

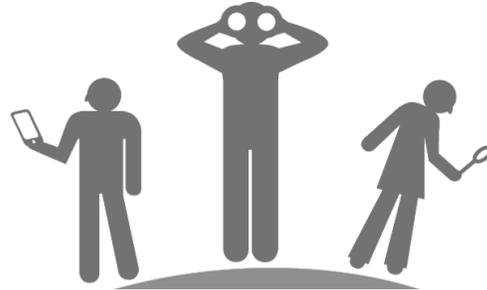
ENSTU 350: Research Methods in Environmental Studies  
California State University Monterey Bay, Fall 2017  
Mondays and Wednesdays, 9:00-11:50 a.m.

"We cannot solve our problems with the same thinking we used when we created them."  
- Albert Einstein

. . . therefore, we need. . .

rē ,sərCH  
verb

1. A careful or diligent search
2. To look again



### Instructor Office Hours

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Office Hours: Mondays and Wednesdays 12-1 p.m. OR BY APPOINTMENT\*\*

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### Course Description

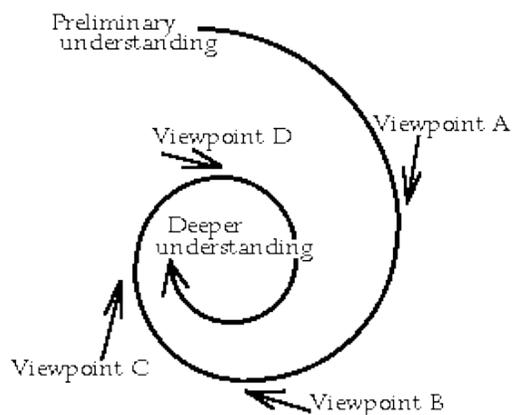
Students of environmental studies will go on to work in a wide range of disciplines but with a shared goal of seeking to understand, communicate about, and/or solve complex problems. This requires a diverse set of tools found in *applied* or *action* research, which seeks to understand and solve a practical problem. There are many reasons for conducting research in the applied environmental professions, including to:

Gain new understandings and insights	Gather community input and foster inclusion	Test an idea	Evaluate or assess a program or project
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So where do we start? In the field of environmental studies, we rely on many kinds of methods, from interviews and surveys, to participant observation, field assessments, and community mapping. We frame problems, investigate solutions, engage stakeholders, and visualize complex ideas. The long term success or failure of our efforts is in part rooted in the methods we use to identify, define, and understand problems and to evaluate success.

In this class we will explore the theory and practice of applied research that can be used in a wide range of contexts. We will focus on tools that can be used *by people* and *with people* to assess both physical and social aspects of the environment. We will ask questions, such as:

- What are our project goals and expected outcomes?
- How do we know we've gotten there?
- Are we asking the right questions?
- Are we using the right methods?
- How will this approach or this data help solve a problem?
- Who is included? And who is excluded?
- What can we conclude from this data?
- What else do we need to know?
- What else could strengthen our understanding?
- How can we communicate these findings to someone else?
- What are the ethical implications of our work?



Many environmental problems are “wicked” problems – in that they are complex, multi-faceted, inter-connected with other problems, and therefore, hard to solve. Applied research thus seeks to create deeper understandings, through multiple methods, multiple types of data, and sometimes, multiple modes of analysis. This course will expose you to a wide range of approaches to thinking about your work and its effectiveness.

### Learning Outcomes

Successful completion of this course will lead to:

1. Greater awareness of the ways in which choices of methodology are closely linked to theoretical and conceptual issues.
2. A critical understanding of the philosophical assumptions and ethical issues of applied research.
3. The ability to consider and select appropriate methodologies and types of evidence for a particular context.
4. Familiarity with diverse research methods, including surveys, interviews, visual methods, participatory research, database research, and community mapping.
5. The ability to develop an applied, action research proposal.

