

Psychology 201  
Macalester College

Research In Psychology I

Fall 2022  
R. Brooke Lea  
(he/him/his)

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Student Drop-By Hours TBA

Class meets on Monday, Wednesday, and Friday from 2:20 – 3:20 PM in Olin/Rice 352.

Required text:

Welkowitz, J., Cohen, B. H., and Lea, R.B. (2012). Introductory Statistics for the Behavioral Sciences. (7<sup>th</sup> edition) NY: Wiley.

Preceptors:

Marika Kay ([mkay@macalester.edu](mailto:mkay@macalester.edu)) and Audrey McGuinness ([amcguinn@macalester.edu](mailto:amcguinn@macalester.edu))

Course Description:

This course is the first in a two-semester sequence in the general research methods and statistical procedures of psychology. It examines how psychologists ask and answer research questions. This course covers the principles of sound and ethical research design, the statistical techniques appropriate for analyzing the data collected during these studies, and the types of inferences and conclusions that can and cannot be drawn from statistical analyses. In the laboratory portion of this course, students acquire a working knowledge of SPSS, a statistical data analysis package for PC and Macintosh systems.

This is a quantitative course. If you have a math background, the course will be straightforward. If you do not have a math background, don't panic! Material will be introduced at an intuitive or conceptual level. Students who possess basic arithmetic skills (e.g., multiplication, division, square roots), who persevere, who complete all assignments, and who seek assistance when needed, usually are very successful in the course.

Course Meeting Times and Attendance:

Class meets Mondays, Wednesdays, and Fridays from 2:20 to 3:20. Students are also required to attend a weekly computer laboratory session. Although attendance will not be taken during class, you are expected to attend all classes (past experience has shown that students who miss classes do poorly on exams). Lab attendance is all but mandatory. You are expected to be in the Psychology Computer Lab (Room 349) at the scheduled lab time. On Sunday evenings there will be an optional Homework Help Session run by the preceptors in room 349 (the computer lab) from [tentatively 3-6pm].

Course Requirements:

Grades for the course are based on the following course requirements: three exams during the semester, weekly problem sets, one research report, passing an SPSS proficiency exam, weekly labs, and a two-part cumulative final exam. Each requirement is described in detail below.



### *Exams.*

During the Semester: Each of the three exams given during the semester will be non-cumulative. Each exam is divided into two parts: a closed-book conceptual part (no fancy formulas needed) and an “open notes” practical part. The conceptual part includes multiple choice questions, definitions, matching items, and short answer questions. This part of the exam does not include practical (i.e., computational) problems.

The practical part contains only computational (homework-like) problems; you will analyze various data sets using the statistical techniques you have learned in the course. For the practical part of the exam, you may use a single, 8½ X 11 sheet of paper on which can be written anything you wish (and which should definitely contain any formulas that you may need for the exam). If, during the exam, you believe that you are missing some formulas, you may buy them from me for 2 points per formula (i.e., you lose 2 points off your exam grade for each formula that I supply).

Final Exam: The cumulative final exam is also divided into two parts: an open-book, take-home, practical exam composed entirely of data sets to be statistically analyzed, and a closed-book, in-class, conceptual exam composed of short-answer questions, definitions, matching items, and multiple-choice questions. The practical final exam, given out on the last day of class, is due in my office by 5 PM on Friday, December 17<sup>th</sup>, and counts for 15% of your total course grade. The conceptual final exam is given during the class’s assigned exam period, on Wednesday, December 15<sup>th</sup> from 10:30 – 12:30, and counts for 15% of your total course grade.

SPSS Proficiency Exam: You are required to satisfactorily pass (i.e., receive at least 80 out of 100 points) an SPSS proficiency exam. On this exam you must demonstrate your ability to prepare data sets and carry out statistical analyses using SPSS. This exam is an open-book exam that you have 24 hours to complete. Make-ups for this exam will be given. However, if you have not satisfactorily passed the exam by Friday, December 17<sup>th</sup> at 5 PM, 10 points will be deducted from your final grade point total. The exam will be available starting Monday, December 6<sup>th</sup>.

