San José State University  
Department of Psychology  
Psychology 121E: Advanced Research Methods: Psychophysiology Lab  
Sections 10 & 11  
Spring 2016  

Course and Contact Information  
Instructor: Ashley Defensor, PhD  
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Office Hours: Tuesdays 8:00 - 9:00 AM or by appointment  
Class Days/Time: Lecture: Tuesdays 9:00 - 10:00 AM  
Lab: Tuesdays 10:15 - 1:00 PM  
Classroom: DMH 339  
Prerequisites: PSYC 30, PSYC 100W, & PSYC 120 (Co-requisite)  

Course Description  
The objective of this course is to provide students with a basic understanding of the most common principles and research techniques used in physiological psychology. We will examine physiological psychology from a species and research-based perspective. Model organisms have both limitations and strengths as research systems. The anatomy, complexity and behavior of many species have shaped our current state of knowledge on the structure and function of the nervous system. Through lectures, discussions, and classroom activities, students will learn to critically evaluate the primary literature, design, analyze and interpret original research.  

Course Learning Outcomes (CLO)  
Upon successful completion of this course, students will be able to:  
1. CLO 1- Read and critically evaluate primary research articles.  
2. CLO 2- Formulate clear and testable research questions and hypotheses.  
3. CLO 3- Distinguish between, and generate, conceptual and operational definitions of psychological constructs.  
4. CLO 4- Recognize and describe the major forms of research methods and designs used by psychophysiclists, describe the strengths and weaknesses of these designs, and choose an appropriate design to answer a given research question.  
5. CLO 5- Interpret and apply the most common descriptive statistical techniques used in psychlogy, including implementing these techniques.
6. CLO 6- Know and apply the basic principles of APA-style writing, including those for references and reference citations.

7. CLO 7- Know and apply the APA ethical guidelines for conducting research in psychology.

Program Learning Outcomes (PLO)

Upon successful completion of the psychology major requirements…

1. PLO1 – Knowledge Base of Psychology – Students will be able to identify, describe, and communicate the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.

2. PLO2 – Research Methods in Psychology – Students will be able to design, implement, and communicate basic research methods in psychology, including research design, data analysis, and interpretations.

3. PLO3 – Critical Thinking Skills in Psychology – Students will be able to use critical and creative thinking, skeptical inquiry, and a scientific approach to address issues related to behavior and mental processes.

4. PLO4 – Application of Psychology – Students will be able to apply psychological principles to individual, interpersonal, group, and societal issues.

5. PLO5 – Values in Psychology – Students will value empirical evidence, tolerate ambiguity, act ethically, and recognize their role and responsibility as a member of society.

Required Texts/Readings

Textbook

No text is required for this course. Instead, assigned scientific articles relevant to the course topics will be posted to the course website at least one week in advance of the expected due date. Students are responsible for having completed the assigned readings prior to the start of class.

Recommended Text


Other Readings

Additional required readings, along with PowerPoint slides from the lectures, will be posted on the course website.

Other equipment / material requirements

Access to SPSS.

Student Technology Resources

Computer labs for student use are available in the Academic Success Center at http://www.sjsu.edu/at/asc/ located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.
University Policies

General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU’s policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. See University Policy S90–5 at http://www.sjsu.edu/senate/docs/S90-5.pdf.

More detailed information on a variety of related topics is available in the SJSU catalog, at http://info.sjsu.edu/web-dbgen/narr/catalog/rec-12234.12506.html. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not serve to address the issue, it is recommended that the student contact the Department Chair as a next step.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester’s Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

Consent for Recording of Class and Public Sharing of Instructor Material

University Policy S12-7, http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor’s permission to record the course and the following items to be included in the syllabus:

- “Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”
  - It is suggested that the greensheet include the instructor’s process for granting permission, whether in writing or orally and whether for the whole semester or on a class by class basis.
  - In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.
- “Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”
Academic Integrity
Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The [University Academic Integrity Policy S07-2](http://www.sjsu.edu/senate/docs/S07-2.pdf) requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at [http://www.sjsu.edu/studentconduct/](http://www.sjsu.edu/studentconduct/).

Campus Policy in Compliance with the American Disabilities Act
If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. [Presidential Directive 97-03](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) requires that students with disabilities requesting accommodations must register with the [Accessible Education Center](http://www.sjsu.edu/aec) to establish a record of their disability.