## Course Organization

The course is organized into six sections, with the first five focused on a particular approach to research and the final section focused on development of your own independent research proposal. Each part of the course will require: i) assigned readings from the required text, ii) reading articles that support the theory and application of the method of focus; iii) written reading summaries; iv) in-class activities; and v) a written research report. Assignments for the research proposal will be tailored to individual projects.

Part I: Survey Design and Analysis with Elkhorn Slough Foundation – Weeks 2-4: In partnership with the Elkhorn Slough Foundation, students will learn the goals for survey use, what constitutes good survey questions, how to analyze survey data, and how to produce a written report.

Part 2 – Interviews and Focus Groups for CSUMB Sustainability Initiatives – Weeks 5-6: Students will participate in a focus group about the Sustainability Commons on CSUMB's campus. In addition, students will conduct semi-structured interviews with one CSUMB student and one campus representative to evaluate the biophilic design features and potential of the campus in preparation for the Living Communities Challenge.

Part 3 – Photographic and Other Visual Methods with CSUMB Sustainability Initiatives and CSUMB @ Salinas City Center – Weeks 7-8: Students will learn photographic methods, including photovoice (to assess CSUMB's biophilic design features) and photogrid (to examine the physical and cultural environments starting from CSUMB @ Salinas City Center).

Part 4 – Participatory Methods, Weeks 8-9: Students will look more broadly at the theoretical frameworks and approaches to participation, including in their application in the Global South, in community mapping, and advocacy work.

Part 5 – Research from Observation and Secondary Sources + CHAMACOS – Week 10-12: Students will learn observational techniques and behavior mapping and will explore a range of secondary data sources including databases to document social and environmental (in)justices. They will also hear from a guest speaker from CHAMACOS about their approach to participatory research and environmental health.

Part 6 – Individual Research Proposal Development – Weeks 12-16: Students will develop an independent research proposal for a community partner or individual interest. This project may support future capstone work, a service-learning partnership, or other interest. It should directly respond to an identified need and address an environmental issue. Students will not implement the research proposal in its entirety during this course but may need to collect background data (via secondary sources, interviews, or other methods) in order to develop the proposal.

## Course Materials

### Required Materials

- Text: Mertler, Craig A. 2016. *Action Research, 5<sup>th</sup> Edition*. Sage Publications, Inc.
- All other readings will be assigned via iLearn
- Notebook for field and in-class notes and binder/folder to hold them.

## Course Expectations

- Come to class prepared and ready to actively participate: this includes bringing all required materials as well as completing all readings and assignments **prior to** class
- Support a distraction-free environment. Technology can lead to many distractions and detract from your own learning environment and that of your peers. Therefore, I ask that computers be used only for designated purposes and cell phones be silenced or off during class time. Because this is important in creating a positive learning environment for all, students using technology for non-learning purposes (texting, social media, other assignments, etc.) may be marked absent.
- Navigate the iLearn website to access assignments, resources, and monitor grades. Any updates or changes to the course syllabus will be posted on iLearn.
- Follow course and university policies (as noted in the syllabus)
- Proactively communicate with the instructor about any difficulties or challenges. Life happens, every day and in many ways. Our challenge is to communicate so that we can arrive at the best strategies to help you success in times of challenge.

An average student expecting a B or B- in ENSTU 350 should plan to spend at least 12 hours per week on this course: 6 hours in class, and 6 hours outside of class working independently (e.g. doing readings, conducting research, preparing reports.). Some weeks will require more effort than others, so work steadily and plan ahead.

**Late or incomplete work:** This is a fast-paced course that builds on itself. If you are having difficulty meeting deadlines, please schedule an appointment with me so that we can strategize how to best be accountable to yourself and your peers. Late assignments and incomplete work will be penalized by one full letter grade per day late.

**Absences:** Excused absences are for death, illness documented with a doctor's note, or other extreme events. Communicate with me via email if you will miss a class *for any reason*, or if other extenuating circumstances are interfering with your attendance and/or performance.

## Assignment Overviews

Assignments will be issued on iLearn and via paper handouts. The overviews below serve to introduce you to the assignments, not to elaborate details and requirements.

