

#### **SYLLABUS**

#### **Statistical Methods**

Course Number: PSY 330 Section #89695

**Course Dates:** 10/11/2017-12/1/2017 (Fall Session B, 2017)

Credits: 3.0

**Prerequisites:** Must have completed ECN 221, JUS 302, POS 401,

PSY 230, 231, QBA 221, SOC 390, 395 or STP 226

with C or better

## **Faculty**

Name: Trudy Y. Kuo, Ph.D.
Email address: trudy.kuo@asu.edu
Office hours: To be arranged by email

#### **Course Assistant**

Name:

**Email address:** 

## **Syllabus Disclaimer**

The syllabus is a statement of intent and serves as an implicit agreement between the instructor and the student. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. Such changes will be communicated in a timely fashion via ASU email and the Blackboard course site. Please remember to check your ASU email and the course site regularly.

#### How to Use the Syllabus

Please read through this entire document because it contains the information you need to know to be successful in this course. For easy reference to this document throughout the course, a table of content with quick links is provided on the next page. Always review the syllabus before emailing the Course Assistant or the Instructor with course-related questions or posting such questions in the "Hallway Conversation" within Blackboard.



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#### **ABOUT THIS COURSE**

#### **Course Description**

Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.

### **Purpose of the Course**

This course builds on the fundamental concepts learned in introductory statistics (such as PSY230) to provide additional insights and related concepts in statistical analysis. The course focuses on guiding students in the art of selecting statistical methods and interpreting statistical analysis results.

### **Learning Objectives**

At the completion of this course, students will be able to:

- Identify the appropriate statistical method for data analysis for a real-world scenario or scientific research question.
- Perform and interpret statistical analysis using SPSS, in both descriptive statistics and inferential statistics (including *t* tests, ANOVA, correlation, regression).
- Interpret data analysis results in relation to real-world and scientific implications.
- Critically evaluate statistical analysis reported in research publications and news media.

#### **Course Format and Course Website**

This is an online course delivered in Blackboard. There are no face-to-face meetings. The course website can be accessed at <a href="https://myasucourses.asu.edu">https://myasucourses.asu.edu</a>, using your ASURITE ID and password. The course can also be accessed by going to your <a href="mayASU">myASU</a> site. The website contains all the components of the course such as announcements, the syllabus, discussion forums, lectures (Power Point with audio narration), quizzes and exams, and relevant links to other resources.

If you have trouble with Blackboard or need technology assistance, please note the information under the Technical Support link in the Navigation menu of the course site (on the left), or go to <a href="http://asuonline.asu.edu/studentsupport/index.cfm">http://asuonline.asu.edu/studentsupport/index.cfm</a> and click on 'Tech Help' from the menu on the left.

#### LEARNING IN THE COURSE

#### **Instructional Material**

The required content materials in this course are all accessible (free) via the Blackboard course site and includes the following:



- Textbook chapters and articles from the ASU library
- Recorded lectures and tutorials created by the instructor
- Written content created by the instructor
- Publications and other resources available on the internet

### **Required Technology**

This course requires a computer with speakers and reliable internet access. Poor internet connection and other computer issues are not valid grounds for requesting a due date extension for course work.

This course also requires the following (click on the links to download the free programs):

- Web browser (Chrome, Internet Explorer, Mozilla Firefox, or Safari)
- Adobe Acrobat Reader (free download from the internet)
- Adobe Flash Player (free download from the internet)
- Microsoft Word and Excel (included in Microsoft Office Suite, provided free by ASU)\*
- SPSS software\*\* (provided free by ASU)

\* For software programs provided by ASU, log into My ASU and click on My Apps in the left navigation panel. Then search for the program to download (e.g. Microsoft Office, SPSS... etc.).

### \*\* Special notes about SPSS:

- 1. A tutorial video is available in Blackboard to guide you through the process of obtaining SPSS.
- 2. The SPSS program provided by ASU can be accessed in two ways: Downloading and installing on your personal computer or accessing the web-based version of the program via internet connection. It is strongly recommended that you download and install SPSS on your personal computer so that you can use it anytime, with or without internet access. The option of accessing SPSS via ASU portal (Citrix) is much slower and requires internet connection.
- 3. SPSS is a large program, so please allot sufficient time and preferably hard-wired (i.e. Ethernet) internet connection for downloading. It is needed for completing all assignments, starting from week one.

To monitor the status of campus networks and services, visit the System Health Portal at <a href="http://syshealth.asu.edu/">http://syshealth.asu.edu/</a>. To contact the help desk, call toll-free at 1-855-278-5080.