Student Resources:

**SJSU Peer Connections**

Peer Connections, a campus-wide resource for mentoring and tutoring, strives to inspire students to develop their potential as independent learners while they learn to successfully navigate through their university experience. You are encouraged to take advantage of their services which include course-content based tutoring, enhanced study and time management skills, more effective critical thinking strategies, decision making and problem-solving abilities, and campus resource referrals.

In addition to offering small group, individual, and drop-in tutoring for a number of undergraduate courses, consultation with mentors is available on a drop-in or by appointment basis. Workshops are offered on a wide variety of topics including preparing for the Writing Skills Test (WST), improving your learning and memory, alleviating procrastination, surviving your first semester at SJSU, and other related topics. A computer lab and study space are also available for student use in Room 600 of Student Services Center (SSC).

Peer Connections is located in three locations: SSC, Room 600 (10th Street Garage on the corner of 10th and San Fernando Street), at the 1st floor entrance of Clark Hall, and in the Living Learning Center (LLC) in Campus Village Housing Building B. Visit [Peer Connections website](http://peerconnections.sjsu.edu) at [http://peerconnections.sjsu.edu](http://peerconnections.sjsu.edu) for more information.

**SJSU Writing Center**

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the [Writing Center website](http://www.sjsu.edu/writingcenter) at [http://www.sjsu.edu/writingcenter](http://www.sjsu.edu/writingcenter). For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook.
SJSU Counseling Services

The SJSU Counseling Services is located on the corner of 7th Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit Counseling Services website at http://www.sjsu.edu/counseling.

Classroom Protocol

The classroom is a special environment in which students and faculty come together to promote learning and growth. It is essential to this learning environment that respect for the rights of others seeking to learn, respect for the professionalism of the instructor, and the general goals of academic freedom are maintained. Student conduct that disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from the course.

- Attendance is critical for success in this course. All students are expected to arrive on time, prepared to participate in the day’s activities.
- You will be working with other students in groups. Therefore, active participation is required. Those who do not participate or do only minimal work in group projects will get their individual points deducted.
- Students are responsible for regularly checking the course website, their email (as listed in MySJSU), and the messaging system through MySJSU for course announcements and other materials.
- Cell phones and other personal electronic devices should be silenced and put away before class.

Course Assignments and Grading Policy

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu senate/docs/S12-3.pdf.

Student Assessment

Students will be evaluated on the basis of class participation, homework assignments, in class activities, quizzes, and a final research paper and an oral presentation.

- **Participation**: Active participation is required. You will evaluate one another’s participation and contribution to group projects. Those who do not participate or do only minimal work will have their individual points deducted. Failure to participate in in-class activities will result in points being deducted from your participation.
- **Homework**: Homework assignments will primarily be submitted digitally. You may also be required to print multiple copies of assignments and bring them to class. Failure to follow instructions will result in points being deducted from your assignment.
- **Late Work & Make-ups:** Assignments will be accepted late ONLY if the student contacts the instructor BEFORE the due date and receives permission. Assignments turned in late without the instructor’s permission will not be accepted. Points per business day late (2 per day) will be deducted EVEN WITH the instructor’s permission.

- **Quizzes:** Quizzes may be used to assess participation and understanding of course content, or to serve as a way to earn points.

- **Research Paper:** A large portion of the final grade will be determined based upon a group research project. In groups of 3-5 students, you will develop an original research idea, review the literature, collect and analyze data, interpret the results and write an APA Style research report. The topics and methods must be approved by your instructor before you conduct the study.
  - Each student must submit a final written report including the following sections: Title Page, Abstract, Introduction, Materials and Methods, Results and Discussion.
  - The final report must be between 5-7 pages (not including the title page, abstract or references) in APA style. The methods and results sections can be completed as a group. However, the abstract, introduction and discussion sections must be written individually.
  - Group members will be evaluating each other’s participation along the way. These assessments will be taken into consideration during grading.

- **Oral Presentation:** Students will present their results during a formal oral presentation on the day of the final exam. Although you will be presenting as a group, you will be questioned individually to assess your knowledge and understanding of the project. Oral presentations will be evaluated by your instructor as well as your peers. Scores from the instructor and your peers will be averaged to compute the final score for the assignment. A grading rubric will be provided with further details.