**Attendance and Participation:** Students will complete in-class assignments on paper and via iLearn. Students will also submit reading shorts as assigned for Parts 1 through 5 of the course. These will include completing a methods summary sheet to synthesize information as well as a 250-300 word reflection or critical analysis.

**Research Documents:** Students will prepare 5 written/visual research reports, one each for Parts 1-5 of the class. Some of these will be submitted to a community or CSUMB partner. All should be professional, quality submissions. As a final project, students will also generate a research proposal that identifies a research topic, methods, and expected outcomes. First, students will submit a short proposal. Once approved, students will submit a draft outline. The final report will frame the problem, how it is to be studied, a justification for the methods, and an appendix with applicable

research tools/instruments (e.g., survey questions, interview guide, etc.). The final submission will be fully developed and professionally formatted. Detailed instructions will be provided.

**Mid-Term Exam:** At the end of Part 5 of the course, students will take a comprehensive in-class exam that covers reading, lecture, and “lab” (research document) materials. The exam will include multiple choice, short answer, and essay questions.

### Course Grading

1. Attendance and participation	20%
5% Attendance and in-class participation activities, daily	
15% Reading Shorts (5 @ 3% each, Parts 1 through 5)	
2. Research Documents	70%
50% Written reports (5 @ 10% each, Parts 1 through 5)	
20% Research Proposal	
3. Mid-term exam, Parts 1 through 5	10%

Grades will be posted as they are assigned throughout the semester and will be based on the following scale:

A	93-100%	C	73-76.99%
A-	90-92.99%	C-	70-72.99%
B+	87-89.99%	D+	67-69.99%
B	83-86.99%	D	63-66.99%
B-	80-82.99%	D-	60-62.99%
C+	77-79.99%	F	59.99% or lower

### Detailed Schedule and Assignments

<b>Week/ Date</b>	<b>In Class Work</b>	<b>Assignments and Readings (To be completed <u>before</u> the start of class)</b>
<b>1</b> W, 8.23	Introduction to the course Action Research Methods text Complete wordle: what is research?	Read Ch 1 from <i>Action Research</i>
<b>2</b> M, 8.28	Establishing project goals for evaluation with Katie Pofahl, Elkhorn Slough Foundation	Read pages 7-11 of Chapter 1 and all of Chapter 3 from <i>Children Learning Outside the Classroom</i>
<b>2</b> W, 8.30	Survey Development (good questions, statistical analysis) with Dr. Alana Unfried	Read Ch 5 pp. 128-157 from <i>Action Research</i>
<b>3</b> M, 9.4	NO CLASS: Labor Day	

<b>Week/ Date</b>	<b>In Class Work</b>	<b>Assignments and Readings (To be completed <u>before</u> the start of class)</b>
<b>3</b> W, 9.6	Ethics and follow up on good survey design	Read Leach's "Surveying Diverse Stakeholder Groups" <b>Reading Short 1 Due</b> Read Ch 5 pp. 157-167 from <i>Action Research</i>
<b>4</b> M, 9.11	Survey Data Analysis with Dr. Alana Unfried	Read Ch 6 (pp. 178-210) from <i>Action Research</i>
<b>4</b> W, 9.13	Open-ended and semi-structured interviews	<b>Report 1 Due</b> for Elkhorn Slough Foundation
<b>5</b> M, 9.18	Open-ended and semi-structured interviews with Laura Lee Leink, Return of the Natives	Read Ch 6 (pp. 171-177) from <i>Action Research</i> Read Pp. 84-98 from <i>Working with Qualitative Data</i>
<b>5</b> W, 9.20	Biophilic Design film Semi-structured interviews Interview a classmate and conduct guided tours with photovoice	Read OSMP Report
<b>6</b> M., 9.25	Focus Group – Sustainability Commons	Read Ruiz-Mallen et al.'s "Evaluating EE programmes . . . Mexico" <b>Reading Short 2 Due</b>
<b>6</b> W, 9.27	Analysis – Sustainability Commons + Biophilic Design	Read Ch 7 from <i>Action Research</i>
<b>7</b> M, 10.2	Action Research – History, Theory Photogrids, Introduction Prepare base maps	
<b>7</b> W, 10.4	Field Trip to CSUMB @ Salinas City Center: Photogrids	<b>Report 2 Due</b> Biophilic Design Read draft manuscript from Chapter 7, <i>Designing Sustainable Cities . . .</i>
<b>8</b> M, 10.9	Photogrid Analysis	<b>Reading Short 3 Due</b>
<b>8</b> W, 10.11	Participatory Methods	<b>Report 3 Due</b> – Sustainability Commons Read Nazarea et al.'s "Integrating Community Values into Sustainability Indicators"
<b>9</b> M, 10.16	Participatory GIS Community Mapping: Manzano Case Study Georeferenced Word Clouds	Read Gubrium and Harper's "Participatory Mapping" chapter from <i>Participatory Visual and Digital Methods</i> Read Allen et al.'s "Mapping popular resistance and dwelling practices in Bogotá eastern hills" <b>Reading Short 4 Due</b>
<b>9</b> W, 10.18	<b>No Class Today</b>	<b>Report 4 Due</b> – Photogrid analysis
<b>10</b> M, 10.23	Behavior Mapping Introduction Civic Area Case Study and protocol	Read pp. 100-108 from <i>Working with Qualitative Data</i>
<b>10</b> W, 10.25	Behavior Mapping Analysis	Read Doolittle's "Stories Matter" <b>Reading Short 5 Due</b>

