



The Science Education  
Partnership & Assessment Lab  
San Francisco State University

## **Biol 860**

### **Advances in Biology Education Research**

#### ***Course Syllabus, Spring 2020***

- Instructor:** Kimberly Tanner, Professor of Biology  
Email: [kdtanner@sfsu.edu](mailto:kdtanner@sfsu.edu); Phone: 415-405-3438
- Schedule:** Fridays, 12 pm – 1:40 pm
- Location:** SEPAL Classroom, Hensill Hall 245, SFSU main campus
- Office Hours:** Wednesdays, 4-5 pm; Thursdays, 10-11am, anytime you want to talk in person, by phone, or by Zoom, just email me to arrange an appointment like you would with any colleague!
- Course credit:** 2 units; Grading may be + / - letter, CR/NCR.

#### **Course goals:**

- To develop graduate students with a scholarly grounding in biology education research
- To provide a forum to explore science teaching and learning from a research perspective
- To provide opportunities to develop facilitation, evaluative writing, and presentation skills
- To establish a seminar-based entry point into the content area of biology education



**You belong in this course!** I am excited to learn with each and every one of you. We are all here to support each other as we explore the world of discipline-based education research, mostly grounded in biology education. I have no doubt that you will do great things with the ideas you learn in this course because of who you are as a person and the values you bring with you from your culture, family, and life experiences. I invite you to bring your *whole self* into our biology learning community. Each of you brings cultural assets and personal perspectives that will allow you to make unique contributions in science and make the world a better place. *I encourage you to bring your personal perspectives and values to all you do in this course!* Please be confident that you can come to me with your questions, concerns, challenges, confusions, victories, and requests for help. ***I am here to support you and your success! Sí, se puede!***

**Course description:** *This course is co-constructed by the students and the instructor. All research articles that we read will be collaboratively chosen by the group. Additionally, all course sessions will be co-facilitated by teams of students. We will engage in reading primary research articles in the field, both classic papers and more recent publications, based on student input on the first day of the course.*



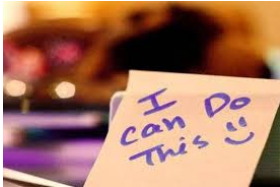
Students will reflect on each article and post this publicly on iLearn to share with colleagues in the course. Towards the end of the course, each student will develop a mini-grant proposal on a biology education research question of interest to them. Proposals will be peer reviewed in class to get constructive feedback and then shared in a brief oral presentation to celebrate each person’s mini-grant efforts.

**Student Learning Objectives:** Through participation in the Bio 860 course, we will...

- build a community of students with strong interests in biology education and research
- explore the research literature in science education with a focus on issues in biology
- compare and contrast biological science research and social science research
- practice writing evaluations of research articles that we read together
- develop a written mini-grant proposal based on each of our individual interests
- review and constructively critique mini-grant proposals developed by peers
- share an oral presentation on the mini-grant proposal that is highly interactive

**Course requirements:**


- Attend and actively participate in weekly seminar.
- Prepare weekly by completing readings and contributing to the discussion of articles.
- Write and post brief electronic reflections on each article for peers to learn from
- Co-facilitate at least one class discussion about one of our chosen research articles.
- Present a biology education research mini-grant proposal that includes a review of the literature in that sub-field.



**Course Components/Grading Scheme:**

COURSE COMPONENT	TOTAL POINTS	% OF GRADE
Weekly Reflections (14 @ 10 points each)	140	25%
Weekly Attendance and Participation (14 @ 10 points each)	140	25%
Journal Club Co-Facilitation	70	12.5%
Mini-Grant Written Proposal	70	12.5%
Mini-Grant Oral Presentation	70	12.5%
Final Semester Reflection	70	12.5%
<b>TOTAL</b>	<b>560</b>	<b>100%</b>



 <p>The Science Education Partnership &amp; Assessment Lab San Francisco State University</p>	<p><b>Biol 860</b> <b>Advances in Biology Education Research</b> <b><i>DRAFT SCHEDULE, Spring 2020</i></b></p>
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(The topic sequence is approximate and subject to modification.)

<b>Class #1</b> 1/31/20	<b>Class Topic:</b> Welcome, Introductions, Course Goals, and Exploring the Field of Biology Education Research
<b>Class #2</b> 2/7/20	<b>Class Topic:</b> Journal Club Team Assignments & Planning Time Introduction of Mini-Grant Proposal Assignment
<b>Class #3</b> 2/14/20	<b>Journal Club Discussion #1:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
<b>Class #4</b> 2/21/20	<b>Journal Club Discussion #2:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
<b>Class #5</b> 2/28/20	<b>Journal Club Discussion #3:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
<b>Class #6</b> 3/6/20	<b>Journal Club Discussion #4:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
<b>Class #7</b> 3/13/20	<b>Journal Club Discussion #5:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
	<b>Submit Mini-Grant Proposals</b>
<b>Class #8</b> 3/20/20	<b>Journal Club Discussion #6:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
<b>No Class</b> 3/27/20	<b>SPRING BREAK: NO CLASS! Have a fun and be safe!</b>
<b>Class #9</b> 4/3/20	<b>Mini-Grant Proposal Peer Review Panels</b>
<b>Class #10</b> 4/10/20	<b>Journal Club Discussion #7:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
<b>Class #11</b> 4/17/20	<b>Journal Club Discussion #8:</b> Article for Discussion: <i>To be determined by the group...</i> Co-Facilitators: who? and who?
<b>Class #12</b>	<b>Journal Club Discussion #9:</b>

4/24/20 Article for Discussion: *To be determined by the group...*  
Co-Facilitators: who? and who?

