

SYLLABUS

Introduction to Statistics

Course Number: PSY 230 Section #41721
Course Dates: 5/16/2017-7/9/2017 (Summer Session C, 2017)
Credits: 3.0
Prerequisites: Must have completed PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 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: Stephanie Thibault
Email address: sthibaul@asu.edu

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 a detailed overview of how 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” in the Blackboard course site.

TABLE OF CONTENT

ABOUT THIS COURSE

- Course Description
- Purpose of the Course
- Learning Objectives
- Course Format and Course Site

LEARNING IN THE COURSE

- Required Textbook
- Required Technology
- Course Modules
- Learning Activities
 - Assigned Readings
 - Lectures
 - Supplemental Materials
- Assessment of Learning
 - Tutorial Quizzes
 - Module Assignments
 - Course Exams
- Course Schedule
- Tutoring Services

COURSE POLICIES AND PROCEDURES

- Grading Rubric for the Course
- Final Grade Conversion Table
- Grading Policies and Procedures
- Missed or Late Work
- Communicating with Instructor and CA
- Attendance and Preparation

UNIVERSITY POLICIES AND PROCEDURES

- Add/Drop/Withdrawal
- Grade Appeals
- Student Conduct and Academic Integrity
- Course Evaluation
- Accessibility Statement

ABOUT THIS COURSE

Course Description

Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.

Purpose of the Course

This course introduces you to statistics - the techniques for organizing, summarizing, and interpreting a set of numbers (called a data set), either collected for formal research or for casual analysis. Through the modules of the course, you will develop an understanding of the fundamental statistical concepts in terms of the purposes they serve, how they are computed, and the circumstances in which they are applicable. Such an understanding will enable you to perform basic data analysis and to critically evaluate statistical reports seen in everyday life.

Learning Objectives

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

- Demonstrate an understanding of the fundamental concepts in statistics (see the objectives within each module for the details of those concepts).
- Analyze and interpret data using the statistical techniques covered in the course (see the objectives within each module for the details of those techniques).
- Demonstrate an understanding of how the statistical concepts and techniques are applied in psychological research and practice.
- Analyze the practical implications of statistical analysis in both academic research and mass media.
- Critically evaluate the statistical analysis within research and news reports from a variety of sources and channels.

Course Format and Course Website

This is an online course delivered on Blackboard. There are no face-to-face meetings. The course website can be accessed at <https://myasucourses.asu.edu>, using your ASURITE ID and password. The course can also be accessed by going to your *myASU* 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 <http://asuonline.asu.edu/studentsupport/index.cfm> and click on 'Tech Help' from the menu on the left.

LEARNING IN THE COURSE

Required Textbook

Aron, A., Coups, E. J., & Aron, E. N. (2011). *Statistics for the Behavioral & Social Sciences: A Brief Course (5th Edition)*. Boston: Pearson - Prentice Hall. ISBN: 0205797253

The textbook can be obtained either as a hard (paper) copy or as e-Text through the "Textbook eText Link" in the Blackboard course site.

Note: Students are expected to have access to the textbook at the start of the course. A delay in obtaining access to the textbook is not considered an emergency for requesting due date extensions.

Required Technology

This course requires a computer with reliable internet access and the following:

- Web browser (Chrome, Internet Explorer, Mozilla Firefox, or Safari)
 - Adobe Acrobat Reader (free)
 - Adobe Flash Player (free)
 - Speakers for the computer
 - Microsoft Word (provided free by ASU, obtainable through My ASU- My Apps)
 - Microsoft Excel (provided free by ASU, obtainable through My ASU- My Apps)
- Excel is required for creating graphs in the assignments for certain modules. Everything that needs to be done in Excel will be demonstrated in instructor-recorded tutorials. Excel is also a great general tool for organizing the mathematical calculations for every assignment, even though manual-calculation with a simple calculator is always acceptable. Instructor-recorded tutorials are available for using Excel for calculations.*
- Please note that using the statistical functions in graphing calculators like TI-83/TI-84 is DISCOURAGED because it prevents students from learning proper data manipulation and management.*

The following is optional:

- SPSS software (provided free by ASU, obtainable through My ASU- My Apps)
- In later modules of the course, tutorials will also demonstrate using SPSS for certain parts of the assignment. This is optional but it will be a necessary skill if you plan on learning advanced statistics or pursuing graduate studies.*

To monitor the status of campus networks and services, visit the System Health Portal at <http://syshealth.asu.edu/>.

