

DRAFT: SUBJECT TO REVISION
FIELD STUDIES OF SOILS IN CALIFORNIA ECOSYSTEMS
Soil Science 105/205

June 21 – July 10, 2010

Department of Land, Air and Water Resources
University of California, Davis

The course comprises 18 days of intensive classroom and field study, mostly in the field, away from Davis. Five quarter units. The course is offered through UC Summer Sessions (SSC 105/SSC 205 Special Session). See the web site at:

http://summer-sessions.ucdavis.edu/special_off.cfm?goto=soil

For SSC 205, an extra written project that focuses on the application of some aspect of the course to a natural resource issue that involves soils is required. Please contact Randy Southard to discuss the scope of the graduate project prior to registration for SSC 205.

Instructor: Randy Southard, rjsouthard@ucdavis.edu, 530-752-7041.

Grading: Exam, course summary written report, field mapping exercise, quizzes. For SSC 105, each accounts for 25% of the grade. For SSC 205, these four assignments, plus the additional written project, each account for 20% of the grade.

Text: Keys to Soil Taxonomy, 11th ed., 2010. Available for download on line at http://soils.usda.gov/technical/classification/tax_keys/ or purchase from Randy Southard.

Schedule:

<u>DATE</u>		<u>TOPIC OR FIELD LOCATIONS. OVERNIGHT STOP UNDERLINED</u>	
JUNE	21	Monday	8 – 5 p.m. Course introduction, logistics. Introduction to soil morphology, classification, genesis, and mineralogy. <u>Davis*</u> .
	22	Tuesday	8 – 5 p.m. Soil morphology, classification, genesis, and mineralogy continued. Afternoon: Soils on valley fill, Sacramento Valley, Part I. <u>Davis</u>
	23	Wednesday	Soils on valley fill, Sacramento Valley, part II. Davis, Plainfield, <u>Davis</u> .
	24	Thursday	Rocks and soils in northern Sierra Nevada foothills. Sacramento, Auburn, Georgetown. <u>Vine Hill</u> .
	25	Friday	Sierran life zones transect on soils formed from andesitic materials. Placerville. <u>Silver Lake</u> .
	26	Saturday	Glacial geomorphology and soils. Carson Pass, South Lake Tahoe. <u>Tahoma</u> .
	27	Sunday	Desert loess and soil development on remnant lake shore features of Lake Lahontan (Olinghouse transect). Truckee, Reno, Wadsworth. <u>Pyramid Lake</u> .
	28	Monday	Travel to Eagle Lake Biological Field Station via Susanville. Begin mapping exercise. <u>ELBFS</u> .
	29	Tuesday	Eagle Lake Field Station mapping. <u>ELBFS</u> .
	30	Wednesday	Eagle Lake Field Station mapping. <u>ELBFS</u> .
JULY	1	Thursday	Eagle Lake soil-vegetation relations. <u>ELBFS</u> .
	2	Friday	Soils in the Great Basin. <u>Susanville</u> .
	3	Saturday	Soils, geology and vegetation in Lassen National Park. Chester, Lassen National Park, Old Station, McArthur. <u>Day Bench</u> .

4	Sunday	Soils and agriculture in the Fall River Valley; soils on volcanic landscapes. Fall River Mills, Burney. <u>Redding</u> .
5	Monday	Soils on valley fill, Sacramento Valley, Part III. Red Bluff, Corning. <u>Black Butte Lake</u> .
6	Tuesday	Coast Range hodge-podge: Coast Range valley fill, Clear Lake volcanics, Franciscan graywacke and serpentinite. Chrome, Elk Creek, Leesville, Lower Lake. <u>Hopland Research and Extension Center</u> .
7	Wednesday	Coastal redwoods and the ecological staircase, Mendocino Coast. Yorkville, Boonville, Albion, Mendocino. <u>Van Damme State Park</u> .
8	Thursday	Ecological staircase. Mendocino, Fort Bragg, Ukiah. Return to <u>Davis</u> .
10	Saturday	Exam 9:00-11:00 a.m.
14	Wednesday	Course summary written report due 5 pm
21	Wednesday	Written project for SSC 205 due 5 pm

SUPPLIES, EQUIPMENT AND COSTS

For classroom and field:

- 1 8-1/2 x 11 3-ring binder with notebook paper
- 1 8-1/2 x 11 clip board for field note taking
- 1 Pocket notebook for miscellaneous field notes
- 1 Plastic ruler
- 1 Felt-tip pen (e.g., Flair) with black ink for soil map work
- 1 2-m locking steel measuring tape
- 1 Road map/atlas of California (UCD bookstore, Target, WalMart)
- 1 10x hand lens - leather lace for neck lanyard
- Pencils with erasers, pencil sharpener
- 1 Keys to Soil Taxonomy, 2010, 11th edition. (see above)
- 1 Sturdy knife with sheath for soil excavation (Target, CVS, WalMart, Davis Lumber, Woodland Mercantile)
- 1 Calculator

Personal

Warm sleeping bag (bring a sheet for those warm nights), ground cloth, small tent (optional), air mattress or foam pad, towels, toilet articles, small first aid kit, sun screen, insect repellent, clothes for field (including hat, field boots, warm jacket and rain gear) and classroom (laundromats occasionally available during the trip), and water bottle for drinking water.

SANDALS AND OPEN-TOED SHOES ARE NOT PERMITTED FOR FIELD WORK.

Luggage limited to: 1 suitcase or duffel bag, 1 day pack, sleeping bag, pad, tent, camera case.

Estimate of Cost

See Summer Session Web Site:

<http://summer-sessions.ucdavis.edu/specialSession.cfm?goto=soil>

This fee covers campus fees, transportation, campground/lodging, and most meals while in the field.

Books, personal supplies, and other meals while in field are not included.

HEALTH INSURANCE IS NOT INCLUDED IN THE COURSE FEE.

- * While in Davis, out-of-towners can usually make arrangements to stay with others in the class. Otherwise, make reservations at a local motel (See www.usa-lodging.com/motels/califn/Davis.htm for more information).