DEPARTMENT OF PSYCHOLOGY   **DR. CRAIG A. WENDORF**

COURSE SYLLABUS
PSYC 300: Statistics for Psychologists

Course Term:	Semester I (Fall), 2019-20 – Main Campus (Stevens Point)
Lecture:	Section 02, MWF, 1:00 – 1:50 pm, D224 Science
Labs:	Section 02L1, T, 9:00 – 10:50 am, D326 Science
	Section 02L2, T, 11:00am – 12:50 pm, D326 Science
Instructor:	Craig A. Wendorf, Ph.D., Professor and Chair of Psychology

If you have questions that are confidential or personal in nature, please contact me via email or via message in Canvas. I will generally respond to student messages within 24 hours. If you have not received a reply from me within 24 hours, please resend your message.

- **Contact Information:** cwendorf@uwsp.edu, 715-346-2304 (with voicemail)
- **Office Location:** D240 Science Center, University of Wisconsin – Stevens Point (Main Campus)
- **Office Hours:** MWF from 10:30 am - 12:00 pm, MTF from 2:00 pm – 3:30 pm, and other times available by appointment

If you have a general course question (not confidential or personal in nature), please post it to the Course Q&A Discussion Forum found on the course homepage. I will post answers to all general questions there so that all students can view them. Students are encouraged to answer each other's questions too.

Course Overview

Prerequisites

Prior to taking this course, it is expected that you have already accrued a basic understanding of the fields of mathematics and psychology. As such, it requires that you have completed PSYC 110 (Introduction to Psychology) or its equivalent and MATH 095 (College Algebra) or its equivalent. It is strongly recommended that you have also completed PSYC 200 (Research Methods in Psychology).

Course Description and Objectives

This course will introduce you to statistical reasoning and the application of basic statistical (descriptive and inferential) procedures. This course is intended to provide an understanding of why a particular statistic is appropriate for a given experimental or nonexperimental design as well as the "inner workings" of each statistical test.

This is a basic statistics course that meets the requirements for the Psychology Major as well as several other majors on campus. This course also meets the Quantitative Literacy requirements for the General Education Program. Therefore, while completing this course, you will:

- **Course Learning Outcome 1:** Explain the logic and appropriate applications of statistical analyses for univariate or bivariate research designs, problems, or hypotheses.

- **Course Learning Outcome 2:** Calculate the statistics necessary to solve problems (both manually and via computer), including descriptive statistics, statistical significance tests, effect sizes, and confidence intervals.
- **Course Learning Outcome 3:** Communicate the meaning of statistical analyses in everyday language and professional formats (e.g., graphs, tables, and words).

Teaching Philosophy

My job is to facilitate your achievement of these objectives. Thus, I am going to do what my professional training and experience suggest helps your long-term learning of important and relevant content and skills. To that end, I emphasize timely reading of course materials, in-class participation, out-of-class activities and homework, and thorough examinations. Overall, you should not think of your professors as lecturers or information deliverers, but rather as discussants, consultants, and guides in your education.

Additional descriptions of these learning outcomes and the
course structure I use to meet them are available on the course Canvas site.

Course Materials and Resources

Textbook and Other Materials

There one required textbook for this class and it is available at text rental. Canvas includes a link to a document describing how to obtain the textbook if you cannot pick up the book directly on campus. If you decide to purchase or borrow the book through another source, please be sure to get the correct edition.

> Aron, A., Coups, E. J., & Aron, E. N. (2011). *Statistics for the behavioral and social sciences: A brief course* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

All homework assignments, exam study guides, course grades, and additional course materials will be posted online through Canvas. Students should check this site regularly to get the updated courses materials.

An online textbook for using and understanding statistical software
is available on my website and accessible through the course Canvas site.

Calculators and Computers

Calculators are highly recommended for the assignments and most in-class work; you will also be allowed to use calculators on the exams. However, do not use a calculator as a crutch. If you do not understand the math you are asking the calculator to do, you will not understand the concept that you need to learn.

Most of the homework assignments will also include a significant amount of computer work involving the software package SPSS (Statistical Package for the Social Sciences). It is accessible from all networked campus computers (instructions are available on Canvas). We will spend considerable time in class dedicated to helping you understand this program.

Course Grading Policies

Evaluation of Performance

Evaluation of student performance will be based on homework assignments and in-class exams. An overview of the point values for each of the course assessments is given below.

