

Psychology 216 (Sections M1, M2, 01, & 02): Elementary Statistics – Spring 2022

Class Meetings:	Section M1:	TTh 9:30 to 10:45 a.m. in SJ 003
	Section M2:	TTh 11:00 a.m. to 12:15 p.m. in SJ 003
	Section 01:	TTh 2:00 to 3:15 p.m. in SJ 003
	Section 02:	TTh 3:35 to 4:50 p.m. in SJ 003

Instructor: Dr. Robert Crutcher, SJ 309, phone 229-1346; email: rcrutcher1@dayton.edu
Office Hours: Wed 1:30 -- 3:30 p.m., drop-in anytime, or by appointment.

Texts: Gravetter, F. J., & Wallnau, L.B. *Statistics for the Behavioral Sciences*. (10th edition). Wadsworth, 2017. **ISBN-13:** 978-1305504912. We're participating in the University of Dayton Complete Digital Access program. Through this program, you've received discounted access to MindTap and the Gravetter & Walnau e-TextBook as part of your tuition for this course. There's a link to the MindTap materials in the Isidore Site for our course. You can also purchase a printed hardcopy of the e-text at the bookstore for about \$25 at the bookstore. See the note at the end of this syllabus for more information.

A **basic pocket calculator** with square-root function that can calculate sums, standard deviations, variances and the like. In general Sharp makes good calculators, as does TI (Texas Instruments). A calculator with a scrolling screen is extremely helpful and much easier to use. *Please bring your calculator to every class.*

Stat Tables: Please download and print off the **Statistical Tables** from the Handouts tab on my website (<https://rcrutcher.on-rev.com/psy216/handouts/handouts.html>) and bring these to every class.

Grading: Approximate distribution of points – I may add categories and/or points may change for a category.

CATEGORY	APPROXIMATE POINTS
Online Quizzes – 9 quizzes - 10 points each (highest 6 out of 9)	60 points
In-Class Quizzes	TBD
Homework 14 Assignments	---
Semester Exams (75 pts each: highest 2 out of 3)	150 points
Final Exam	125 points
Participation	50 points (TBD)
Total	385 points (approximately)

In-Class Quizzes. In-class quizzes will be unannounced & often occur at the beginning of class. Points will vary.

Online Quizzes: Online quizzes will be posted/announced as we go and will usually occur on Fridays. **No make-ups** on quizzes. I will drop some number of quizzes, depending on how many we have—probably the lowest 3 quizzes if we have 9 quizzes. If you miss a quiz (for whatever reason) you'll earn no points for that quiz. That's why I have the drop policy for the quizzes. Quizzes are cumulative: they're over any material that we've covered up to that point in the course.

Exams: There will be **3 exams** during the semester, worth 75 points each. **You are required to take all 3 exams.** However, I will take your 2 highest exam scores and drop your lowest exam score. In the case of a genuine emergency if you are unable to take one of the semester exams due to an excused absence, I will count that exam as your lowest score. However, you **MUST** contact me **before** the exam concerning your absence or you will receive a zero for that exam and it will count against you, even if you've already taken 2 of the 3 exams. There are no make-up exams. Note that all exams in this course are cumulative: that is, though an exam **focuses** on the material since the previous exam, *every* exam may ask questions about any material we've covered up to that point in the course.

Final Exam: There is a **final exam**, which is worth 125 points and will be **cumulative**. It covers everything we've covered over the semester.

Participation: Your **active** presence and participation in class will most definitely figure in your grade. Bring your calculator and statistics tables to class and be prepared to use them. While I am working problems, I will ask all of you to help me to **do** the various calculations (e.g. computing sums, squaring and summing numbers, computing means, standard deviations, etc.) and always be ready to share the results of your calculations. This

servers as a check on my computations and keeps us moving forward. More importantly, it gives you immediate, **active practice applying** the statistical procedures you're learning. If you sit passively and don't participate, your participation grade will reflect that. If you miss class it will also affect your participation grade. If you miss one or two classes, it's not a problem. However, as you miss more class, it will affect your participation grade and your overall grade in the course. If you miss more than 6 classes (which is more than 25% of instructional time), you likely won't be able to pass Psy 216. Having said all this, I realize we're still dealing with Covid so if you're not in class because of Covid and I have official documentation of this, I will take this into account.

Classroom Protocol and Scholarly Conduct:

It is your responsibility to attend class and when absent to obtain information presented in class from another class member or from me.

