

PSYC 399: INTERMEDIATE STATISTICS

Mondays 11am-12:15pm in SCI A203

Spring 2019, 3 credits

PROFESSORS

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Science B337

M 12:30-1:50pm, TR 1-1:50pm,

or by appointment

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Science D240

MTWF 930-11am, MF 2-3pm,

or by appointment

TEXTBOOK

Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques* (2nd ed.). Los Angeles, CA: Sage Publications. (PDFs provided)

SPSS Data Files: <http://www.sagepub.com/warner2e/study/default.htm>

DESCRIPTION

The purpose of this course is to provide you with a level of familiarity and comfort with analyses typically encountered in graduate training programs. The course will focus on three core areas. First, it will focus on a review of descriptive and inferential statistics. Second, it will focus on multiple regression and some derivations, such as mediation analysis. Third, it will focus on measurement issues, such as reliability and principal components analyses. The course will conclude with a wrap-up of the semester.

As an independent study course, the majority of your learning in this course will be based on what you do outside of this class. It will be essential to keep up with your readings, to practice the activities from your book, and to contact us when you need assistance. The course sessions will be used to clarify your understanding, answer questions, conduct analyses, and so on. Nonetheless, you should not think of your professors as lecturers, but rather as discussants and consultants. We are guides, rather than information deliverers.

GOALS

After completing this course, students will be able to:

1. Describe the purpose and rationale behind intermediate statistical analyses
2. Conduct and interpret intermediate statistical analyses using appropriate software
3. Write-up intermediate statistical results for publication in APA-style manuscripts

CALENDAR

Week	Topic	Reading	Homework
<i>Review of descriptive and inferential statistics</i>			
1/28	Review of design and analysis	Chapter 1	
2/4	Preliminary data screening	Chapter 4	
2/11	Basic descriptive statistics	Chapter 2	
2/18	Bivariate regression	Chapter 9	#1 assigned
2/25	Significance tests and effect sizes	Chapter 3	
<i>Multiple regression and its derivations</i>			
3/4	Multiple regression with two predictors	Chapter 11	#1 due
3/11	Multiple regression with dummy predictors	Chapter 12	
3/25	Analysis of covariance (ANCOVA)	Chapter 17	
4/1	Multiple regression with interactions	Chapter 15	#2 assigned
4/8	Mediation analysis	Chapter 16	
<i>Psychometric or measurement issues</i>			
4/15	Reliability and validity in measurement	Chapter 21	#2 due
4/22	Principal components and factor analysis #1	Chapter 20	
4/29	Principal components and factor analysis #2	None	#3 assigned
<i>Summary and integration</i>			
5/6	Wrap-up	None	
5/13	Final exam week (no regular class meeting)	None	#3 due

HOMEWORKS

In this course, you will be required to complete three homework assignments, one for each major content area—review of statistics, multiple regression, and measurement. We find that students become more comfortable with statistics when they can correctly choose an analysis, when they can correctly perform this analysis, and when they can adequately write-up the results. As a result, homework assignments will involve these three elements—choosing analyses, conducting analyses, and writing up your results. These homeworks will be handed out and collected in class on the dates indicated on

the calendar. Each will be worth 100 points or 1/3 of your final course grade. You can use the grading scale below to determine your final grade.

A = 279-300 points, A- = 270-278 points, B+ = 261-269 points, B = 249-260 points, B- = 240-248 points, C+ = 231-239 points, C = 219-230 points, C- = 210-218 points, D = 180-209 points, F = 0-179 points.

POLICIES

Communication. Please do not hesitate to contact us with your concerns related to this course, as well as other academic and career-related issues. Office hours are the most reliable way to contact us. We hold several office hours per week. If you cannot attend office hours, please contact us about an appointment. Email is the next most reliable way to contact us. We typically respond to emails in two business days (not on evenings and weekends). To avoid being snagged by our junk mail filters, type PSYC 398 in the subject line. Emails requiring an extensive reply will be referred to office hours. Other ways of contacting us are generally unreliable.

Disabilities. UWSP is committed to reasonable and appropriate accommodations for students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, contact the Disability and Assistive Technology Center on the 6th floor of ALB (the library) as soon as possible. DATC can be reached at 715-346-3365 or DATC@uwsp.edu.

Emergencies. In the event of a medical emergency, call 911 or use the Red Emergency Phone outside of SCI B215. Offer assistance if trained and willing to do so. Guide emergency responders to those in need. In the event of a tornado warning, proceed to the lowest level interior room without windows. See <http://www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx> for floor plans showing the severe weather shelters (such nearby classrooms). Avoid wide-span structures (such as gyms, pools, or large classrooms). In the event of a fire alarm, evacuate the building in a calm manner and meet on the south side of SCI (near the TNR building). Please notify instructor or emergency command personnel of any missing individuals. In the event of an Active Shooter/Code React, run/escape, hide, fight. If trapped, hide, lock doors, turn off lights, spread out, and remain quiet. Call 911 when it is safe to do so. Follow instructions of emergency responders. See UWSP's Emergency Management site at <http://www.uwsp.edu/rmgt> for details on emergency response procedures.

Incompletes. Incompletes are only available to students in exceptional situations, such as medical emergencies or similar circumstances. They are not available for those who feel overwhelmed by routine academic or personal activities. Requests for incompletes must be accompanied by documentation. Except in extraordinary cases, incompletes must be finished within one semester or a grade of F will be entered for the course.

Illegalities. Under several federal and state laws, and according to several university guidelines, professors are required to report acts of an offensive or criminal nature that

occur within and outside of class. This includes acts of sexual harassment and assault, bias and hate crimes, illicit drug use, and acts of violence. Any disclosure or description of these incidents—past and current—may be reported to the Dean of Students office (<http://www.uwsp.edu/dos/>) or local authorities.

Makeups. Makeups are only available to students who cannot complete an assessment on time due to academic, athletic, or religious obligations, major illnesses, or other valid reasons. Requests for makeups must be accompanied by documentation, such as letters from coaches, doctors, or spiritual leaders. Except in extraordinary cases, makeups must be completed within a week of the deadline to receive credit for the assessment.

Misconduct. The professors take instances of misconduct (such as cheating and plagiarism) seriously. The minimum penalty for an instance of misconduct will be a zero on the assessment. Other penalties will be considered under university policy. Please do not put yourself and others through disciplinary proceedings. To read UWSP's policies, go to: <https://www.uwsp.edu/dos/Pages/Student-Conduct.aspx>.

Professionalism. UWSP values a safe, honest, respectful, and inviting learning environment. In order to ensure that each student has the opportunity to succeed, a set of expectations (called Community Rights and Responsibilities) has been developed for students and professors. For more information, go to: https://www.uwsp.edu/dos/Documents/2015_Aug_Community%20Rights%20and%20Responsibilities%20Web.pdf.