With the exception of the SPSS proficiency exam, makeups are not given for unexcused absences from exams (except under truly extraordinary circumstances). If you have a problem, contact me before the exam. A student who is not present at an exam receives no credit for that exam (i.e., a numerical grade of zero).

*Problem Sets.* Most weeks you will be required to complete a problem set. You will be asked to solve a number of problems using SPSS, as well as by hand. Completed problem sets are *due at the start of class on Monday*, unless otherwise announced. The grade you receive on them will depend upon their correctness, completeness, and whether they were turned in on-time. Problem sets turned in late will receive no credit, though they will be graded (i.e., you will get feedback).

Each of the ten problem sets is worth 1 point toward your final grade point total. Thus, the ten problem sets count for 10% of your final course grade. Complete and correct problem



sets turned in on the original due date will receive full credit (1.0 point).

A complete and correct problem set is one in which all assigned problems have been correctly solved *with all your work/computations for that problem shown*. You will lose points if your problem set is incomplete (i.e., is missing an assigned problem), contains an incorrect problem solution, or does not show your work. Problem sets are due on Mondays *at the beginning of class* (NB: if you have not completed your homework by the beginning of class, come to class and turn in what you have.) Graded problem sets will be returned to you on Fridays. Each problem set will receive a grade of check, check +, or check -. To earn a check +, a student must have a) submitted the homework on time; b) attempted every assigned problem; and c) successfully answered each question showing the appropriate amount of work (a few very small errors are okay); A check indicates that a student has satisfied criteria a) and b), but that one or more substantial or conceptual error was made. A check - indicates that criteria a) has been met, but that either not all problems were attempted, or there were significant errors of understanding. These marks are intended to provide general feedback about your performance on the problem set where check + means "excellent - no major problems found"; a check means "good try, but you should be aware that you may not understand the material as well as you thought"; and check - should be understood as a red flag indicating that you should pay more attention to either your effort to complete the data set, or to your understanding of the material (or both). Your two lowest homework grades will be dropped before your final homework grade is computed.

*Laboratory Activities.* Each week you will spend approximately an hour and a half in lab performing various activities. For the most part, computer activities involve interacting with SPSS, a statistical software package. When you have completed the Lab Handout for that week, you will fill the remaining lab time by doing your SPSS homework (usually due the following Monday). It is important that you bring your textbook to lab so you can do your homework. Other lab time will be spent discussing and/or working on your Research Projects.

Makeups will only be allowed for excused absences, and must be completed within two weeks of the original lab date. Lab attendance is worth 5 points.

*Research Report.* The research report will be a write-up of an experiment that will be conducted during lab. The experiment will reproduce the experimental framework of a classic eye-tracking experiment. You will receive more detailed information about the write-up for this research report in a separate handout. The Research Report counts for 15% of your total course grade.

### Sunday Help Sessions

On Sunday evenings in room 349 [tentatively 3-6pm] the class preceptors will be available to answer questions about the homework problems. The purpose of these sessions is to answer specific questions about problems that you are having difficulty solving. Do not simply ask the preceptor to do the problems for you--this will not help you learn the material or prepare for the exams. Try to do the problems yourself before the session or during the session; then, if you get stuck or do not get the correct answer, ask for help. It is highly recommended that students who find particular topics difficult, who have difficulty keeping current with the reading/homework assignments, and/or who desire extra support, attend the help sessions. In the



past, some students have chosen to do their homework during the help sessions, while other students only come to the help sessions when they have a specific problem. You should use the sessions so that they best meet your needs.

### Composition of Course Grade

Exam 1	10 points
Exam 2	15 points
Exam 3	15 points
Take-home Final Exam	15 points
In-class Final Exam	15 points
Problem Sets	10 points
Participation in class and lab	5 points
Lab paper	15 points
<b>TOTAL</b>	<b>100 points</b>

**Please note that there are no make-up exams in this course.** You are responsible for being appropriately prepared for each exam at the time that it is given.