I expect you to arrive to class **on time** and to show respect for other students. Once class begins, **please remain in class**. Use of cell phones and other electronic devices (except your calculators) is prohibited during class. **Laptops or other electronic devices may only be used by special agreement between the instructor and the individual student and may only be used for the purpose of note taking**. If you wish to use a device, you must first come see me to discuss and sign an agreement concerning the use of the device.

Any student caught copying, plagiarizing, or cheating in any way on an exam or assignment will receive a grade of "F" for the assignment and/or for the entire course. On all assignments, quizzes, exams, etc., you are expected to do your own work. Copying another student's work or copying solutions from previous students' assignments or the instructor's solutions sheets *is* cheating. During quizzes and/or exams, no cellphones or any other electronic devices may be used or on your workspace unless approved by the instructor. If a quiz or exam is online, you are not to consult with anyone else or discuss any of the material. Once an in-class exam or quiz begins, students must remain in the classroom. For complete university policies concerning academic honesty, see the University's Academic Honor Code in the Academic Catalog:

<http://catalog.udayton.edu/undergraduate/generalinformation/academicinformation/theacademicinonorcode/>

Please bring your **Statistics Table, calculator** and your notebook to every class. No need to bring the textbook.

Please check your email daily. I will use email to update you about due dates and other important information. It is up to you to check your UD email account daily.

Special Needs:

Any student with a disability or other special need that may require special accommodations for this course should make this known to the instructor as soon as possible--by the end of the first or second week of class. **Do NOT wait until the week before the exam**. If you do, it won't be possible to accommodate your request. Students requiring special accommodations should also register with the Office of Learning Resources (phone: 229-2066).

Goals: To learn, understand, and apply statistical methods and principles of experimental design to analyzing behavioral data. I hope this will be an enjoyable and stimulating course for you. By the time you finish, you should feel confident of your skills in applying basic statistical procedures to analyzing behavioral data as well as understanding which procedures to apply in specific situations. In the next course in this sequence, Research Methods (Psychology 217), you will learn additional statistical procedures (e.g. ANOVA using more than one variable) and how to use a computer software statistics package to analyze behavioral data and a great deal more about how to design, execute, and analyze psychology studies.

I want you to do well in this course. Sometimes students are unnecessarily frightened by statistics. Please don't be. If you put in the work, you *will* eventually understand the material. As a result, you will experience the pleasure of understanding what you thought was so difficult. When you get frustrated with the material or you don't follow what I'm talking about in class, come see me. I am happy to help. On that score, please feel free to drop by during office hours to talk about the course, life here at the University of Dayton, your plans for the future or whatever other concerns you may have.

I want to emphasize the **importance of keeping up with the material in this course**. The homework is designed to give you the opportunity to practice the statistical procedures that we learn. Put all of your energy into the homework regularly and do the best job you can on it. Not only will the points for the homework help your grade but regular practice on the homework prepares you for the exams far better than simply re-reading your notes.

I strongly encourage you to communicate with me via campus email. This is the best way to ensure that if you have a question I will receive it and answer it promptly. My email address is: rcrutcher1@udayton.edu

Course Web Site. There will be materials on my web site to accompany the course, including links to slides and other materials related to the course. There's a link to the website in Isidore or you can go directly to the course web site here: www.rcrutcher.on-rev.com/psy216 or here: www.rcrutcher.info/psy216.

Schedule. This schedule is **TENTATIVE**: Exam dates and/or lecture topics may change. It's your responsibility to keep track of these changes. If you miss a class, check with a classmate or with me to see if dates have changed.