#### **Course Modules**

The course content and learning activities are organized into modules, with each module lasting one week (7 calendar days). Based on the start and end dates of this session, each weekly module runs **from Thursday to Wednesday**. Therefore, most of the course work is due by the **Wednesday** for each module, with a few items due by the Sunday in the middle of a module. See the Course Schedule in Blackboard and on page 6 of this document for more details.

Each weekly module consists of the following learning and assessment components:



### Core Content

A combination of the following resources will be provided for achieving the learning objectives.

- Textbook chapters and articles from the ASU library
- Lectures and tutorials recorded by the instructor
- Instructional material written by the instructor
- Publications and resources available on the internet

### Module Assignments

Each week there is an assignment due by the end of the module on **Wednesday**. These 7 assignments require that students apply the concepts and skills learned in each module to work with data sets provided.

- Each assignment is worth 40 points total
- To download:
  - A word document with a problem set
  - One or more data sets in Excel or SPSS format
- To submit:
  - A Word document containing all the answers typed out clearly, supported by relevant SPSS output. Hand written answers (scanned or photographed) will not be accepted for credit.
  - The SPSS output file(s) demonstrating your work to get the answers.
  - Other files as specified in individual questions, such as SPSS data file.

#### **Discussion Forums**

- In week 1, week 3, and week 5, there is a discussion forum where students collaboratively learn to apply statistical methods or interpret statistical analysis results within a small-group setting.
- Each student is required to post an initial response (15 points) by mid-module (**Sunday**), followed by one peer comment (5 points) on another student's posts by the end of the module (**Wednesday**). An extra credit of 2 points may be earned by replying substantively to a comment on your initial post or by making an additional post that meets the peer comment requirements.
- Detailed grading rubric will be provided for both the initial response and the peer comment.

#### Quizzes

- There is a quiz in week 2, week 4, and week 6, due by the end of those modules on **Wednesdays**.
- Week 2 quiz covers modules 1-2; week 4 quiz covers modules 3-4; week 6 covers modules 5-6. The questions are randomly pulled from a larger question pool for each student. The quizzes are open-book and open-computer.



- Each quiz is worth 20 points total, with 20 multiple-choice and/or short-answer questions to be completed in 60 minutes. The quiz will be automatically submitted and graded when the time limit is reached.
- Each quiz can only be taken <u>once</u> before the due date and must be <u>completed</u> by 11:59 pm on the due date.

## **Course Schedule: Module Topics, Learning Activities, and Assessments**

Below is a quick view of all the module topics and deliverables for grades. The *Course Schedule* in the Blackboard course site has the same information in a calendar format and can be easily accessed from the course home page.

\* NOTE: The quizzes must be **completed** and the assignments **submitted** by 11:59pm (AZ time) on the specified due dates.

Module # & Dates	Module Topics	Deliverables (due date, points)
First day of the course 10/11 (Wed)	Orientation and Preparation:  Explore the course website  Read the syllabus	Due by Sun 10/15 - Take syllabus quiz (5 pts extra credit) - Self-intro video (10 pts extra credit)
Module 1: Thu 10/12- Wed 10/18	<ul> <li>Review: Basics of descriptive statistics</li> <li>Review: Basics of inferential statistics</li> <li>SPSS for descriptive statistics</li> </ul>	Due by Sun 10/15 - M1 Discussion: Initial post (15 pts) Due by Wed 10/18 - M1 Discussion: Comment (5 pts) - M1 Assignment (40 pts)
Module 2: Thu 10/19- Wed 10/25	<ul> <li>Application and interpretation of t tests</li> <li>Perform and interpret t tests with SPSS</li> </ul>	All due by Wed 10/25 - M2 Quiz (20 pts) - M2 Assignment (40 pts)
Module 3: Thu 10/26- Wed 11/1	<ul> <li>The logic of ANOVA</li> <li>Hypothesis testing with one-way ANOVA</li> <li>Perform and interpret one-way ANOVA with SPSS</li> </ul>	Due by Sun 10/29 - M3 Discussion: Initial post (15 pts) Due by Wed 11/1 - M3 Discussion: Comment (5 pts) - M3 Assignment (40 pts)
Module 4: Thu 11/2- Wed 11/8	<ul> <li>The logic of factorial ANOVA</li> <li>Hypothesis testing with two-way ANOVA</li> <li>Perform and interpret two-way ANOVA with SPSS</li> <li>Other common ANOVA tests</li> </ul>	Due by Wed 11/8 - M4 Quiz (20 pts) - M4 Assignment (40 pts)
Module 5: Thu 11/9- Wed 11/15	<ul> <li>The logic of regression and prediction</li> <li>Hypothesis testing with simple regression</li> <li>Perform and interpret simple regression with SPSS</li> </ul>	Due by Sun 11/12 - M5 Discussion: Initial post (15 pts) Due by Wed 11/15 - M5 Discussion: Comment (5 pts) - M5 Assignment (40 pts)
Module 6: Thu 11/16- Wed 11/22	<ul> <li>The logic of multiple regression</li> <li>Hypothesis testing with multiple regression</li> <li>Perform and interpret multiple regression with SPSS</li> </ul>	Due by Wed 11/19 - M6 Quiz (20 pts) - M6 Assignment (40 pts)



