

Psyx 222 – Psychological Statistics

Spring 2021

Instructor Information

Instructor: Daniel J. Denis, Ph.D.

Office: 369 Skaggs Building

Office Hours (Zoom): Mondays, 12-1, Wednesdays, 12-2. (Appointment)

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Course Information

Lectures: M, W, F, 11:00 – 11:50. (Lectures Posted by Approx. 11:00AM)

Location: **REMOTE OFF-CAMPUS**

Labs/Tutorials: ZOOM

Times: Thursdays, 11:00 – 11:50, 12:00 – 12:50, 3:00 – 3:50, 4:00 – 4:50.

Join Zoom Meeting

<https://zoom.us/j/97301938837?pwd=dFBFWVFazkVlekl1cDZqcDVxWHltZz09>

Meeting ID: 973 0193 8837

Passcode: 271971

Teaching Assistant: Gabriella Ji

Office Hours (Zoom): Mondays, 9:30-11:00, Wednesdays, 3:30-5:00.

E-mail: cj140300@umconnet.umn.edu

Course Objective

The primary objective of this course is to provide the opportunity to acquire a working knowledge, overview, and understanding of statistical methods regularly used in psychological, social, and related sciences, and apply and interpret them in the context of empirical research.

Required Text

1. R. Lyman Ott, Michael T. Longnecker, "An Introduction to Statistical Methods and Data Analysis" (7th edition). The cover of the text is blue. The ISBN is: 9781305269477. The publisher is Cengage Learning. This is the required text. Lectures will be based on this source.

2. Paul Teator, "R Cookbook: Proven Recipes for Data Analysis, Statistics, and Graphics" (1st edition or any later edition would also be fine as well, though the 1st edition will be much cheaper; since we'll be using the source as a reference manual only, it doesn't matter which

edition you get). The publisher is O'Reilly. Red cover (1st edition). The book is optional for the course, but you are strongly encouraged to obtain a copy.

Evaluation

Final Grades will be based on the following:

Test 1: 10%

Test 2: 25%

Final Exam: 50%

Assignment Sets (3 submissions of completed work each @ 5%): 15%

Final Grade Determination (Maximizing your Grade)

*** If your grade on the final exam is better than Test 1 or Test 2 or both, your final exam grade will count for the corresponding test weight. The final exam is cumulative over the entire course. If you miss, for whatever reason, Test 1 or Test 2, the relevant weight is automatically transferred to the final exam.

THERE ARE NO MAKE-UP TESTS IN THIS COURSE.

Final Letter Grades will be assigned according to the “grade thermometer” below. Course grading is traditional (you CANNOT change your grade to pass/fail unless you have an exceptional reason).

% Points	Grade
100 – 90	A
89 – 80	A-
79 – 77	B+
76 – 73	B
72 – 70	B-
69 – 67	C+
66 – 63	C
62 – 60	C-
59 – 57	D+
56 – 53	D
52 – 50	D-
< 50	F

Evaluations and Assignments

All material discussed in the course is theoretically testable and can appear on tests and exams. However, what is emphasized and discussed in class has the greatest probability of appearing, and you should focus mostly on these concepts unpacked in class discussion and appearing on assignments leading up to evaluations. Tests 1 and 2, as well as the final exam, are multiple choice. Assignment sets are to be submitted on the day of the given test or exam and are graded on a “credit vs. no credit” scale. **Late assignments will NOT be accepted unless there is an exceptional reason.** Work that is overall complete, thorough, and well-prepared will receive full credit. Work that is incomplete, scattered, and not carefully prepared, or absent altogether, will not receive credit. You are strongly encouraged to attend weekly labs to review/edit your answers (learn from your mistakes as well), and submit assignment sets that are complete to ensure you receive credit for these easier points. Assignment sets are designed to help you prepare for evaluations, so it is in your best interest to prepare them carefully,

revise/edit/improve upon them based on what you are learning in class and in lab. Use them as mini “study guides” to help prepare for evaluations. **Assignments will be posted via Moodle usually on Fridays, which will then be reviewed in lab the following week. Keep an eye out for announcements in class and/or be sure to check Moodle regularly for updated assignment postings. You must attend lab to learn of the correct solutions and approaches to problems, as they will not be posted to Moodle at any time, nor will TA notes be provided at any time. You are strongly encouraged to attend all labs. However, attendance will not be taken at lab.**

Course Policies and Guidelines

Policy on Missed Tests

A missed test will result in a grade of **zero** for that test. **There are NO MAKE-UP TESTS for this course.** You are encouraged to attend all evaluations as scheduled. If you miss any of the tests, the weight of that test is automatically transferred to the final exam.