ASSESSMENTS OF OBJECTIVES:	POINTS EARNED:
Weekly Assignments	
Assignment 1: Math Review	_____ / 12 points
Assignment 2: Frequency Distributions	_____ / 12 points
Assignment 3: Descriptive Statistics	_____ / 12 points
Assignment 4: Standardized Scores	_____ / 12 points
Assignment 5: Correlations	_____ / 12 points
Assignment 6: Measurement and Description	_____ / 12 points
Assignment 7: Sampling Distributions	_____ / 12 points
Assignment 8: Interval Estimation	_____ / 12 points
Assignment 9: One Sample Statistics	_____ / 12 points
Assignment 10: Independent Sample Statistics	_____ / 12 points
Assignment 11: Sampling and Inferences	_____ / 12 points
Assignment 12: One-Way ANOVA	_____ / 12 points
Assignment 13: Post Hoc Comparisons	_____ / 12 points
Assignment 14: Repeated Measures ANOVA	_____ / 12 points
Assignment 15: Factorial ANOVA	_____ / 12 points
Course Exams	
Exam 1: Measurement and Description	_____ / 40 points
Exam 2: Sampling and Inferences	_____ / 40 points
Exam 3: Multiple Group Analyses	_____ / 40 points
TOTAL:	**_____ / 300 points**

The weekly homework assignments are designed to provide you with opportunities to explore the main concepts and to apply the material. *You may confer with other students and the instructor if you have questions, but you must submit work that is your own.*

The in-class exams are a combination of multiple-choice questions, short essay questions, and problem-based questions. *You will be permitted to use your notes during the exam.* The exams, as well as the "redo" portions of the exams, are to be done independently (without consulting with other students).

The grading rubric and sample questions for the exams
are available on the course Canvas site.

Late Assignments and Make-Up Exams

Each assignment's due date is clearly marked on this syllabus. If you know ahead of time that you will miss a due date for an assignment, you should submit the assignment before the due date.

Similarly, each exam will start promptly at the beginning of class on the scheduled exam day. Students who arrive late to an exam will only be allowed to take it if they arrive before the first student finishes and leaves the room. After that point, requests to take exams will be declined unless they are consistent with the make-up policy below.

For all unexpected absences (e.g., illnesses, etc.), I require notice no later than the morning of the due date or exam. Only students with instructor-validated documentation for the absence will be given an extension or a make-up exam; failure to follow this policy will result in an automatic zero for the assessment in question.

Unless you are taking an exam through the Disability and Assistive Technology Center, all make-up exams will be proctored through the Department of Psychology during one of the official times. I will notify you of available times, and you will be expected to schedule during one of these times. Under most conditions, make-up exams should be completed within one week of the original exam date.

Determination of Final Course Grades

Final course grades are determined by the percentage of possible points that you earn. The grades will be determined as follows (with no extra credit available in the course).

COURSE GRADE:	PERCENT OF TOTAL:	POINTS EARNED:
A	93% - 100%	278 – 300
A-	90% - 92%	269 – 277
B+	87% - 89%	260 – 268
B	83% - 86%	248 – 259
B-	80% - 82%	239 – 247
C+	77% - 79%	230 – 238
C	73% - 76%	218 – 229
C-	70% - 72%	209 – 217
D+	67% - 69%	200 – 208
D	60% - 66%	179 – 199
F	0% - 59%	000 - 178

Final grades of "Incomplete" will be given only under extreme circumstances. An Incomplete is not an option for students who feel overwhelmed by academics, work schedules, or extracurricular activities. Typically, an Incomplete must be completed within one semester otherwise an "F" will result.

Tentative Course Schedule

This section offers a tentative schedule for the semester. *This syllabus, along with course assignments and due dates, are subject to change.* It is the student's responsibility to check Canvas for corrections or updates to the syllabus. Any changes will be clearly noted in a course announcement or through email.

DATE	TOPIC AND TASK	MATERIALS	DUE
Topic 1: Course Overview and Math Review			
09-02-19	No Class (Labor Day)		
09-03-19	Lab: Math Review		
Topic 2: Frequency Distributions			
09-04-19	Understanding Variables and Scores	Aron et al. (2011, Ch. 1)	
09-06-19	Understanding Research Design		
09-09-19	Calculating Frequencies and Percentiles		Assignment 1
09-10-19	Lab: Frequency Distributions		
Topic 3: Descriptive Statistics			
09-11-19	Understanding Distribution Characteristics	Aron et al. (2011, Ch.2)	
09-13-19	Calculating Central Tendency		
09-16-19	Calculating Variability		Assignment 2
09-17-19	Lab: Descriptive Statistics		
Topic 4: Standardized Scores			
09-18-19	Understanding Standardized Scores		
09-20-19	Calculating Percentiles with z Scores		
09-23-19	Calculating Probability with Scores		Assignment 3
09-24-19	Lab: Standardized Scores		
Topic 5: Correlations			
09-25-19	Understanding Statistical Relationships	Aron et al. (2011, Ch. 3)	
09-27-19	Calculating Correlations		
09-30-19	Calculating Shared Variance		Assignment 4
10-01-19	Lab: Correlations		
Topic 6: Measurement and Description			
10-02-19	Exam Preview		
10-04-19	Conceptual Integration		
10-07-19	Integration Problems		Assignment 5
10-08-19	**Lab: Exam 1**		
Topic 7: Sampling Distributions			
10-09-19	Exam Review and Applied Probability		
10-11-19	Understanding Sampling Processes	Aron et al. (2011, Ch. 4)	
10-14-19	Calculating the Probability of a Statistic		Assignment 6
10-15-19	Lab: Sampling Distributions		
Topic 8: Interval Estimation			
10-16-19	Understanding Inferential Statistics	Aron et al. (2011, Ch. 6)	
10-18-19	Understanding Student's Distribution		
10-21-19	Calculating Confidence Intervals		Assignment 7
10-22-19	Lab: Interval Estimation		