### SPSS Problem Sets

For the SPSS problems, turn in a copy of the computer printout of the analysis (the results table or the graph). Make sure you circle the results, label them, and verbally interpret them (you can use SPSS to write comments on the output) ***you will lose points if you do not circle, label, and interpret your SPSS results.***

### Grading

Grades will be assigned based on the percentage of available points:

92-100 %	90-91%	88-89%	82-87%	80-81%	78-79%
A	A-	B+	B	B-	C+
72-77%	70-71%	68-79%	62-67%	60-61%	<60%
C	C-	D+	D	D-	NC

### Academic integrity

You are expected to meet the highest standards of academic integrity and honesty, which includes submitting your own original work and properly citing any other work (ideas/quotes) that you have incorporated into your work. See Macalester's detailed definitions and policies concerning forgery, cheating, and plagiarism:

<https://www.macalester.edu/academicprograms/academicpolicies/academicintegrity/>. If you have any uncertainties about academic honesty/dishonesty as it might relate to your work in the course, please talk with me. Cases of suspected academic dishonesty will be reported to the Director of Academic Programs.

All exams are to be your own work regardless of whether they are open-book, closed-book, take-home, or in-class. You may not collaborate with any other individual on any





exam and you may only use those materials (notes, tables, books) as explicitly stated on each exam booklet or in the syllabus.

You may (and should) work on the problem sets with other students. However, each student must turn in their own, hand-written, completed problem sets (i.e., machine generated copies of problem solutions will not be accepted, except for computer printouts of computer assignments). If you do work on the problem sets with other individuals, make sure that you understand the solutions to all the problems and that you can solve them by yourself (i.e., dividing up the problems will put you at a *serious disadvantage* on the exams).

### Accommodations

I am committed to supporting the learning of all students. If you are encountering barriers to your learning that I can mitigate, please bring them to my attention. If you think you need accommodations based on the impact of a disability, please contact Melissa Fletcher, Director of Disability Services ([mfletche@macalester.edu](mailto:mfletche@macalester.edu), 651-696-6874) early in the semester to schedule an accommodations meeting. Further information about disability services and accommodations can be found at: <http://www.macalester.edu/studentaffairs/disabilityservices>

### Health and Wellness at Macalester

Here at Macalester, you are encouraged to make your well-being a priority throughout this term and your career here. Staying well is extra complicated these days by COVID-19, as well as ongoing systemic racism, and other forms of oppression - this complex context requires flexibility, creativity, persistence and support. Investing time into taking care of yourself will help you engage more fully in your academic experience. Remember that beyond being a student, you are a human being carrying your own experiences, thoughts, emotions, and identities with you. It is important to acknowledge any stressors you may be facing, which can be mental, emotional, physical, financial, etc., and how they can have an academic impact. I encourage you to remember that you have a body with needs. In the classroom, eat when you are hungry, drink water, use the restroom, and step out if you are upset and need a break. Please do what is necessary so long as it does not impede your or others' ability to be mentally and emotionally present in the course. Outside of the classroom, sleep, moving your body, and connecting with others can be strategies to help you be resilient at Macalester. If you are having difficulties maintaining your well-being, please don't hesitate to contact me and/or find support from other resources on the following page.

### On-Campus Resources

#### **Laurie Hamre Center for Health & Wellness**

Leonard Center Room 53, 651-696-6275 (call to make an appointment).

Follow *macalesterhwc* on Instagram. [www.macalester.edu/healthandwellness/](http://www.macalester.edu/healthandwellness/)

- Medical Services
  - There is no charge for an office visit to see a provider for most appointments
  - Medical providers can talk to you about your mental health.
- Counseling Services
  - Health & Wellness counselors provide short-term counseling to students.
  - Drop-in counseling sessions are available each day.
  - Counseling staff offers multiple groups each semester. Check Hamre Center website for more information on specific groups being offered.



