

FIELD STUDIES OF SOILS IN CALIFORNIA ECOSYSTEMS

ESPM 123

Soil Science 105/205

June 22 – July 14, 2015

Department of Land, Air and Water Resources; Davis

Department of Environmental Science, Policy and Management; Berkeley

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/courses/field_courses.html

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.

Instructors: Ronald Amundson, 510-643-7890, earthy@berkeley.edu; Marco Pfeiffer (TA), marcopfeiffer@gmail.com

Grading: Exam, course summary written report, field exercise, and 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, 12th ed., 2014. Download from the NRCS website http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/class/?cid=nracs142p2_053580

DATE	TOPIC OF FIELD LOCATIONS. OVERNIGHT STOP UNDERLINED
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JUNE 22	Monday	9 – 5 pm. Meet in PES 2005. Course introduction, logistics. Introduction to soil formation, classification, ratings. <u>Davis</u>
23	Tuesday	8 – 5 pm. Soil development western Sacramento Valley. <u>Davis.</u>
24	Wednesday	Major shopping, packing, and organization day. <u>Davis.</u>
25	Thursday	Depart Davis. Jepsom, Delta, Ione. <u>Angels Camp</u>
26	Friday	Transect of lithologies in central Sierra. <u>Green Creek, Bridgeport</u>
27	Saturday	Drainage sequence, <u>Green Creek, Bridgeport</u>
28	Sunday	Mono litho and topo studies, <u>Oh Ridge, Mono Lake</u>
29	Monday	Mono Glacial Moraine chronosequence, <u>Oh Ridge, Mono Lake</u>
30	Tuesday	Yosemite transect, <u>Millerton Lake, SP</u>
1	Wednesday	Climosequence, Sierra Nevada <u>Shaver Lake</u>
2	Thursday	Climosequence, Sierra Nevada <u>Buck Meadows</u>

- 3 Friday Climosequence, Sierra Nevada, **Kearney Field Station**
- 4 Saturday Chronosequence, eastern SJ Valley, **Kearney Field Station**
- 5 Sunday Toposequence, eastern SJ Valley, **Westside Field Station**
- 6 Monday Toposequence, western SJ Valley, **Pinnacles NM**
- 7 Tuesday Coast Range, **Henry Cowells SP**
- 8 Wednesday Chronosequence, Santa Cruz marine terraces, **Henry Cowell Redwoods SP**
- 9 Thursday Hillslope transect, Coast Range, **Davis**

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 (Walmart, Davis Lumber)
- 1 Road map/atlas of California (UCD bookstore, Target, WalMart)
- 1 10x hand lens - leather lace for neck lanyard (Bookstore, Target)
- Pencils with erasers, pencil sharpener
- 1 Keys to Soil Taxonomy, 2014, 12th edition. (see above)
- 1 Sturdy knife with sheath or hand trowel for soil excavation (Target, CVS, WalMart, Davis Lumber)
- 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 backpack, suitcase, or duffel bag, 1 day pack, sleeping bag, pad, tent.

Estimate of Cost

See Summer Session Web Sites:

<http://summer-sessions.ucdavis.edu/fees/index.html>
http://summer-sessions.ucdavis.edu/courses/field_courses.html

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 http://travel.yahoo.com/p-hotel-474205-davis_hotels-j for more information).