Topic 9: One Sample Statistics

10-23-19	Understanding Statistical Significance	Aron et al. (2011, Ch. 5)	
10-25-19	Calculating a One Sample t Test	Aron et al. (2011, Ch. 8)	
10-28-19	Calculating Supplemental Statistics		Assignment 8
10-29-19	Lab: One Sample Statistics		

Topic 10: Independent Sample Statistics

10-30-19	Understanding Independent Sample Designs	Aron et al. (2011, Ch. 9)	
11-01-19	Calculating Independent Sample Statistics		
11-04-19	Calculating Statistical Power	Aron et al. (2011, Ch. 7)	Assignment 9
11-05-19	Lab: Independent Sample Statistics		

Topic 11: Sampling and Inferences

11-06-19	Exam Preview		
11-08-19	Conceptual Integration		
11-11-19	Integration Problems		Assignment 10
11-12-19	**Lab: Exam 2**		

Topic 12: One-Way Analysis of Variance

11-13-19	Understanding Multiple Group Designs	Aron et al. (2011, pp. 314-333)	
11-15-19	Calculating Sources of Variability		
11-18-19	Calculating an Analysis of Variance		Assignment 11
11-19-19	Lab: One-Way ANOVA		

Topic 13: Post Hoc Comparisons

11-20-19	Understanding Pairwise Comparisons	Aron et al. (2011, pp. 333-338)	
11-22-19	Understanding Error Rates		
11-25-19	Calculating Post Hoc Statistics		Assignment 12
11-26-19	Lab: Post Hoc Comparisons		

Topic 14: Repeated Measures ANOVA

11-27-19	Understanding Sources of Variability	Aron et al. (2011, W02)	
11-29-19	No Class (Thanksgiving Break)		
12-02-19	Calculating Repeated Measures Statistics		Assignment 13
12-03-19	Lab: Repeated Measures ANOVA		

Topic 15: Factorial ANOVA

12-04-19	Understanding Factorial Designs	Aron et al. (2011, pp. 338-364)	
12-06-19	Calculating a Factorial ANOVA		
12-09-19	Calculating Factorial Statistics		Assignment 14
12-10-19	Lab: Factorial ANOVA		

Topic 15: Multiple Group Analyses

12-11-19	Conceptual Integration	Aron et al. (2011, Ch. 12)	
12-13-19	Integration Problems		
12-17-19	**Final: Exam 3 (12:30-2:30)**		Assignment 15

Conduct and Accommodations

Personal Conduct

UWSP values a safe, honest, respectful, and inviting learning environment and has developed guidelines to ensure that each student has the opportunity to succeed. *All students are expected to be familiar with and to abide by the university's Community Rights and Responsibilities document* (see https://www.uwsp.edu/dos/Documents/CommunityRights.pdf).

Under federal and state laws, and university guidelines, I am required to report acts of a criminal or offensive nature that occur both 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 – both current and in the past – may be reported to the Dean of Students office (http://www.uwsp.edu/dos/) or the local authorities.

Academic Misconduct

Academic misconduct (i.e., cheating) will result in an automatic zero on that exam or assignment for all people involved. I will follow up on all cases in the manner described in Community Rights and Responsibilities document.

Representation of another person's work as your own (i.e., plagiarism) will result in an immediate rejection of the work. Any student who engages in plagiarism will be given the opportunity to repeat the work and have it graded appropriately. Consistent with university policy, a written reprimand will be placed in the student's disciplinary file. "Accidental plagiarism" – naiveté about what constitutes plagiarism – will not be accepted as a legitimate excuse.

Accommodations and Disabilities

If there are factors creating difficulties for you in this course that are recognized disabilities under the Americans with Disabilities Act, please provide me with appropriate notification from the Disability and Assistive Technology Center (103 Student Services Center, 715-346-3365, or at http://www.uwsp.edu/disability/). *I will follow all recommendations made by the Disability and Assistive Technology Center.*

If you are having difficulties of a personal (not academic) nature, I will refer you to the UWSP Counseling Center (Third Floor Delzell Hall, 715-346-3553, or at counsel@uwsp.edu). *Appropriate accommodations may be made for due dates, testing procedures, etc. at the instructor's discretion.*

Extra Assistance and Tutoring

If you would like extra assistance related to course materials or have any questions related to your performance in the course, please contact me as soon as possible. This should always be your first step in getting assistance, as most questions and concerns can be best addressed this way.

However, if you would prefer help from a student beyond your instructor or colleagues in this class, you should contact the UWSP Tutoring-Learning Center (http://www.uwsp.edu/tlc/, 018 LRC, 715-346-3568).