

Plantbi 375 – Workshop on Teaching

Fall 2018 Syllabus

Instructor: Shauna Somerville (ssomerville@berkeley.edu)

Time: Tuesdays, 4 to 5:50 pm

Location: VLSB 2030 (room for 30 students)

Course # 26607

Units: 2

General Information: This seminar is designed to prepare students for being effective teachers. We will consider both theory and practice, including strategies for and applications of “Scientific Teaching” (Science 304, 521-522, 2004). This course has two goals: discussion of questions and problems relating to the GSI's teaching, and learning how to design and execute a whole course. Effective teaching methods will be introduced by experienced GSIs and faculty. Students will participate in discussions of course design, lecture preparation, sample lecture presentation, and discussion of current literature on teaching. Finally, we will prepare a teaching statement, which is a typical component of an academic job application. This course qualifies for the GSI Teaching and Resource Center's Certificate in Teaching and Learning in Higher Education.

Rules and Requirements:

Prerequisites: Graduate student status







Repeat Rules: Course may be repeated for credit up to a total of 4 units

Additional Details:






Subject/Course Level: Plant and Microbial Biology/Professional course for teachers or prospective teachers with a focus on those in STEM fields

Grading: Offered for satisfactory/unsatisfactory grade only.

Office hours: by appointment

Date		Topic/Activity or Assignment/Reading
08/28	Class 1	Topics: Course overview and organization, introduction Activities: <ul style="list-style-type: none">organize microteaching schedule (sign up at Collaborations Page: New (Aug. 28) Date Selection - Microteaching Presentations) Collaborationsdiscussion of reading Reading: The Science of Teaching Science, Waldrup, <i>Nature</i> 523, 273 (2015) Reading: Handelsman et al., Chapt. 1: Scientific Teaching; Link: Handelsman Chap 1 Scientific Teaching.pdf 
09/04	Class 2	Topics: Examples of the state of the art in scientific teaching Activity: Discussion of readings Reading: Handelsman et al., Chap. 2 Active Learning; Link: Handelsman Chap 2 Active Learning.pdf  Reading: Students 101; Link: Arvidson 2009 Chronicle Higher Education.pdf  Reading: “Ten Simple Rules to Combine Teaching and Research; Link: Vicens 2009 PLoS CompBiol.PDF  Reading: Graduate Students’ Teaching Experiences Improve their Methodological Research Skills; Link: Feldon 2011 Science.pdf  Focus on the abstract of the Feldon (2011) article, and look at the evidence as desired. Our discussion of that paper will focus more on brainstorming "why is it so" and the implications of the findings, instead of the data that proves it.
09/18	Class 3	Topics: Learning styles Activity: Discussion of reading materials and assignments Reading: Learning Styles and Strategies; Link: Felder & Soloman_ Learning Styles and Strategies.pdf 

		<p>Also: http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSdir/styles.htm Assignment: Go to http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Learning_Styles.html Select <i>Index of Learning Styles</i> and take the self-scoring questionnaire for assessing learning preferences. Bring into class your <u>numerical</u> results Assignment: If you were to be tested (on Learning Styles, or a mechanism like DNA replication/cell division), how would you best learn the material? (i.e., what classroom activities or homework/study tools would work best for you?) What do you think would best help other dissimilar learner types? Come to class prepared to talk about the four categories of learning styles and find out how good your predictions are for teaching to other learning styles. Assignment: Read about Learning Styles Chart about the different learning styles. Consider which category you fall most into.</p>
09/25	Class 4	<p>Topic: Assessment versus evaluation Activity: Discussion of readings Reading: Is this a trick question? A short guide to writing effective test questions; Link: Clay A Short Guide Module 6.pdf Reading: Handelsman et al., Chapt. 3 – Assessment; Link: Handelsman Chap 3 Assessment.pdf Reading: Handelsman et al., Chapt. 4 - Diversity; Link: Handelsman Chap 4 Diversity.pdf Links to Center of Teaching and Learning Resources: CTL-Improve; CTL-Assessment and Evaluation</p>
10/02	Class 5	<p>Topic: Building a teachable unit Activity: Discussion of reading materials Reading: Handelsman et al. Chapt 5 - Teachable Unit; Link: Handelsman Chapter 5.pdf Reading (Optional): Teaching Guide for Laboratory Sections GSIs (http://gsi.berkeley.edu/teachingguide/labs/index.html) - we will not discuss in class Compilation of Teaching Plans from in-class assignment to build a teaching plan for a class on "Assessments". Link: Teaching Plans - Class on Assessment Strategies.pdf</p>
10/09	Class 6	<p>Guest lecture: Sophia Ewens (Department GSI Awardee last year) Topic: Students in distress, student misconduct, students with challenging behaviors. Activity: Discussion about reading. Reading: Students 101; Link: Arvidson 2009 Chronicle Higher Education.pdf Resources: Student Mental Health Fact Sheet Student Mental Health Fact Sheet <i>Be Well at Cal</i> Link: https://uhs.berkeley.edu/bewell <i>Mental Health Resources from CAPS</i> (Counseling and Psychological Services) Link: mental health resources at UCB CAPS.pdf <i>Dealing with students in distress. UC Berkeley Gold Folder to Assist Students in Distress.</i> Link: ucb_goldfolder.pdf <i>Assisting a Student in Distress</i> Link: https://sa.berkeley.edu/conduct/student-in-crisis</p>

