

## Geography 486/586: Field Methods (Fall 2018)

### Faculty:

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**Meeting time:** We meet on **Fridays** from 9-3:30 (sometimes **earlier** or **later** depending on the day's agenda)

**Meeting place:** PH1-227 and 231, and various field locations in Southern and Central California ☺



Field Class, Serrano Valley CA (Spring 2018)

**Field Methods** introduces advanced students to variety of methodological approaches for exploring biophysical and human geographies. The course includes both quantitative and qualitative methods.

**Field Methods** is designed to enhance your skills in recognizing real world geographic patterns and features, developing methods of collecting, describing, interpreting and analyzing geographic data in the field, and solving geographic problems. The course is experiential in nature. There will be a great deal of hands-on work as well as a significant amount of writing. Over the duration of the course, fieldwork will be concentrated in the following areas: biogeography, environmental issues, restoration, soil science, native California plants, low-altitude remote sensing, and GPS positional data collection.

**Goals:** By the end of this semester students will be able to: (i) gather data in the field using a variety of techniques, (ii) understand the advantages and limitations of gathering your own data, (iii) define a research question and determine the best method for gathering and analyzing data to address that question, (iv) write a well-structured research report, and (v) have a better knowledge of various physical and human environments in Southern California. In addition, because we will spend a lot of time working in groups, students will gain valuable experience in collaboration.

### Required Materials:

Turlo, J. 2005. *Guidelines for Writing Field Research Reports* (on beachboard).

### Recommended Reading:

Hay, I. 2012. *Communicating in Geography and the Environmental Sciences*. Oxford U. Press. This publication is a useful and general guide for writing reports and papers, and for making presentations.

**Additional reading including field excursion questions and assigned topical articles** will be posted on BeachBoard at least one week prior to each field day. BeachBoard is also where we will **post announcements** to the class. Please check your e-mail regularly as plans for field outings may change.

**Course Organization:** This class meets on **most Fridays** as a group and on one 3-day weekend during the fall semester. There are also dates set aside for individual or small group independent field-work (note that on some

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days the class will likely run past the scheduled 3:30pm end time; however, this time will be given back to you at a later date). Transportation will be **by carpool** to all sites. **Be prepared to offer to drive and/or share fuel cost.**

**Assignments:** This course is an intensive field and writing course. You will be graded on 6 reports. About one half of these reports will involve group work; a single group report will be submitted for a grade in these cases (see table to right). Individuals in the group must determine the work distribution and “sign-off” on the final copy. Assignments should be submitted in digital form. Reports should look professional and will be graded on thoroughness and accuracy, as well as layout and style (see Hay 2012 and Turlo 2005 for details on what is expected).

For the River Ridge Ranch trip and the Final Project, students will form groups based on their interest in the different topics.

Assignment Topics	Type	Points
Palos Verdes: Causes of type conversion in Coastal Sage Scrub (CSS) ecosystem	Individual	50
River Ridge Ranch: Vegetation sampling and low-altitude aerial imaging (aka “drones”)	Group	100
Serrano Valley: Veg alliance, UAV, sampling and analysis	Group	100
Aerial image analysis: supervised classification in ArcMap	Individual	50
Soil Sampling and Lab Analysis	Individual	50
Final Projects and Presentation	Group	150
<b>TOTAL</b>		<b>500</b>

**Grades:** Final course grades and grades for each of the submitted assignments are issued using a conventional point system as shown in the table to the right. Points earned by the student are awarded based on the quality of the fieldwork, attention to detail, clarity and thoroughness of work submitted, participation, and improvement over the course of the semester. Students will be required to complete all assignments, each of which varies in workload and point value. There are *no* traditional exams (*Yippeee!*).

