San José State University
Department of Psychology

PSYC 120: Advanced Research Methods & Design
Fall 2015

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<th>Instructor Information</th>
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<td><strong>Instructor:</strong></td>
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<td><strong>Office Location:</strong></td>
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<td><strong>Telephone:</strong></td>
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<td><strong>Email:</strong></td>
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<td><strong>Office Hours:</strong></td>
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| **Class Days/Time:**   | Section 30 Lecture, Tues and Thurs 4:30 – 5:45 pm  
                         | Section 31 Laboratory, Tuesdays 6:00 – 8:00 pm     
                         | Section 32 Laboratory, Thursdays 6:00 – 8:00 pm    |
| **Classroom:**         | Seminar held in DMH 355 
                         | Lab held in DMH 339 |
| **Prerequisites:**     | PSYC 001 (Intro to Psychology), STAT 095 (Introductory Statistics), PSYC 100W (Writing Workshop) |

**Course Description**

The purpose of this course is to provide students with a review of advanced treatment of research topics in psychology. Students will gain a deeper understanding of and engage in hands-on experience in the design, execution, and data analysis strategies used in psychological research. You can expect to learn about descriptive, correlational, quasi-experimental, and experimental designs. Other topics we will cover include hypothesis testing, validity, reliability, scales of measurement, power, statistical significance, and effect size. The course will be divided into two parts. We will begin the course with reviewing a set of research topics and learning about research methodology issues. During this part of
the course, students will be learning about how to critique scientific literature, incorporate diverse information from published sources to form research hypotheses, the ethics of conducting a study, and understanding the research process. In the second part of the course, students will be expected to design, carry out, and present findings of an independent original research project. Development of a research hypothesis, data collection, statistical data analysis, and interpretations will be the essential parts of this small research study. Students will communicate their findings in written and oral formats, using appropriate professional standards (i.e., APA style).

### Learning Outcomes

#### Course Learning Outcomes (CLOs)

This course builds upon the research skills gained in prior psychology research methods classes and is designed to provide students with research skills necessary to carry out independent projects.

Upon successful completion of this course, students will be able to:

1. CLO 1 – Understand the research methods used to study the topics in psychology
2. CLO 2 – Use critical thinking skills to evaluate the experimental evidence and assess psychological theory
3. CLO3 – Read, understand, and synthesize findings from journal articles related to psychology
4. CLO4 - Design and conduct an independent, original research study
5. CLO5 – Use statistical analyses appropriate to psychology to interpret the results of research studies
6. CLO6 – Communicate findings using APA style report writing guidelines
7. CLO7 – Deliver a professional oral presentation of research findings

#### Program Learning Outcomes (PLOs)

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 and Recommended Readings

**Textbook (required)**


**Additional Publications (recommended)**


**Other Readings and Resources**

All other readings will be distributed electronically. The electronic holdings for this class will be made available on CANVAS.

Students may find the following resources helpful:
- the website for the magazine “The Skeptical Inquirer” – [www.csicop.org](http://www.csicop.org)
Course Requirements and Assignments

Success in this course is based on the expectation 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. This is a four unit course, so please expect to spend around 12 hours per week in course preparation and course activities, including assigned readings, review of lectures, and completion of laboratory assignments. As we progress through the course and gain more familiarity with various research methodologies, you can expect to spend more time dedicated to lab activities and less time in preparation for lectures. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu/senate/docs/S12-3.pdf.

In-class Quizzes (10 quizzes; 10 points per assignment; 10% of the grade)

10 unannounced quizzes will be administered during the term, either in class or during our lab time to encourage your learning and attendance.

Laboratory Assignments (10 assignments; 30 points per assignment; 30% of the grade)

In the first part of the course, students will be assigned laboratory exercises to practice research methodology and critical thinking skills (CLO1, CLO2, and CLO3). While completed assignments will be turned in and graded individually, this activity can be completed in small groups to promote team effort and collaborative spirit. The assignment is intended to provide you with a real-world scenario of working on interdisciplinary teams. We will divide the class into small groups during your first laboratory session. Specific instructions for each assignment will be provided during course term.