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**Class #13** **Mini-Grant Proposal Presentations**  
5/1/20 Presenters (n~7): *Schedule to be determined...*

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**Class #14** **Mini-Grant Proposal Presentations**  
5/8/20 Presenters (n~7): *Schedule to be determined...*

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**Class #15** **Mini-Grant Proposal Presentations**  
5/15/20 Presenters (n~6): *Schedule to be determined...*  
Making Bio 860 Better...

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**FOOD AND HOUSING INSECURITY AND SUPPORT**

Students experiencing economic hardships resulting in food insecurity, housing insecurity, or homelessness are encouraged to reach out to us or other faculty and staff members. SFSU has programs and resources in place to provide support with housing, food & other emergencies. Please reach out to us. We are eager to support all of you! <https://basicneeds.sfsu.edu>

**DISABILITY ACCESS**

Students with disabilities who need reasonable accommodations are encouraged to contact the instructor. The Disability Programs and Resource Center (DPRC) is available to facilitate the reasonable accommodations process. We are happy to support you in any way we can. The DPRC is located in the Student Service Building and can be reached by telephone (voice/415-338-2472, video phone/415-335-7210) or by email ([dprc@sfsu.edu](mailto:dprc@sfsu.edu))

**POLICY ON OBSERVANCE OF RELIGIOUS HOLIDAYS:** The faculty of San Francisco State University shall make reasonable accommodations for students to observe religious holidays when such observances require students to be absent from class activities. It is the responsibility of the student to inform the instructor, in writing, about such holidays during the first two weeks of the class each semester. If such holidays occur during the first two weeks of the semester, the student must notify the instructor, in writing, at least three days before the date that he/ she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. (*SFSU Policy F00-212*)

**STUDENT DISCLOSURES OF SEXUAL VIOLENCE**

SF State fosters a campus free of sexual violence including sexual harassment, domestic violence, dating violence, stalking, and/or any form of sex or gender discrimination. If you disclose a personal experience as an SF State student, the course instructor is required to notify the Title IX Coordinator by completing the form available at <http://titleix.sfsu.edu>, emailing [vpsaem@sfsu.edu](mailto:vpsaem@sfsu.edu) or calling 338-2032.

**To disclose any such violence confidentially, contact:**

- The SAFE Place - (415) 338-2208; [http://www.sfsu.edu/~safe\\_plc/](http://www.sfsu.edu/~safe_plc/)
- Counseling and Psychological Services Center - (415) 338-2208; <http://psyservs.sfsu.edu/>
- For more information on your rights and available resources: <http://titleix.sfsu.edu>

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**DEPARTMENTAL AND UNIVERSITY DEADLINES AND PROCEDURES:**

**Friday, February 14, 2020 – Last day to drop classes.** During the first two weeks of instruction, dropping a course(s) is permitted without academic penalty. No symbol is recorded on the student's permanent record. Students are responsible for making changes to their official academic schedule. If you decide not to attend a class you enrolled in, you must drop that class through GATOR REG during access hours. If you added a class during the first two weeks and then decide to drop, you also must drop through GATOR REG. As a courtesy, please notify the instructor that you are dropping.

**From Saturday, February 15 – Monday, April 27, 2020 – Withdrawal from a class.** After the first two weeks of instruction, withdrawal from a course is **not permitted except for serious and compelling reasons**. The "W" grade carries no connotation of quality of student performance and is not used as units attempted in calculating grade point average or progress points. The expectation of being dropped for nonattendance is **not** a sufficient reason for withdrawal. If the withdrawal is approved, the student will receive a "W". Requests for withdrawal are reviewed by Instructor and Chair. Students must submit an unofficial transcripts with their petitions.

**From Tuesday, April 28 – Thursday, May 14, 2020 – Withdrawals are normally not permitted** during this period except in cases of **verified accident or serious illness** where the cause of withdrawal is due to circumstances clearly beyond the student's control and where the assignment of an incomplete is not practical. Ordinarily, withdrawals in this category involve a **total withdrawal from the University**. All requests during this period must be reviewed by the Instructor, Department Chair, and Associate Dean. Students must submit their unofficial transcripts and appropriate documentation with their petitions.

**Note:** The University withdrawal policy is: A student may withdraw from an individual course only 2 times no matter what their circumstances are. The third time that the student enrolls in the same course (if the course repeat policy has been waived), they CANNOT withdraw for any reason.