“A”	≥ 90% of possible points
“B”	80 - 89.9% of possible points
“C”	70 - 79.9% of possible points
“D”	60 - 69.9% of possible points
“F”	< 60% of possible points

**Late Assignment Policy:** The due date for each assignment will be specified by the instructors at the time the work is assigned. Students who turn in work late will be penalized in the form of a 5% point deduction for each day that the work is submitted late. Students are therefore encouraged to make a special effort to turn assignments in on time to maximize their potential score and avoid getting behind. This course moves quickly from one topic to the next!

**Plagiarism:** Plagiarism is the act of taking the ideas or work of another and passing it off as one’s own. Plagiarism will not be tolerated and is grounds for expulsion. In this class you will be encouraged to work in pairs or groups. If you use material created or gathered by a fellow student, you must note this on your paper/report. Likewise, if you co-author a report for the class, it must be clear to us that the work is a joint project. As is the case for all of your academic work, be sure to give credit to all of your sources of information (e.g., photographs, maps, written descriptions, etc.). See CSULB research-related policies at: <http://www.csulb.edu/divisions/aa/research/our/information/policies/cheating/>.

**Absences and Tardiness:** Field Methods meets only once per week, so each class session will be intensive. Every effort should be made to attend each class session since **absences are extremely difficult to overcome**. If you know you will be absent from a class session, please inform the instructors prior to that class. It is your responsibility to catch up on any missed course material.

Field classes will begin promptly at 9:00am unless otherwise noted. You must arrive to class on time. Tardiness disrupts class and, in our case, it may mean that you are left behind (it has happened)!

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**Food and Drinks in the Classroom:** We do not mind if you snack or drink in class during our morning classroom sessions. We would rather have you eat in class than starve in the field! Note, however, that our Department policy prohibits eating or drinking (except water) in the computer labs. As a courtesy to your colleagues and faculty, please clean up after yourself.

**Transportation:** We require that all students carpool. The only exception to this rule is if you are coming from far away from campus and it will be much more convenient for you to return home directly from the field rather than return to campus. Carpool arrangements with your colleagues should be agreed upon prior to leaving campus. Passengers in carpools are expected to contribute to the driver for the cost of fuel.

CSULB requires that all drivers (their cars) be insured for a minimum of \$15,000 personal injury for one person, \$30,000 for personal injury for two or more persons, and \$5,000 for property damage. Cars driven by students on field trips must be properly registered, insured, and equipped with working seat belts and other safety equipment for the driver and each passenger.

**University Withdrawal Policy:** It is the **student's** responsibility to withdraw from a class. Withdrawal from a course after the first two weeks of instruction requires the signature of the instructor and department chair, and is permissible only for serious and compelling reasons. The deadline to withdraw for the Fall semester without a "W" is **September 10, 2018**. During the final three weeks of instruction, **withdrawals are not permitted** except in cases such as accident or serious illness where the circumstances causing withdrawal are clearly beyond the student's control and the assignment of an "incomplete" grade is not practical.

### **Things to bring on Field Days:**

- An open and inquiring mind!
- Notebook or other device for making notes while standing
- Sunglasses, sunscreen and hat
- Muddy boots and/or dusty sandals, or walking shoes if in the city
- Camera (phone) (**required!**)
- GPS, compass, map of area (optional, unless we provide for assignment)
- WATER!
- Cell phone
- Snacks and lunch (some days we will need sack lunches)
- First Aid (bee allergies anyone?)

**Final Note:** We do a lot of walking each week. If for any reason you think this will be difficult for you, please let us know.