Written Exams (3 exams; 100 points per exam; 30% of the grade)

Three exams (two midterm and one final) will be administered in the course of this class. These will be written exams, consisting of 50 multiple-choice questions assessing mastery of research methodology and laboratory techniques covered in this course. Based on the schedule of final examinations posted by SJSU, our final exam has been scheduled for Friday, December 11 at 2:45 pm in DMH 355. Please consult course schedule for specific dates for the other exams.

Original Research Project (300 points; 30% of the grade)

To successfully complete this course, you will need to complete a professionally written and orally presentation original research study in the domain of psychology. You will be expected to identify a topic of interest covering one of the domains of psychology discussed in your other psychology courses, synthesize relevant published research, develop a specific
hypothesis or set of hypotheses, design a research study, collect and analyze data, and present your findings in an APA-style written research report as well as deliver a brief oral presentation of your results (CLO4, CLO5, CLO6, and CLO7). The topic of your research must be approved by the instructor in advance. Students working on similar topics will be encouraged to work in small groups and collaborate on research techniques, writing of the report, and delivering oral presentation. Specific instructions for this project will be provided during course term.

Additional Information

As part of your independent research project, you will be required to complete an online training in conducting research with human subjects. The training can be found in the following link:

http://inside.bard.edu/irb/train_cert/

Please note that this training would require you to create an account (no fees) and participate in a review of ethical guidelines for the treatment of research subjects. The training and required quizzes will take about 2 hours to complete. This will serve as one of your laboratory assignments, to be completed during designed lab time or at your own pace. A printed certificate will be required to receive credit for your independent research project. Proof of prior certification will be accepted.

Course Grading

Grading Elements

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<th>Assignment</th>
<th>Points</th>
<th>Weight</th>
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<tr>
<td>Quizzes</td>
<td>100 points</td>
<td>10%</td>
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<tr>
<td>Laboratory Exercises</td>
<td>300 points</td>
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<td>Written Exams</td>
<td>300 points</td>
<td>30%</td>
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<td>Exam 1</td>
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<td>Exam 2</td>
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<td>Final (not comprehensive)</td>
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<tr>
<td>Research Project</td>
<td>300 points</td>
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<tr>
<td>Written Research Proposal</td>
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<td>Oral Presentation</td>
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<tr>
<td>Written Research Paper</td>
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<tr>
<td>Total</td>
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Tentative Grade Determination

Final course grade will be assigned as indicated below:

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<th>Percent</th>
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<tr>
<td>93 – 97</td>
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<td>88 – 89</td>
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<td>83 – 87</td>
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Late Assignments

Assignments are due in class on the date indicated by the course schedule (you can submit hardcopies or upload your assignments electronically through CANVAS). If due dates change, the new due dates will be announced in class in a timely fashion. No extensions or make-up assignments will be accepted without prior approval by the instructor; such extensions or make-ups will be granted only in cases of emergency, serious illness, or for other documented academic reasons. If you anticipate being late on an assignment, you are urged to contact the instructor as early as possible to discuss your situation.

Extra Credit

Extra credit assignments will be given at the instructor’s sole discretion. Should extra credit opportunities be extended, the total amount of extra credit points earned by a student cannot exceed 1% to 2% of the total number of points available for this course.

Note that University policy F69-24 at http://www.sjsu.edu/senate/docs/F69-24.pdf states that “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.” Note that “All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades.” See University Policy F13-1 at http://www.sjsu.edu/senate/docs/F13-1.pdf for more details.
Contacting Instructor

Please feel free to use either SJSU email (olga.rosito@sjsu.edu) or my personal email account (olga.rosito@gmail.com) to contact me at any time. I will promptly respond to your emails during normal business hours (Mon-Fri, 8 am to 5 pm). On the weekend or during holiday, please anticipate that it might take me up to 48 hours to respond to your emails.