		<p><i>Student Affairs Office</i> - Berkeley Honor Code, Student Code of Conduct document, Misconduct Reporting, etc. Link: https://sa.berkeley.edu/conduct/resources/home</p> <p><i>Students of Concern Committee</i> Link: https://sa.berkeley.edu/csi/socc</p>
10/16	Class 7-8	<p>Topic: Microteaching presentations</p> <p>Activity: Microteaching presentations and classmate feedback. There will be ~4-5 presentations in each of four classes.</p> <p>Microteaching presentation topics should science-based. The topic can be inside or outside your general research field, but it cannot be about your thesis research. Aim for presentation length of 15minutes. PowerPoint can be used. Presentations should be focused on the scientific method and have clear learning goals. It should include an introduction, data/results, discussion/significance, activities to enhance understanding (active learning) and activities to obtain feedback about learning.</p> <p>After each presentation, there will be 10 minutes for written and oral evaluation. We will discuss with the presenter strategies to enhance the presenter's teaching style. Print out and bring copies of the Blank Evaluation Form to class. Fill out an Evaluation Form for each presenter and hand-on these in at the end of class to the instructor. The written comments will be summarized and returned to the presenter in the next class.</p> <p>Blank Evaluation Form; Link: Blank Microteaching Evaluation Form.pdf </p> <p>Presenters:</p>
10/23	Class 8-9	<p>See Class 07-08 notes for additional information.</p> <p>Presenters:</p>
10/30	Class 9-10	<p>See Class 07-08 notes for additional information.</p> <p>Presenters:</p>
11/06	Class 10-11	<p>See Class 07-08 notes for additional information.</p> <p>Presenters:</p>
11/13	Class 12	<p>Topic: How to write a Teaching statement</p> <p>Activity: Discussion on how to write a teaching statement.</p> <p>Two examples of job advertisements asking for teaching statements:</p> <ol style="list-style-type: none"> 1. Assistant Professor - Plant Response and Adaptation to Climate Change - Department of Plant and Microbial Biology (JPF01648) - UC Berkeley AP Recruit.pdf  2. California State University-Monterey Bay Portal _ Assistant Professor of Plant Pathology.pdf  <p>Reading: Writing the Teaching Statement; Link: Writing the Teaching Statement _ Science _ AAAS.pdf </p> <p>http://www.sciencemag.org/careers/2006/04/writing-teaching-statement</p> <p>Reading: Write a Teaching Statement that Sings; Link: Writing a Statement that Sings.pdf </p> <p>https://chroniclevitae.com/news/1114-how-to-write-a-teaching-statement-that-sings</p>
11/19	noon	Submit draft Teaching Statement via bCourses
11/20	Class 13	<p>Topic: Draft Teaching statements</p> <p>Some examples of teaching statements: Cal Distinguished Teaching Awardees for 2018 (see "Read more ... in their own words")</p> <p>https://teaching.berkeley.edu/node/240</p> <p>Assignment: First draft of teaching statement (max 2 pages double spaced) -</p>

		submit bCourses by noon before class. Bring three printed copies to class. Activity: Review of colleagues' Teaching Statements in class
11/27	Class 14	Topic: Final Teaching Statements Activities: <ul style="list-style-type: none"> • Present revised Teaching Statement to class • Course wrap-up and reflection Assignment: Revise Teaching Statement prior to class.

Assignments:

Points	Assignments
40	Microteaching presentation
15	Critiques of Colleagues' Microteaching Presentations
10	Class participation in discussions, assignments
35	Teaching statement

Note 1: Attendance is mandatory. (As noted in your appointment letter, attendance at this seminar is required as a condition of your teaching assignment.) If you must miss a class, please notify the instructors and obtain their approval.

Note 2: A passing grade is based on accumulating at least 75 points.

Microteaching Presentation plus Critiques. Seminar topics should be science based. The topic can be inside or outside your general research field, but it cannot be about your thesis research. Aim for presentation length of 15 to 20 minutes. PowerPoint can be used. Presentations should be focused on the scientific method and have clear learning goals. It should include an introduction, data/results, discussion/significance, activities to enhance understanding (active learning) and activities to obtain feedback about learning. After each presentation, there will be 10 minutes for written and oral evaluation. The evaluations, with the names of all but the instructor's removed, will be returned to the presenter in the following meeting. After each microteaching module, we will discuss with the presenter strategies to enhance the presenter's teaching style.

Useful Sites and Articles (in addition to the GSI Teaching and Resource Center)

Handelsman, J., Miller, S., and Pfund, C. (2007) *Scientific Teaching*. The Wisconsin Program for Scientific Teaching, Madison and Roberts and Company, New York. Pp. 184.

Kober, N. (2015) *Reaching Students: What Research Says about Effective Instruction in Undergraduate Science and Engineering*. The National Academies Press. Free online at: <http://nap.edu/18687>

The University of Michigan Resource for Teaching and Learning

<http://www.crlt.umich.edu/tstrategies/teachings.php>

Merlot Resources for Teaching Strategies <http://pedagogy.merlot.org/TeachingStrategies.html>