Tentative Schedule: Introductory Statistics, S2022

Wk	Date	Topic	G&W Reading
01	01-11-22	Foundations/Scales/Samples and Populations	Chapter 1
		Descriptive Statistics: Freq. Distributions, Graphs, Tables	Chapter 2
02	01-18-22	Descriptive Statistics and Measures of Central Tendency	Chapters 2 & 3
		Measures of Central Tendency & Variability	Chapter 3 & 4
		Quiz 1 (Friday, 01-21-22)	
03	01-25-22	Measures of Variability	Chapters 4
		Z-scores – Locating Scores in a Distribution	Chapters 5
		Quiz 2 (Friday, 01-28-22)	
04	02-01-22	Z scores & Probability	Chapter 6
		Probability and Samples	Chapter 7
		Quiz 3 (Friday, 02-04-22)	
05	02-08-22	Exam 1 (Tuesday 02-08-22) - Chapters 1-6	
		Introduction to Hypothesis Testing (the z statistic)	Chapter 8
06	02-15-22	Introduction to Hypothesis Testing (cont.)	Chapter 8
		Finish z statistic & Introduce Single Sample t statistic	Chapters 8 & 9
		Quiz 4 (Friday, 02-18-22)	
07	02-22-22	Hypothesis Testing: Finish single sample t statistic and begin independent t statistic	Chapters 9 & 10
		Independent t statistic (continued.)	Chapter 10
		Quiz 5 (Friday, 02-25-22)	
08	03-01-22	TBD	
		Exam 2 – (Thursday, 03-03-22) - Chapters 1-10 (emphasis on 7-10)	
09	03-08-22	Analysis of Variance (ANOVA)	Chapter 12
		ANOVA (continued)	
		Quiz 6 (Friday, 03-11-22)	
10	03-15-22	Spring Break	Break – No Readings
		“ “ “	
11	03-22-22	ANOVA (continued)	Chapter 12
		ANOVA (continued)	
		Quiz 7 (Friday, 03-25-22)	
12	03-29-22	Repeated Measures ANOVA	Chapter 13
		RM ANOVA (continued)	
		Quiz 8 (Friday, 04-01-22)	
13	04-05-22	TBD	
		Exam 3 – Thursday (04-07-22) - Chapters 1-13 (emphasis on 12 & 13)	
14	04-12-22	Correlation and Regression	Chapter 15
	04-14-22	Easter Recess - No Class	
15	04-19-22	Correlation and Regression	
		Correlation and Regression (continued)	
		Quiz 9 (Friday, 04-22-22)	
16	04-26-22	TBD	
17	Finals	Section M1 - Wednesday: 05/04/22 -- 12:20 p.m. to 2:10 p.m.*	Comprehensive 1-15
		Section M2 - Friday: 05/06/22 -- 10:10 a.m. to 12:00 p.m. *	Comprehensive 1-15
		Section 01 - Tuesday: 05/03/22 -- 12:20 p.m. to 2:10 p.m. *	Comprehensive 1-15
		Section 02 - Friday: 05/05/22 -- 2:30 p.m. to 4:20 p.m. *	Comprehensive 1-15

*You must take your final exam at your assigned time.

Regarding the textbook for the course:

The PSY 216 course that you're taking with me this semester is participating in the University of Dayton Complete Digital Access program. Through this program, you've received discounted access to MindTap and the Gravetter & Walnau e-TextBook as part of your tuition for this course. You **do not need to purchase any additional materials, nor do you need to register with an access code**. To access the MindTap resources, including the e-Textbook, just click the Cengage Mindtap link in our Psy 216 course in Isidore. Here are the steps:

- Login to you Isidore account.
- Locate our PSY 216 **Course**
- Click on the Cengage MindTap link on the left-hand tools side bar.
- Your Course materials will open in a new tab or window. Be sure POPUPS are enabled.

Note: If you've used Cengage before, login with your UD email and password that you previously created. If you've never used Cengage before, you will first be asked to create a new Cengage Mindtap account with your UD email and a password (which can be the same as your UD password). Once you've set the account up, you'll be taken straight into your Mindtap materials whenever you access them from Isidore.

If you would like to purchase a low-cost print version of the textbook in addition to the digital materials above (which I recommend), these are available at the University of Dayton bookstore. The cost is about \$25.

For any questions about print book availability, please contact the University of Dayton bookstore directly at **(937) 229-3233**

For questions about Mindtap and/or any problems using it or your account you may contact Emily Eckes, one of the Cengage reps. I've included her contact information here as well as information about some Zoom sessions she's offering to answer MindTap questions.

Our Cengage Representative, Emily Eckes will be hosting office hours on Wednesday, 1/12/2022 from 11:00AM-12:00PM EST AND Thursday, 1/13/2022 from 11:00AM-12:00PM EST via Zoom if you have any MindTap questions. To join, please use this zoom

link: <https://cengage.zoom.us/j/92368062362?from=addon>

- If you are unable to join that specific date, Cengage will be hosting more office hours about MindTap the week of January 10 and will run through the week of January 31
 - Tuesdays: 10AM -12PM ET
 - Wednesdays: 2PM – 4PM ET
 - Thursdays (Jan 13 and Jan 20): 10AM – 12PM ET
- In addition to the hours above, we'll host a Sunday evening session on January 23 from 6PM – 8PM ET
- To join any of these times, please use this Zoom link: <https://cengage.zoom.us/j/93702764175>

You may also contact Emily via email if you have other questions: emily.eckes@cengage.com