	Narrative analysis and document review	
<b>Week/ Date</b>	In Class Work	Assignments and Readings (To be completed <u>before</u> the start of class)
<b>11</b> M, 10.30	Secondary Sources: Databases for environmental health Spatial Data Census Data	<b>Report 5 Due</b> – Behavior Mapping Read Ch 5 from <i>Working with Qualitative Data</i>
<b>11</b> W, 11.1	Exam Review (and maybe CHAMACOS)	Read Ch 9 from <i>Action Research</i>
<b>12</b> M, 11.6	<b>Mid-Term Exam (In-Class)</b>	<b>Mid-Term Exam (Study!)</b>
<b>12</b> W, 11.8	(maybe CHAMACOS) Introduce Writing a Research and/or Evaluation Plan	Read NOAA's B-Wet 5-year evaluation plan
<b>13</b> M, 11.13	Writing a Research and/or Evaluation Plan	Read WWF Conservation Education Evaluation
<b>14</b> W, 11.15		<b>Outline due</b>
<b>14</b> M, 11.20	No Class: Fall Break	
<b>14</b> W, 11.22	No Class: Fall Break	
<b>15</b> M, 11.27	Research and/or Evaluation Plan In class presentations/feedback	Review Ch 7-8 <i>Action Research</i>
<b>15</b> W, 11.29	Research and/or Evaluation Plan	<b>First Draft Due</b>
<b>16</b> M, 12.4	Research and/or Evaluation Plan Anonymous Course Evaluations	
<b>16</b> W, 12.6	Research and/or Evaluation Plan Complete wordle: what is research? Course Plus/Delta	
<b>17</b> M, 12.11	<b>No Class</b>	<b>Final Research Proposal Due</b>

## University Services and Policies

CSUMB has a variety of programs designed to help students thrive in college and graduate in a timely manner. If you have the desire to get more out of your CSUMB course and community work, increase your foundational academic skills, and graduate on time, please take advantage of these programs. Many students avoid these programs because they view seeking such help as a sign of weakness. However, in reality, many motivated and successful students take advantage of these services. If you are thinking of these services as an indicator of weakness, try thinking about them as openness to learning and growing.