- Let's Talk - brief, drop-in chats with counselors.
- 24 Hour Urgent Phone Counseling – PRESS 2
  - To speak to a mental health counselor at any time, call 651-696-6275, then press “2” to be connected to ProtoCall, a free phone counseling service that Macalester provides for students, available 24/7.
- Self-Care Resources
  - Health Promotion
    - Provides resources and initiatives, including free yoga classes, aromatherapy, AOD resources including fentanyl test strips, sleep products, and sexual health resources. Visit the Wellness Initiatives section of the HWC website.
    - We're All in this Together Resilience Challenge found on the Wellness Section, Resilience Button of the HWC website provides practical, digestible skills for you to create your own building blocks to resilience.
  - PAWS @ Mac (therapy dog program)
    - To learn more about when and where to find the therapy dogs, email [paws@macalester.edu](mailto:paws@macalester.edu), or follow *pawsatmac* on Instagram.

#### **Resident Advisor (RA) and Resident Hall Director (RHD)**

- Both RAs and RHDs can serve as a first point of contact and are able to connect you to resources during mental health crises.

#### **Other Support Offices**

- Center for Religious and Spiritual Life, (651-696-6298), Weyerhaeuser Chapel
- Office of Student Affairs (651-696-6220), Weyerhaeuser 119

Urgent and Off-Campus Resources

([www.macalester.edu/healthandwellness/afterhours](http://www.macalester.edu/healthandwellness/afterhours))

#### **Macalester Public Safety**

- Call 651-696-6555 in the case of any emergency to reach Public Safety. They will connect you with other campus response personnel.
- On Friday and Saturday nights (9 pm – 2 am), student EMTs are on call, and will respond to health-related emergencies when Security is called

#### **Telehealth (call, text, email or video)**

##### **24/7 services with NO charge**

**Press 2 – Phone Mental Health Counseling** (Macalester-sponsored. See description above)

Call **651-696-6275**, select menu option 2.

##### **Crisis Text Line Text MN to 741741**

Minnesota's suicide prevention and mental health crisis texting services are available 24 hours a day, seven days a week.

##### **Trevor Project** (text, chat, or call - suicide hotline for LGBTQ youth)

Call: **1-866-488-7386** [thetrevorproject.org/get-help-now](http://thetrevorproject.org/get-help-now) Text **START** to **678678**



**Transgender Suicide Hotline** 877-565-8860

**Steve Fund Crisis text line** Text **STEVE** to **741741** For person of color.  
**SOS Sexual Violence Services** 651-266-1000

**BetterHelp.com** Does charge but covered at 100% if the student has the Macalester-offered United Healthcare Student Resources health insurance. \*The BetterHelp app may share (non protected healthcare) information with other apps.\*

**Urgent Care for Adult Mental Health**

402 University Ave E, St. Paul, MN 55130

651-266-7900 (24/7 phone support; walk-ins M-F 8am - 5:30pm)

**Regions Hospital (Emergency Room)**

640 Jackson Street, St. Paul, MN 55101

651-254-3456

Transportation

If you have an urgent health need and do not have transportation to get to a clinic or hospital, Hamre Center staff, Residential Life staff, Office of Student Affairs and other campus response individuals can arrange for a ride share (Uber) to and from the clinic/hospital. There is no charge for the ride.