I have a phone number (408-924-5613) assigned to me at SJSU. You are welcome to call this number, however, please note that I am only on campus for a limited time during the week so I might not be able to return your call promptly. Sending me an email to my personal account is the most efficient way to communicate with me.

Please make sure to provide me with the best way to respond to you when you are calling or emailing me. If your request requires urgent attention, please indicate so in the subject line of the email or at the onset of your call.

I have office hours in DMH 310 on Tuesdays and Thursdays from 4 to 4:30 pm. Please come and visit even if you don’t have a specific question.

Use of Technology in the Classroom

Use of laptops is permitted but limited to note-taking or looking up information specific to this class. All other activities (checking email, Facebook, surfing the web, etc.) should be scheduled for outside of class time.

Use of cell/smart phones or other digital devices is not permitted in the classroom. Please make sure your phones are turned off (or placed on silent mode) to avoid unnecessary distractions during class time. If you need to make a phone call, please exit the classroom quietly.

Classroom Etiquette

If you must arrive or leave the class early, please do so as quietly as possible. If you can, please notify me when leaving early to make sure you are receiving all the necessary course information.

Please be respectful toward each other. This class will require you to work in small groups for a large proportion of class time, so please contribute to all group projects, communicate effectively with your classmates, and respect differing points of view.
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.”
- “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 at 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 is available at 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 at 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 (AEC) at http://www.sjsu.edu/aec to establish a record of their disability.

Accommodation to Students' Religious Holidays

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, 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. See University Policy S14-7 at http://www.sjsu.edu/senate/docs/S14-7.pdf.

Student Resources

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.

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 at 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 at 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. (Note: You need to have a QR Reader to scan this code.)

**SJSU Counseling Services (Optional)**

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.
Please note that this schedule is subject to change with fair notice. Changes will be announced in class. GG refers to readings in your main textbook.

