# Statistics!!

Psychology 301 Syllabus, Fall 2016

\*\*\* Go to: <a href="https://www.schoology.com">www.schoology.com</a> \*\*\*

<u>Sign-up immediately</u> (access code: XMDH3-7J5QX); complete "Getting Started" activities.

Record test scores here:		
Test 1:	Test 3:	
Test 2:	Test 4:	

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Cell (ask me) from 9am-8pm: (704) - 999 - \_\_\_\_\_

Office Hours:
Monday 1:30-4:00
Tues/Thurs 3:15-3:30
Tuesday 10:45-11:45
often 11-12 Thurs, too
-- Other times by
appoint

#### Meetings & Location: Lecture: Kinard 119

T/R 9:30-10:45 Lab: Kinard 116

001 (10928): M 8-9:50 002 (10929): M 10-11:50

### <u>Supplies</u>

3-ring binder (for course pack, provided) © Calculator with sq. rt. © Ear buds (for on-line lectures) © 1 Medium Sized Llama: 150-200 lbs, well-groomed and recently sheered. © Budget \$3 for printing costs.

#### **Broader Goals Addressed:**

<u>Departmental</u>: (2) Scientific Inquiry & Critical Thinking, and (4) Communication Skills. <u>General Education</u>: (1) Winthrop graduates think critically and solve problems, and (2) Winthrop graduates communicate effectively.

#### Learning Outcomes: You will learn how to ...

- Interpret empirical outcomes of psychological studies using statistics. Ö Apply the logic of experimental design (i.e., identify independent, dependent, and extraneous variables; distinguish treatment effect from sampling error; explain the meaning of a "significant" difference).
- Calculate and understand the formulas for many <u>basic</u> <u>statistics</u> (e.g., mean, median, mode, standard deviation, one-sample t-tests). Ö Use the statistical software package <u>SPSS</u> (ie, entering data, running analyses, interpreting results) for both basic and more advanced statistics (e.g., regression, analysis of variance). Ö Select the appropriate statistic for the task at hand.
- Write clearly about statistics as one would when preparing a research article for publication. 

   ö Make waffles using an electric stapler and coconut oil (if time allows)

#### **Grading Components:**

<u>Tests (88%)</u>: Each test counts 22% of your final grade. Two occur during the semester and two occur at the end – the Computational Final on the last lab meeting and the Conceptual Final during Exam week.

<u>Quizzes (4%)</u>: You will take most quizzes on-line using Schoology. Please use a computer (not a phone) to take any online quizzes. Pop quizzes are also possible during class. I drop the two lowest quiz grades.

Attendance (4%): Attendance is extremely important in this course. See table for grades. There are no excused absences, as I basically give you two days for illnesses, family deaths, etc. (but see Leniency Requests). Note that the penalty per absences gets steeper. Three tardies = 1 absence. Athletes - should email each time you miss class for your sport and I will give you attendance credit. Beware the Winthrop 25% attendance rule: Missing 25% (12) or more meetings results in an automatic course grade of F.

Homework (4%): You will upload a phone-scanned copy of your homework prior to each class meeting. Grading is based upon completion. You are expected to check your work against the key

prior to scanning your homework. Please check your homework grades within Schoology at least weekly to make sure you've received the credit you expect. Sometimes you think you've uploaded something and yet it doesn't work. I'll give you a chance to correct such problems, but it's your responsibility to alert me within one week of me checking the homework. Upload your work to the correct Schoology assignment space as one single pdf (not separate pdfs) to get credit – please pay attention and seek me out if you have tech problems. If any part of the homework confuses you, email or call me BEFORE the next class meeting and I'll help you.

<u>Bonus Points</u>: You can earn <u>up to</u> 1500 bonus points which can raise your overall grade <u>up to</u> 1.5%; one "badge" earns 100 points. [This is a new experiment; I might make some adjustments as we go.]

- ü <u>Tutoring</u>: Earn a badge for each pair of tutoring session attended; earn an extra badge for attending three-in-a-row (up to three times). Submit a tutoring "receipt."
- ü <u>Early Homework Completion</u>: Occasionally I'll give a badge to everyone that completed their homework within just 24 hours.
- Ü <u>Perfect Attendance</u>: Occasionally I'll give a badge to those that have had perfect attendance for a particular period.
- <u>Self-Explanation</u>: Occasionally I'll give a badge if you've done serious, substantial work on the self-explanation journaling questions I assign.
- ü <u>Special Events</u>: You'll occasionally earn a badge for attending a specific event I recommend or for participating in a research study.

Grd	Grd Scale	
Α	94	
A-	90	
B+	87	
В	84	
B-	80	
C+	77	
С	74	
C-	70	
D+	67	
D	64	
D-	60	
F	59	
_	64 60	

Abs	Grd
0	110
1	105
2	100
3	93
4	86
5	78
6	69
7	59
8	48
9	35
10	22
11	9
12	F

#### Policies:

<u>Course customization</u>: If you'd like to modify any part of this syllabus (e.g., not grading your attendance) for you, propose something in the first two weeks of class. I really want the class to work for you; I'm happy to entertain alternative policies:

<u>Leniency Requests</u>: If you get sick, have a death in the family, misunderstand an assignment, or get abducted by space aliens, and the event causes you to miss class, miss a quiz, or something else, send me a short email (2-4 sentences) within 1 week of the event. In special cases I may then adjust your grade upward.