\*\*\*\*\*IF AT ANY TIME YOU NEED HELP, PLEASE ASK FOR IT! \*\*\*\*\*

**Tentative Course Schedule**  
**(Times are subject to change due to course progress and weather conditions!)**

Week	Date	Prof	Scheduled Activity	Location	Time*
1	Aug 31	PL/SW	<b>Course Introduction:</b> <ul style="list-style-type: none"> <li>• Student and instructor introductions</li> <li>• Syllabus and schedule review</li> <li>• Course paperwork [Read Turlo in advance]</li> <li>• Prep for Palos Verdes field trip</li> </ul>	CSULB	9:00am-12:00pm
2	Sept 7	PL/ SW	<b>One-Day Field Trip:</b> Type Conversion in Coastal Sage [Read Engelberg et al. and “Sampling” on BB]	Palos Verdes	8:00am-3:00pm
3	Sept 14	PL/SW	<ul style="list-style-type: none"> <li>• Lab work for PV</li> <li>• Prep for River Ridge Ranch and UAV/field work.</li> <li>• Putting ideas to paper and writing style. [Read Hay before class!]</li> <li>• GPS lecture and practicum</li> </ul>	CSULB	9:00am-12:00pm
4	Sept 21	SW/PL	<b>Virtual Field Trip:</b> <ul style="list-style-type: none"> <li>• Remote sensing lecture</li> <li>• UAV flight planning and demo (SW)</li> <li>• Intro to River Ridge Ranch study topics (PL)</li> </ul>	CSULB Computer Lab*	9:00am-1:30pm
5	Sept 28-30 Overnight!	PL/ SW	<b>3-Day Field Trip:</b> <ul style="list-style-type: none"> <li>• UAV and veg sampling</li> <li>• Friday afternoon and Sunday morn veg work</li> <li>• Saturday UAV work and GPS work with students and faculty</li> </ul>	River Ridge Ranch near Porterville, CA	Leave Friday am; return Sunday eve
6	Oct 5	PL/ SW	<ul style="list-style-type: none"> <li>• Field trip debrief</li> <li>• Photogrammetry lecture and Pix4d software intro (SW)</li> <li>• Begin imagery analysis</li> </ul>	CSULB Computer Lab*	9:00am-12:00pm
7	Oct 12	PL	<ul style="list-style-type: none"> <li>• Continue lab work</li> <li>• Prep for Serrano or La Jolla Valley (LJV)</li> </ul>	CSULB	9:00am-12:00pm
8	Oct 19 Long day or overnight	SW/PL	<b>Field Trip: Serrano or LJV</b> <ul style="list-style-type: none"> <li>• GPS groups for accuracy and training sites (PL)</li> <li>• UAV image acquisition flights (SW and DM)</li> <li>• Pre/post fire analysis?</li> </ul>	Pt. Mugu State Park	All Day or Overnight
9	Oct 26	SW	<ul style="list-style-type: none"> <li>• Basic image processing lecture</li> <li>• Supervised ground cover classification using ArcMap (+ Esri e-Learning exercise)</li> </ul>	Computer Lab	9:00am-1:30pm
10	Nov 2	SW/PL	<ul style="list-style-type: none"> <li>• Continued lab work</li> <li>• Prep for soil sample collection and analysis</li> <li>• Discuss final project topics and proposal writing</li> </ul>	Computer Lab	9:00am-12:00pm
11	Nov 9	SW/PL	• Soil sampling and testing (multiple methods)	TBD: Wetlands?	9:00pm-2:00pm
12	Nov 16	SW/PL	<ul style="list-style-type: none"> <li>• Lab work for soils</li> <li>• Proposal development, finalize final projects</li> </ul>	Enviro Lab	9:00pm-12:00pm

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13	Nov 23	<b>NO CLASS – Fall Break</b>			
14	Nov 30	PL/SW	• Field day for final projects	TBA	9:00am-12:00pm
15	Dec 7	PL/SW	• GPS field final data collection • Team work/presentation and write-up prep	CSULB/Field	9:00am-12:00pm
16	Dec 14 <b>Final</b>	PL/SW	• Conclusions and final presentations • PARTY/POTLUCK???	TBA	9:00am-12:00pm
<b>16</b>	<b>Dec 20</b>		<b>Final Reports Due</b>		

\* All finish times are *approximate*. Depending on traffic and work pace, we may arrive back at campus later. We recommend that we leave early on long field days rather than return late. Our preference would be to work from 7:00am until 3:30pm to avoid heat and traffic.