1. **Academic Integrity.** Academic integrity is of central importance to an education at CSUMB. The core of this integrity resides in the scholastic honesty of the CSUMB community and, therefore, is the responsibility of all students and faculty to uphold and maintain. Forms of academic dishonesty include cheating, fabrication, plagiarism, and collusion in any of these activities. Students discovered to have engaged in academic dishonesty will be sanctioned. For more information regarding the Academic Integrity Policy, please go to:  
<http://policy.csumb.edu/site/x20830.xml>
2. **Students with Disabilities.** Students with disabilities who require accommodations such as time extensions or alternate media format must present verification from Student Disability Resources as soon as possible. **Please schedule an appointment to discuss your specific needs with me.** If you think a disability may impact your performance in this class, please meet with SDR professional staff in the Health and Counseling Centers Building (#80) or call 582-3672.  
Email: [StudentDisabilityResources@csumb.edu](mailto:StudentDisabilityResources@csumb.edu)  
Phone: (831) 582-3672 voice, or 582-4024 fax/TTY  
Website: <http://sdr.csumb.edu/>
3. **Learning environment** – Students and faculty each have responsibility for maintaining an appropriate learning environment. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran’s status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.
4. **Communication.** CSUMB policy establishes email as the primary and official means of communication from California State University, Monterey Bay to students. This includes faculty communication to students and will be used for communication in this course. Students are therefore expected to check their email on a frequent basis.

5. **Integration of Technology.** In keeping with the CSUMB vision statement, which says: “The University will invest in preparation for the future through integrated and experimental use of technologies,” this course will require the application of technology to solve problems and create material relevant to our discipline. It is the responsibility of each student to fully understand the required technology and how to use it to complete assignments for this course. There are a variety of campus resources provided to help students enhance their technology skills and you are encouraged to take advantage of these opportunities as needed. For more information on technology support:
  - Visit [Atomic Learning](#)
  - Contact [Collaborative Learning Center Tutoring](#), Library 2nd floor, 582-4104, [clc@csumb.edu](mailto:clc@csumb.edu)
  - Register for Atomic Learning via iLearn
  
6. **Center for Student Success (CSS).** CSUMB works to make sure that all students are succeeding in their courses. To ensure that this takes place, if you are falling behind or are missing classes, I strongly encourage you to schedule an appointment with the Center for Student Success to create an Academic Success Plan and get back on track. The CSS offers services such as one-on-one support, peer mentoring, and study skills workshops. CSS is located in the Library, 2<sup>nd</sup> Floor, Suite 2163. Phone: (831) 582-3165.
  
7. **Cooperative Learning Center (CLC).** CLC is a campus-wide tutoring program that is free and open to all students. CLC seeks to provide high-quality learning assistance in computer technology, math, science, writing, languages, and study strategies aimed at enhancing learning needs at all ability levels. CLC works with students to expand their knowledge and abilities by empowering them to become independent learners. CLC tutors, staff, and faculty work together to design and offer effective collaborative, and active learning experiences. We provide tutors with the opportunity to develop teaching, leadership, and communication skills. CLC is located in the Library, 2<sup>nd</sup> Floor. Phone: (831) 582-4104.
  
8. **Personal Growth and Counseling Center.** The Personal Growth and Counseling Center promotes mental health of CSUMB to help you achieve student success. If you are struggling with personal issues that are interfering with your school, work, or life, please stop by the center (and please also communicate with me if you are having trouble meeting course requirements due to personal issues!) [Counseling\\_center@csumb.edu](mailto:Counseling_center@csumb.edu) or (831) 582-3969 or Health and Wellness Services Building (Building 80).  
[Personal Growth and Counseling Center Online Screening Program](#)  
[Personal Growth and Counseling Center Homepage](#)

9. **Collection of Student Work.** CSUMB is committed to providing excellent and innovative curricula and educational opportunities to its students. To help us maintain quality academic offerings and to conform to institutional and professional accreditation requirements, the University and its programs regularly examine the effectiveness of the curricula, teaching, services, and programs the University provides. As CSUMB sees appropriate, it may obtain, assess, and retain samples of student work from representative courses. This work might include papers, exams, creative works, recordings of oral presentations, or portfolios developed and submitted in courses or to satisfy the requirements for degree programs as well as surveys, focus group information, and reflective exercises. Instructor and student names will not appear in any assessment results and assessment results will have no impact on student grades, instructor evaluations, or instructor employment.