<u>Tutors</u>: Typically, students completing an "academic internship" with me will provide weekly tutoring sessions. In addition, the Academic Success Center (x3929) usually provides tutoring as well. If you anticipate difficulty you should investigate both (free) options.

<u>Extra Assistance</u>: I desperately want you to do well in the course and can provide extra help to make that happen. If you are working hard and don't get it – PLEASE COME SEE ME! If you are working hard, I will do whatever I can do help you succeed.

<u>Disabilities</u>: Contact the Office of Accessibility (x3290) if you need special accommodations. They will let me know what to do.

<u>Class Partner</u>: Pick a class partner as a backup system in case an emergency arises and you miss class. Contact this person if you miss class so you can get notes and announcements. If you miss an announcement or assignment by missing class this is your responsibility to address.

<u>Test Make-ups</u>: To justify the need for this, contact me as soon as humanly possible and provide written documentation (e.g., a doctor's letter, an obituary notice).

<u>Winthrop Email</u>: Check it every day, M-F. When emailing or texting, please address me (e.g., "Dr. Sinn,") and sign it. Be professional.

<u>Academic Honesty</u>: You must do your own work. Although you may ask for general help from other students, you cannot copy homework or other work. Quizzes should be done independently. When in doubt, ask. Dishonesty can result in severe penalties, including a course grade of F. Report any suspicious activity to me. Not reporting potential academic dishonesty is academic dishonesty. For more: Student Handbook: *Student Conduct Code Academic Misconduct Policy*.

<u>Syllabus Changes Possible</u>: I may change any part of this syllabus with a timely, emailed notice.

No phone: If you don't have a phone that's no problem. You can show me the homework at the beginning of the class for which the homework is due. To make this work smoothly, please have it sitting on the podium before I arrive so I can glance at it quickly and hand it back to you before class starts. If you aren't there, you can submit homework in this manner but it will lose some points for being late.

Monitoring your Grades: Please check your grades at least once per week. If you find an error, email me without one week of me posting the grade.

#### **Success Tips:**

- · Never miss class.
- Always do your homework.
- Never use the key just to copy your homework.
- Make flash cards for key concepts and formulas. See the "Vocab Guide" in the coursepack.
- Study! Review the lecture material and put concepts in your own words; practice retrieval and articulation; – check for comprehension by writing out explanations to yourself of key concepts from memory, then looking at your notes and adding more detail to your explanations.
- At the very instant you feel lost, see me, so we can get you back on track.

## Psyc 301 Entertainment Schedule, Fall 2016

DATE	Prep Work (Due Before Class on this Date) & = Lecture Vid; † =Homework; + = Quiz; ù = Quizlet	In-Class Activity	
8.23	† 0a "Start Here!" (see Schoology for assignment)	Stats Basics     Stats Basics     Stats Basics     Stats Basics     Stats Basics	
8.25	& 1.2: Frequency Distribution, FD Graphs, Histogram & 1.4: Normal Curve, Deviations from Norm † 1.1: Qual/Quant, Freq Distr, Graphs, Levels of Meas.		
8.29	† 1.2: Normal Crv, Exp Design, Trt Effect & Smpl Error & 2.1: Measures of Central Tendency, Samples & Populations + 0.1 Syllabus Quiz + 1.1 Experimental Terminology Quiz		
8.30	& 1.5: Math Review & 2.2: Measures of Variability † 2.1: Central Tend, Samples & Populations + 2.1 Descriptive Statistics Quiz	2. Descriptive Stats - Measures of Central Tendency	
9.1	& 3.1: Correlations, linear relationships & 3.2: Correlations, correlation coefficient "r" & 3.3a: Correlations and SPSS + 2.2 Descriptive Statistics Quiz	Measures of Variability Lab #2 (non-SPSS stuff)	
9.5		Labor/Day	
9.6	† 2.2: Variability & 3.3b: Correlation & Hypothesis Testing + 3.1 & 3.2 (Correlation)	3. Correlation & Regression Quiz	
9.8	& 3.4: Regression I, basics & 3.5: Regression II, error, r <sup>2</sup> , Sy' † 3.1: Correlation portion only (p.1)		
9.12	† 3.1: Regression portion (pp. 2 & 3) + 3.3 & 3.4 (Regression); + 3.5 Review for Test 1	Lab #3: Correlation & Regression	
9.13	† 3.2: Correlation & Regression Practice † 3.3: Conceptual Review † 3.4: Computational Review (need SPSS) ** ** In Schoology folder, not notebook	Review	
9.15	† 3.5 (more comp. review) (need SPSS) † 3.6 (more regression review) (need SPSS) [Test 1 Study Guide: do MC and Fill in, but don't upload]	Review	
9.19		>>>>>> TEST #1 <<<<<<<	
9.20		4: z-scores	
9.22	† 4.1: z-scores for scores (part I) & 4.2: Z-scores, hypothesis test, sampling distributions † 4.2: video quest.		
9.26	† 4.1, Part II: z-scores for sample means + 4.1 (z-scores)	Lab #4: z-scores	
9.27	<ul> <li>&amp; 5.1: One-sample t-tests &amp; hypothesis testing</li> <li>† 5.1: Questions about video</li> <li>† 5A: Quizlet, z-test &amp; t-test</li> </ul>	5. T-scores & hypothesis testing	
9.29	& 5.2: t-test: Effect size, paragraph, decision errors † 5.2: Hypothesis testing with t-scores (Q 1-3) + 5.1 (One-sample t-test)		