Module 7: Thu 11/23- Wed 11/29	Reflections on data and data analysis  Essential considerations of data  The art of selecting a statistical method	Due by Wed 11/29 - M7 Assignment (40 pts)
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### **Tutoring Services**

**SAM** (**Statistics and Mathematics**) **Lab**, online or in-person on the ASU West Campus <a href="http://samlabasu.com">http://samlabasu.com</a>

**University student success center,** also provides many types of tutoring and student assistance <a href="https://studentsuccess.asu.edu">https://studentsuccess.asu.edu</a>

### **COURSE POLICIES AND PROCEDURES**

# **Grading Scheme for the Course**

Assessment Deliverables	<b>Possible Points</b>	Percentage of
	Earned	Final Grade
Weekly Assignment (40 points each)	$40 \times 7 = 280$	70%
Bi-weekly Discussion Forum (20 points each)	$20 \times 3 = 60$	15%
Bi-weekly Quizzes (20 points each)	$20 \times 3 = 60$	15%
Total	400	100%
Extra Credit Activities:	5+10+(2x3)=21	
Syllabus quiz, self-intro video, extra discussion posts		

# **Final Grade Conversion Table**

Final Grade	Point Range	Final Grade	Percentage Range
A+	388 or more	B-	320-335
A	376-387	C+	308-319
A-	360-375	С	280-207
B+	348-359	D	240-279
В	336-347	E/F	0-239

## **Grading Policies and Procedures**

Grades reflect both your performance and your ability to meet the deadlines. All submissions must be COMPLETED by 11:59PM of the due date, Arizona Time.

- The quizzes are automatically graded and the answers and questions are accessible right after the due date for review via My Grades for 48 hours.
- The grades and feedback for assignments and discussion posts will be available within 7 calendar days of the due date via *My Grades*.



Please note that the quiz questions and assignment problems are different in every session. Students retaking this course are expected to complete all course work assigned in the current section and submit only work done specifically for this section. Submitting past work without revision will receive a zero grade even if some of the answers happen to be correct.

#### **Missed or Late Work**

Published due dates (Arizona time) for all course work are firm. In the case of an emergency and the due date for course work cannot be met, notify the instructor BEFORE the due date (or as early as possible with acute illness). Official documentation of the emergency is required for requesting an extension of the due date.

Specific late/missed work policies for the different grade components are as follows:

- Quizzes: There is no make-up quiz available for any reason because the answers are released right after the original due dates.
- <u>Assignments</u>: Late assignments are not accepted for grading unless alternative arrangements have been made with the instructor in advance.
- <u>Discussion forums</u>: The initial post is due on the **Sunday** of each module, but can be submitted up to the end (Wednesday) of that module, with 10% deduction per day past due. (For example, the initial post submitted on Tuesday of the module week will be assessed 20% late penalty.) The peer comment is due by the end of the module (**Wednesday**) and late posts are not accepted.

Please follow the appropriate University policies to request an <u>accommodation for religious practices</u> or to accommodate a missed assignment <u>due to University-sanctioned activities</u>.

## **Questions for the Instructor or CA**

If you have a course-related question not covered by the syllabus, please follow these steps:

#### Class Announcements

It is a good idea to log into Blackboard to check the *Announcements* page every day. The instructor communicates important information via announcements, which may impact your success in this course.

### **Hallway Conversations**

Inside Hallway Conversations, there is a forum for posting course-related questions. You may find answers to your questions here or you may post your own questions. The instructor monitors the question forum daily and responds within a day (and often much sooner than a full day). But feel free to answer questions posted by other students if you happen to know the answers. Asking and/or answering questions here benefits the whole class.

#### Direct Email to Instructor

Do not hesitate to email (through your ASU email) the instructor or the course assistant if you have a personal emergency, an inquiry about a grade on an assignment, or something else that needs to be communicated privately. Please make sure "PSY330" is written somewhere in the



subject line of your email to identify the course. If you are having difficulties in this course, please reach out as early as possible so we can work together to meet any challenge.