### Grading Scale

Course grades are based on the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>97-100</td>
<td>7%</td>
</tr>
<tr>
<td>A</td>
<td>93-96</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td>90-92</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
<td></td>
</tr>
<tr>
<td>B-</td>
<td>80-82</td>
<td></td>
</tr>
<tr>
<td>C+</td>
<td>77-79</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>73-76</td>
<td></td>
</tr>
<tr>
<td>C-</td>
<td>70-72</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>67-69</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>63-66</td>
<td></td>
</tr>
<tr>
<td>D-</td>
<td>60-62</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>below 60</td>
<td></td>
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</tbody>
</table>

### Assignments & Grading Scale

<table>
<thead>
<tr>
<th>Components</th>
<th>Points</th>
<th>~ Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>50</td>
<td>7%</td>
</tr>
<tr>
<td>Research Proposal</td>
<td>75</td>
<td>10%</td>
</tr>
<tr>
<td>Homework/Activities</td>
<td>175</td>
<td>25%</td>
</tr>
<tr>
<td>Final Paper</td>
<td>200</td>
<td>30%</td>
</tr>
<tr>
<td>Oral Presentation</td>
<td>200</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>700</td>
<td>100%</td>
</tr>
</tbody>
</table>
# PSYC 121E: Advanced Research Methods

## Psychophysiology Lab Spring 2016 Course Schedule

*Please note, the assignments, grade points, and course schedule are subject to change at the instructor’s discretion. Fair notice will be given if there are any changes.*

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Topic/Activity</th>
<th>Reading Due</th>
<th>Assignment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feb. 2</td>
<td>Lec</td>
<td>Introduction to Course &amp; Psychophysiology</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Form Groups: Develop a Research Idea &amp; Operational Definitions</td>
<td></td>
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<tr>
<td>2</td>
<td>Feb. 9</td>
<td>Lec</td>
<td>Cycle of Science: Scientific Method, Research Design, &amp; Ethics</td>
<td>&quot;How Science Works&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Group Work: Develop a Research Idea &amp; &quot;Write a Sentence&quot;</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Feb. 16</td>
<td>Lec</td>
<td>Intro to Neuroanatomy &amp; Psychophysiology Methods</td>
<td>&quot;Anatomy of a Research Paper&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Class Activity: Literature Search Workshop</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Feb. 23</td>
<td>Lec</td>
<td>Psychophysiology Methods Continued</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Discussion: Pros &amp; Cons of various research methods</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Mar. 1</td>
<td>Lec</td>
<td>Animal Models of Human Conditions</td>
<td>Blanchard &amp; Blanchard, 2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Videos: Common paradigms</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Mar. 8</td>
<td>Lec</td>
<td>Brain Damage &amp; Neuroplasticity</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Group Work: Experiment details (Methods &amp; Materials)</td>
<td></td>
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<tr>
<td>7</td>
<td>Mar. 15</td>
<td>Lec</td>
<td>Biopsychology of Emotion</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Activity: Matching Statistics to Design</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Mar. 22</td>
<td>Lec</td>
<td>Biopsychology of Psychiatric Disorders</td>
<td>Andrade, 2011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Workshop: Giving Constructive Feedback Activity: Abstract &amp; Titles</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Mar. 29</td>
<td>NO CLASS - SPRING RECESS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Apr. 5</td>
<td>Lec</td>
<td>Power Point Presentation Guidelines</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Group Work: Data Analysis &amp; Interpretations</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Apr. 12</td>
<td>Lec</td>
<td>APA Style Guide</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Consultation Week</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Apr. 19</td>
<td>Lec</td>
<td>The Hazards of &quot;Popular Science&quot; - Analysis of Current Research</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Peer Review of Project Proposals</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Apr. 26</td>
<td>Lec</td>
<td>Analysis of a current research finding</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Peer Review of Project Proposals</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>3-May</td>
<td>Lec</td>
<td>Analysis of a current research finding</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td>Peer Review of Project Proposals</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>10-May</td>
<td>Lec</td>
<td>Work with group on research project oral presentation</td>
<td>#9 Final Draft of Research Paper Due</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab</td>
<td></td>
<td>Assessments of research project teammate participation</td>
</tr>
<tr>
<td>16</td>
<td>19-May</td>
<td>Lec</td>
<td>Final Exam: Group Presentations</td>
<td></td>
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</tbody>
</table>