10.3	† 5.2: (Q 4-5) & † 5.3: One-sample t-test + 5.2 (Frequency vs. Sampling Distribution) + 5.3 (One-sample t-test conceptual)	Lab #5: t-tests	
10.4	& 6.1: 2-sample, Independent t-tests † 6.1: Questions about Ind-t video	6. Independent & Dependent t-tests HW# 6.2	
10.6	<ul> <li>&amp; 6.3: 2-sample, Dependent t-tests</li> <li>+ 6.1 Quiz on Dependent t-test video</li> <li>+ 6.2: SPSS output interpretation</li> <li>ù 6A: Quizlet, Hypothesis Testing &amp; Decision Errors</li> </ul>	HW# 6.3 HW# 6.3A	
10.10	† 6.4: Independent & Dependent t-tests ù 6B: Quizlet, Independent & Dependent t + 6.3 & 6.4 Fluency	Lab #6: Indep & Dependent t-tests	
10.11	<ul> <li>+ 6.5: Power</li> <li>+ 6.6: Power and Decision Errors</li> <li>+ 6.7: Name that stat quiz</li> <li>† 6.6: Conceptual Review</li> </ul>	Review	
10.13	<ul><li>† 6.7: Computational Review (need SPSS)</li><li>† 6.9: Practice Exam, Test #2 (need SPSS, for part)</li></ul>	Review	
10.17		EALE BREAK	
10.18	† 6.8: Conceptual Review Two + 6.6 (Power & Decision Errors)		
10.20	+ 5.3 (1-sample t-test conceptual)		
10.24		>>>>>> TEST#2 <<<<<<<	
10.25		7. 1-Way ANOVA	
10.27	<ul><li>+ 7.1 1-way ANOVA</li><li>† 7.1: Write-up three ANOVA paragraphs</li></ul>		
10.31	† 7.2: ANOVA interpretation ù 7A: Schoology Scatter	Lab #7 & 8 (1-way ANOVA)	
11.1	† 7.3: Stats for Breakfast + 7.3 Treatment & Sampling Error #1	8. 2-way ANOVA	
11.3	& 8.1 2-way ANOVA + 8.1, 8.2, 8.3 (2-way ANOVA)		
11.7	† 8.1: 2-way ANOVA & 8.3: Data-entry for 2-way ANOVA † 8.2: Data entry <u>&amp;</u> † 8.2B: Output Annotation	Lab #9 (2-way ANOVA)	
11.8	† 8.3: ANOVA Write-ups ù 8A: Schoology Scatter	Election Day	
11.10	† 8.4: Q1-4: Paragraphs Review (need SPSS)] + 8.4 (2-way ANOVA)		
11.14	† 8.4: Q5-7 + 8.5 2-way ANOVAs (interactions)	Lab #10 (Comp Rev 1)	
11.15	<ul> <li>8 9.1 Chi-squared, goodness of fit</li> <li>8 9.2 Chi-squared, test of independence</li> <li>+ 9.1 &amp; 9.2 (Chi-Squared)</li> </ul>	9. Chi-squared	
11.17	† 9.1: Chi Squared + 9.3: Name that Stat		
11.21	+ 8.7 Treatment & Sampling Error #2	Lab #11 (Comp Rev 2)	
11.22	† 9.4: Conceptual Review + 10.1 (Name that Stat)	10. Journal Article Reading & Review	

11.24		ThanksGiving	
11.28	† 10.1: Journal Reading + 10.2 (Name that Stat) Lab #12: Bogus Winthrop, Comput Review (write-ups)	Lab #12 (Computational Review) (data analysis)	
11.29	† 10.2: Conceptual Review & WU evaluations (#1)	Conceptual Review	
12.1	My course evaluations (#2) + 8.6 (2-way ANOVA) + 10.3 (Name that Stat)	Conceptual Review	
12.5		>>>>> FINAL PART #1: COMPUTATIONAL <	
12.9	EXAM WEEK: FRIDAY 11:30 AM	>>>>> Final Part #2: Conceptual <	

Extra Credit Tracking	Your Name:	
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Date Awarded	Activity	Place Sticker Here