choice, true-false, short answer, and fill-in. You will be required to bring a Scantron form (882 or 882-ES). Each of your labs (conducted both in- and outside of class) will be worth **40 points**. You will have the option to drop your lowest individual lab score. Therefore, the majority of your course grade will be based on your participation in and completion of laboratory exercises and one individual and one group project (paper, Power Point, or poster presentation of an environmental topic not covered in class -- further explanation will be provided). We will have at least one off-campus field trip this term (date: to be determined). Take notes. You will be submitting them at the end of the semester. They will be worth the equivalent of one lab (**40 points**) toward your final grade.

**Grading** will be as follows:

**A** 90 – 100% **B** 80 – 89% **C** 70 – 79% **D** 60 – 69% **F** < 60%

**Extra Credit/ "Enrichment Activities": max 35 points**
Ask me about the "Service Learning" Program at LAVC or the "research option" (with a limit of **four** per student; one per month). Details will be discussed in class.

**Class Policies:** I expect students to come to class prepared, and to treat me and fellow students with courtesy and respect. **Academic dishonesty (including, but not limited to, cheating / plagiarism) will not be tolerated!** Anyone found to be plagiarizing or cheating on an assignment will receive a zero (fail) on that assignment or exam, and be referred to the Vice President of Student Services for further disciplinary action (per "Standards of Student Conduct", schedule of classes).

Regular **attendance** is encouraged. If you stop attending class (or wish to drop) on or before **May 4**, 2012 for Spring Semester 2012, you must drop the class yourself – officially – by telephone, internet or Office of Admissions and Records. Failure to do so may result in a grade of 'F' in this class.

Make sure to exchange **contact information** (phone & email) with *several* of your classmates. Just in case circumstances force you to miss a class, you will need to contact one of your classmates to find out what you missed. *Without prior approval / a doctor's note,* **NO MAKE-UP EXAMS** will be given; **NO LATE ASSIGNMENTS** will be accepted. Communication is key!

If you are a student with a disability & require classroom accommodations, please let me know & be sure to contact **Services for Students with Disabilities** (Student Svcs Annex, 1st Floor: 818-947-2681 or TTD 818-947-2680 or email: ssd@lavc.edu).

Do you qualify for **Financial Aid?** Call 818-947-2412 or consult their website: www.lavc.edu/studentservwebsite/financial/index.html

**What you should expect to get out of this course:**

**Course Objectives:** Demonstrate ability to identify, gather and evaluate internet-, field-, and lab-based scientific data. Demonstrate ability to use basic computer programs to store data, perform simple analysis and produce graphs, maps and images. Operate basic field equipment and perform basic monitoring, data collection, and mapping tasks. Conduct an analysis of human impacts on the environment (small-scale). Discuss appropriate non-polluting and low emission alternatives to conventional energy. Evaluate campus programs and buildings for environmental "friendliness" and prepare a report detailing problems and suggested improvements.

**Student Learning Outcome:** Students will use the scientific process to analyze human impact on the environment.

*REMEMBER TO **TURN OFF PHONES** DURING CLASS!*