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<th>Date</th>
<th>Location</th>
<th>Topics, Readings, Assignments, Deadlines</th>
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| 1    | 08/20-08/26| Lecture DMH 355| **LECTURE:** Thursday - Introductions; syllabus review  
Tuesday - Scientific Thinking in Psychology  
**REQUIRED READINGS:** GG 1  
**LAB ACTIVITIES:** group assignment and review of lab procedures  
**ASSIGNMENTS DUE:** none |
| 2    | 08/27-09/02| Lecture DMH 355| **LECTURE:** Thursday – Ethics in Psychological Research  
Tuesday – Developing Your Research Ideas  
**REQUIRED READINGS:** GG 2 and 3  
**LAB ACTIVITIES:** Lab 1  
**ASSIGNMENTS DUE:** Lab 1 - Human Research Certificate |
| 3    | 09/03-09/09| Lecture DMH 355| **LECTURE:** Thursday – Measurement and Data Analysis (cont.)  
Tuesday – Measurement and Data Analysis (cont.)  
**REQUIRED READINGS:** GG 4  
**LAB ACTIVITIES:** Lab 2; approval of research topic  
**ASSIGNMENTS DUE:** Lab 2 – approved topic |
| 4    | 09/10-09/16| Lecture DMH 355| **LECTURE:** Thursday – Observational Method  
Tuesday – Survey Research  
**REQUIRED READINGS:** GG 12  
**LAB ACTIVITIES:** Lab 3; start working on research proposal  
**ASSIGNMENTS DUE:** Lab 3 - proposal outline |
| 5    | 09/17-09/23| Lecture DMH 355| **LECTURE:** Thursday – Review for midterm 1  
Tuesday – Midterm 1 (9/22)  
**REQUIRED READINGS:** Review GG 1, 2, 3, 4, and 12  
**LAB ACTIVITIES:** Lab 4; continue working on research proposal  
**ASSIGNMENTS DUE:** Lab 4 - literature review |
| 6    | 09/24-09/30| Lecture DMH 355| **LECTURE:** Thursday – Intro to Experimental Method  
Tuesday – Intro to Experimental Method (cont.)  
**REQUIRED READINGS:** GG 5  
**LAB ACTIVITIES:** Lab 5; complete work on research proposal  
**ASSIGNMENTS DUE:** Lab 5 - Research Proposal (preliminary) |
| 7    | 10/01-10/07| Lecture DMH 355| **LECTURE:** Thursday – Single Factor Designs  
Tuesday – Single Factor Designs (cont.)  
**REQUIRED READINGS:** GG 7  
**LAB ACTIVITIES:** Lab 6; data collection  
**ASSIGNMENTS DUE:** Lab 6 - consent forms |
| 8    | 10/08-10/14| Lecture DMH 355| **LECTURE:** Thursday – Factorial Designs  
Tuesday – Factorial Designs (cont.)  
**REQUIRED READINGS:** GG 8 |
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<th>Topics, Readings, Assignments, Deadlines</th>
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| 9    | 10/15-10/21| Lecture DMH 355 | LAB ACTIVITIES: continue recruitment and data collection  
ASSIGNMENTS DUE: Completed Research Proposal (with informed consent)  
LECTURE: Thursday – Methodological Issues in Experiments  
Tuesday – Methodological Issues in Experiments (cont.)  
REQUIRED READINGS: GG 6 |
|      |            | Lab DMH 339 | LAB ACTIVITIES: Lab 7; running statistics  
ASSIGNMENTS DUE: Lab 7 – descriptive statistics results |
| 10   | 10/22-10/28| Lecture DMH 355 | LAB ACTIVITIES: Lab 8; start working on research paper and presentations  
ASSIGNMENTS DUE: Lab 8 – inferential statistics results  
LECTURE: Thursday – Review for midterm 2  
Tuesday – Midterm 2 (10/27)  
REQUIRED READINGS: Review GG 5, 6, 7, and 8 |
|      |            | Lab DMH 339 | |
| 11   | 10/29-11/04| Lecture DMH 355 | LAB ACTIVITIES: Lab 9; cont. working on research paper/presentations  
ASSIGNMENTS DUE: Lab 9 – final paper discussion section  
LECTURE: Thursday - Correlational Research  
Tuesday – Correlational Research (cont.)  
REQUIRED READINGS: GG 9 |
|      |            | Lab DMH 339 | |
| 12   | 11/05-11/11| Lecture DMH 355 | LAB ACTIVITIES: Lab 10; cont. working on research paper/presentations  
ASSIGNMENTS DUE: Lab 10 – oral presentation outline  
LECTURE: Thursday – Applied Research  
Tuesday – Applied Research  
REQUIRED READINGS: GG 10 |
|      |            | Lab DMH 339 | |
| 13   | 11/12-11/18| Lecture DMH 355 | LAB ACTIVITIES: Continue working on research papers and presentations; use this week to make up any assignments  
ASSIGNMENTS DUE: none  
LECTURE: Thursday – Small N Designs  
Tuesday – Final thoughts  
REQUIRED READINGS: GG 11 |
|      |            | Lab DMH 339 | |
| 14   | 11/19-11/25| Lecture DMH 355 | LAB ACTIVITIES: Finalize research papers and oral presentations  
ASSIGNMENTS DUE: Oral Presentations  
LECTURE: Thursday – Communicating Your Results  
Tuesday – Communicating Your Results (cont.)  
|      |            | Lab DMH 339 | |
| 15   | 11/26-12/02| Lecture DMH 355 | LAB ACTIVITIES: No labs this week (11/26 and 12/1); Thanksgiving break!  
ASSIGNMENTS DUE: none  
LECTURE: Thursday – no lecture! Thanksgiving break!  
Tuesday – Review for the final  
REQUIRED READINGS: Review GG 9, 10, 11 |
|      |            | Lab DMH 339 | |
| 16   | 12/03-12/08| Lecture DMH 355 | LAB ACTIVITIES: Conclusion of oral presentations  
ASSIGNMENTS DUE: Submit final research paper  
LECTURE: Thursday - Oral Presentations  
Tuesday – Oral Presentations  
REQUIRED READINGS: Friday 12/11 at 2:45 pm – Final Exam  
none |

Lab DMH 339 |