**Overview of Class Topics, Labs, and Assignments**

*9/5/2022 Version*

Date	Class Topic	Lab Activities	Assignments Due
1 <sup>st</sup> Week (8/31-9/2):	Introduction to the course Descriptive Statistics <b>Chapter 1</b>	No Lab	Wed. 9/8 Chapter 1: EX: 1; 2a-b; 3a-b; TQ: 1-8.
2 <sup>nd</sup> Week (9/7-9):	Scales of Measurement Measures of Central Tendency <b>Chapters 2 (pp. 26-35; 39-47)</b>	SPSS Lab 1: Creating and editing data files	Mon. 9/13 Chapter 2: TQ: 2-5. Chapter 3: EX: 1,6,9. TQ: 1-8.
3 <sup>rd</sup> Week (9/12-16):	Measures of dispersion and z-scores <b>Chapters 3 and 4</b>	SPSS Lab 2 & 3: Graphing and descriptive statistics; Manipulating and transforming data	Mon. 9/20 Chapter 1: CE 4,5 Chapter 3: CE: 1,2,5
4 <sup>th</sup> Week (9/19-23):	The Normal Distribution and the Philosophy of Statistical Inference <b>Chapter 5</b>	TBA	Mon. 9/27 Chapter 4: EX: 1,3,7-9,12. TQ: 1-8.
5 <sup>th</sup> Week (9/26-30):	Statistical Inference. <b>Chapter 5</b>	Eye-Tracking Training: Session 1	Mon. 10/4 Chapter 5: EX: 1-5. TQ: 1-5, 7.
6 <sup>th</sup> Week (10/3-7):	Statistical Inference, Single-Samples <b>Chapter 6</b>	Eye-Tracking Training: Session 2	Prepare for Exam 1
7 <sup>th</sup> Week (10/10 -14):	<u>Exam 1 on Monday, 10/10</u> Statistical Inference, Two-Samples <b>Chapter 7</b>	Data Collection in eye-tracking lab (date and time TBD)	Mon. 10/18 Chapter 6: EX: 1-4. TQ: 1-5.
8 <sup>th</sup> Week (10/17- 19): (and Fall Break!)	Independent research designs vs. Repeated/Matched designs Repeated Measures t-test	<b>Labs on TUESDAY this week!</b> Using computerized databases; Library Instruction Room, (L206)	Mon. 10/25 Chapter 7: EX: 1,4,5,7-9. TQ: 1-6.
9 <sup>th</sup> Week (10/24-28):	Correlational research designs <b>Chapter 9 (skip pp. 239-242)</b>	SPSS Lab 4: t-tests	Prepare for Exam 2
10 <sup>th</sup> Week (10/31-11/4):	<u>Exam 2 Monday 10/31</u> Correlation	Writing in APA style Analyze Eye-tracking data	Mon. 11/8 Chapter 6: CE: 1-3 Chapter 7: CE:1-6 Chapter 9: 1,2,4. TQ: 1-8
11 <sup>th</sup> Week (11/7-11):	<b>Chapter 10 (skip pp. 263-272)</b> Prediction and Linear Regression Experimental & Correlational Designs <b>Wellness Day on Friday 11/12</b>	SPSS Lab 5: Correlation & scatter plots SPSS Lab 5: Regression	Mon. 11/15 Chapter 9: CE: 1-4, 6 Chapter 10: EX: 1, 2. TQ: 1-2 CE:1-2. <b>Lab Report Due Wednesday, 11/17</b>
12 <sup>th</sup> Week (11/14-18):	One-Way ANOVA <b>Chapter 12 (skip pp. 331-338)</b>	SPSS Labs 6 & 7: ANOVA & Multiple Comparisons	Mon. 11/22 Chapter 12: EX: 1a-c, 2-3 (no eta squared or omega squared) TQ: 1-2; CE: 1-3.
13 <sup>th</sup> Week (11/21): (and Thanksgiving Break!)	More ANOVA Multiple Comparisons	Thanksgiving!	No Homework Due
14 <sup>th</sup> Week (11/28-12/2):	<b>Chapter 13 (optional)</b> Take-Home Final Available Statistical Interactions	TBA	Interactions Homework Handout
15 <sup>th</sup> Week (12/5-9):	Review <u>Exam 3 on Wed 12/7</u> Review	TBA	
	Conceptual Final: 12/13 10:30-12:30pm	Take Home Final: due 12/16 by 5pm	SPSS Proficiency Exam: passed by 12/16 5pm