Please remember that ASU email is the official means of communication among students, faculty, and staff. Students are contacted via ASU email by the instructor for questions and concerns about course work or grades. Students are expected to read and act upon emails in a timely fashion and bear the responsibility of missed messages that impact their grades. The course-related communications from the instructor will look like they come from Blackboard, so do not delete any Blackboard emails without reading.

### **Attendance and Preparation**

Attendance in an online course means logging into Blackboard on a regular basis (preferably every day) and participating in all activities that are posted in the course. Meeting all deadlines for course work is necessary for success in this course. Because each module builds on all previous modules, missing work can have a huge impact on learning and your grades.

This course is time-intensive. A three-credit course typically requires approximately 135 hours of work, which is about 18 hours per week minimum for this course. Spending time on course material throughout the week is essential for mastering statistical concepts and regular short study sessions are vastly superior to a couple long study sessions right before the due dates.

### UNIVERSITY POLICIES AND PROCEDURES

# Drop/Add/Withdrawal

The last day to drop or add this course without college approval:

Course withdrawal deadline with 100% refund:

Course withdrawal deadline (without refund):

Complete session withdrawal deadline:

October 12, 2017

October 31, 2017

December 1, 2017

This course adheres to a compressed schedule and may be part of a sequenced program, so there is a limited time frame to drop or add the course. Consult with your academic advisor for adding or dropping this course. If you are considering a withdrawal, review the following ASU policies: Withdrawal from Classes, Medical/Compassionate Withdrawal, and a Grade of Incomplete.

### **Grade Appeals**

Grade disputes must first be addressed by discussing the situation with the instructor. If the dispute is not resolved with the instructor, the student may appeal to the department chair per the <u>University Policy for Student Appeal Procedures on Grades</u>.

## **Student Conduct and Academic Integrity**



Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification, and dismissal. For more information, see <a href="http://provost.asu.edu/academicintegrity">http://provost.asu.edu/academicintegrity</a>. Additionally, required behavior standards are listed in the <a href="http://provost.asu.edu/academicintegrity">Student Code of Conduct and Student Disciplinary Procedures</a>, <a href="http://provost.asu.edu/academicintegrity">Computer</a>, <a href="http://provost.asu.edu/academicintegrity">Internet</a>, and outlined by the <a href="http://provost.asu.edu/academicintegrity">Office of Student Rights & Responsibilities</a>. Anyone in violation of these policies is subject to sanctions.

Students are entitled to receive instruction free from interference by other members of the class. An instructor may withdraw a student from the course when the student's behavior disrupts the educational process per <u>Instructor Withdrawal of a Student for Disruptive Classroom Behavior</u>. Appropriate online behavior (also known as *netiquette*) is defined by the instructor and includes keeping course discussion posts focused on the assigned topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion. Inappropriate discussion board posts may be deleted by the instructor.

The Office of Student Rights and Responsibilities accepts <u>incident reports</u> from students, faculty, staff, or other persons who believe that a student or a student organization may have violated the Student Code of Conduct.

In accordance with <u>ACD 304-06 Commercial Note Taking Services</u>, written permission must be secured from the official instructor of the class in order to sell the instructor's oral communication in the form of notes. Notes must have the note-taker's name as well as the instructor's name, the course number, and the date.

Note: If you are retaking this course (regardless of whether the instructor is the same as in your previous section of PSY330), you are required to submit work done specifically for this current section. Re-submission of previous assignments without revision is considered academic deceit, which is a form of academic dishonesty.

#### **Course Evaluation**

Students are expected to complete the course evaluation. The feedback provides valuable information to the instructor and the college and is used to improve student learning. Students are notified when the online evaluation form is available.

## **Accessibility Statement**

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act as amended (ADAAA) of 2008, professional disability specialists and support staff at the Disability Resource Center (DRC) facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities.

Qualified students with disabilities may be eligible to receive academic support services and accommodations. Eligibility is based on qualifying disability documentation and assessment of



individual need. Students who believe they have a current and essential need for disability accommodations are <u>responsible for requesting accommodations and providing qualifying documentation</u> to the DRC. Every effort is made to provide reasonable accommodations for qualified students with disabilities.

Qualified students who wish to request an accommodation for a disability should contact the DRC by going to <a href="https://eoss.asu.edu/drc">https://eoss.asu.edu/drc</a>, calling (480) 965-1234, or emailing DRC@asu.edu. To speak with a specific campus office, please use the following information:

# **ASU Online and Downtown Phoenix Campus**

University Center Building, Suite 160 602-496-4321 (Voice)

### **West Campus**

University Center Building (UCB), Room 130 602-543-8145 (Voice)

# **Tempe Campus**

480-965-1234 (Voice)

## **Polytechnic Campus**

480-727-1165 (Voice)