Disability Modifications

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and [Disability Services for Students](#). If you have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406.243.2243. We will work with you and Disability Services to provide an appropriate modification.

Academic Misconduct

You are expected to adhere to the university’s [Student Conduct Code](#) with regard to academic integrity. All students must practice academic honesty. Academic misconduct in this course will not be tolerated and is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.

Class Behavior (Does Not Apply to Remote Course)

The expectations for this course are such that you remain respectfully silent while either the instructor is speaking or a colleague in the class is asking or responding to a question. In accordance with **policies set by the University, disruptions in class will not be tolerated.** This policy is set so that every student has the opportunity to learn in a quiet and constructive environment. **A failure to meet this expectation will result in you being dismissed permanently from the class.** This policy is very strict as to protect the rights of students who have invested time, money and energy into this course and deserve nothing less than an optimal learning environment. **The instructor will make every effort to make sure you, the student, has an ideal learning environment.** Please speak to the instructor privately if you are being disrupted in class.

Incompletes

Departmental and University policies regarding incompletes do not allow one to change “incomplete” grades after 1 year has passed since the “I” was granted.

Tentative Course Schedule (Subject to Change EXCEPT for Evaluation/Test Dates)

DATE	TOPIC	CHAPTERS	Assignments	LABS Assignments
11 Jan. Mon 13 Jan. Wed 15 Jan. Fri	<i>Syllabus, Mathematics for Statistics</i>	Khan (2015) Fox Appendix	#1	Orientation
18 Jan. Mon 20 Jan. Wed 22 Jan. Fri	Martin L. King Jr. Day (NO CLASS) <i>Mathematics for Statistics</i>	Fox Appendix	#2	#1
25 Jan. Mon 27 Jan. Wed 29 Jan. Fri	<i>Statistics and the Scientific Method Using Surveys and Experimental Studies to Gather Data</i>	1, 2	#3	#2
01 Feb. Mon 03 Feb. Wed 05 Feb. Fri	<i>Data Description</i>	3	#4	#3
08 Feb. Mon 10 Feb. Wed 12 Feb. Fri	<i>Probability and Probability Distributions</i>	4	#5	#4
15 Feb. Mon 17 Feb. Wed 19 Feb. Fri	Presidents' Day (NO CLASS) TEST 1 (10%) - Chapters 1-3 <i>Inferences About Population Central Values</i>	5	Assign. 1-4 DUE (5%)	#5
22 Feb. Mon 24 Feb. Wed 26 Feb. Fri	<i>Inferences Comparing Two Population Central Values</i>	5/6	NO ASSIGNMENT	Test 1 Review
01 Mar. Mon 03 Mar. Wed 05 Mar. Fri	<i>Inferences Comparing Two Population Central Values</i>	6 (SKIP 7)	#6	Student Break (NO LAB)
08 Mar. Mon 10 Mar. Wed 12 Mar. Fri	<i>Inferences About More Than Two Population Central Values</i>	8	#7	#6
15 Mar. Mon 17 Mar. Wed 19 Mar. Fri	<i>Multiple Comparisons</i>	9	#8	#7
22 Mar. Mon 24 Mar. Wed 26 Mar. Fri	<i>Categorical Data</i> TEST 2 (25%) - Chapters 4-8 (NO 7)	10	#9/Assign. 5-7 DUE (5%)	#8
29 Mar. Mon 31 Mar. Wed 02 Apr. Fri	<i>Categorical Data</i> Student Break (NO CLASS)	10	NO ASSIGNMENT	#9
05 Apr. Mon 07 Apr. Wed 09 Apr. Fri	<i>Linear Regression and Correlation</i>	11	#10	Overload
12 Apr. Mon 14 Apr. Wed 16 Apr. Fri	<i>Linear Regression and Correlation</i>	11		#10

DATE	TOPIC	CHAPTERS	Assignments	LABS Assignments
19 Apr. Mon 21 Apr. Wed 23 Apr. Fri	<i>Overload and Review</i> <i>Last Day of Class</i>			Exam Prep/Course Review
28 Apr. Wed	FINAL EXAM (50%) - Chapters 1-11 (NO 7)	-	Assign. 8-10 DUE (5%)	-