To contact the help desk, call toll-free at 1-855-278-5080.

Course Modules

The course content is organized into modules, with one module per week. Each module consists of the following core activities, which are most effective if completed in this order:

- Assigned readings
- Lectures
- Supplemental activities (optional)

- A tutorial quiz
- Assignment

While the readings, lectures, and supplemental resources provide the core instruction, the tutorial quizzes and assignments serve to solidify learning through practice and application of learned concepts.

There are two exams in this course to assess learning outcome.

Learning Activities

Assigned Readings

Textbook chapters are assigned for each module.

Lectures

There are multiple recorded presentations (i.e. lectures) in each module. These presentations do not replace the assigned readings but aim to achieve one or more of the following objectives:

- Highlight important topics
- Elaborate/explain difficult concepts and techniques
- Illustrate concepts and techniques with additional examples
- Provide tutorials for Excel and SPSS as related to the weekly assignments

Supplemental Activities (optional)

Text or multi-media resources may be listed in each module for further exploring the topics of the module from additional angles or contexts. Any content that appears exclusively in the supplemental activities will not be covered in the exams.

Assessment of Learning

Tutorial quizzes

Each tutorial quiz is due by the end of a module (Sunday). The quizzes provide opportunities to practice retrieving and applying acquired knowledge and skills, which helps to consolidate learning. Students are allowed **unlimited attempts on each quiz by the due date** and the highest score will be counted toward the final course grade.

Here are the details about the tutorial quizzes:

- Each quiz covers the content in the assigned readings and instructor lectures within a module.
- There are 25 multiple-choice questions in each quiz, to be completed within 40 minutes. You earn 2 points per question with a maximum score of 50 points.

- Each time you attempt a quiz, the questions will be selected at random from a question bank for that module. This means that you may get different questions during different attempts of a particular quiz, even though the questions still cover the same material of that module.
- With the multiple-choice format of the questions, you must select one "best answer" for each question even if there are other "possible answers."
- The quizzes are not cumulative, but the material itself may depend on the concepts and skills learned in previous modules. This is just the nature of learning a subject like statistics.

Module Assignments

Each module assignment is due by the end of a module (Sunday). Module assignments require that students use the concepts and skills learned in each module to work with data sets provided. Each assignment is worth 50 points total. Follow the instruction in the Assignment section of each module very carefully.

There are two parts in each module assignment:

- Part I: A guided practice of solving one problem set (5 points)
 - Completing the whole problem set (regardless of accuracy) earns 5 points. No partial credit for incomplete work.
 - Students must enter their names when prompted in order to receive credit.
- Part II: Problem sets to be completed by students (45 points)
 - There is a Word document to be downloaded each week which contains the problem sets, detailed instruction, and the data to be analyzed. *Note: Some symbols may not show up correctly if you try to view the documents with other programs.*
 - Each assignment should be submitted in the Word format, with all answers typed out clearly. Hand written answers will not be accepted for credit.
 - Answers without the process or calculation details will not earn points. Such work needs to be shown either in your Word document or in your supporting documents such as Excel or SPSS output files (to be submitted if you choose to use Excel or SPSS for any part of the analysis or calculation). Go to **Assignment Guides** in the navigation menu (right above "My Grades") to see examples of how to show your work properly for the assignments.

Course Exams

There are two exams in this course. Each exam consists of 50 questions, with a maximum score of 100 points (2 points per question). Exam 1 covers Modules 1-4, due by the end of week 4; Exam 2 covers Modules 5-8, due by the end of week 8.

- **Each exam can only be taken one time before the due date and must be completed by 11:59 pm on the due date.** The time limit is 90 minutes. If you have not finished when the time is up or when the deadline is reached, you will be logged out of the exam and the exam will be graded as is.

- All questions in the exams are multiple-choice so you must select one best answer even if there are other plausible answers. The questions assess application of concepts and basic data analysis skills.
- Exams are non-cumulative, but the material covered in each exam may depend on the concepts and skills learned in previous modules. This is just the nature of learning a subject like statistics.

Course Schedule: Module Topics, Learning Activities, and Assessments

The course is organized into 8 full-week modules. Below is a quick view of all the module topics, learning activities, and deliverables for grades. The *Course Schedule* in the Blackboard course site has the same information and can be easily accessed from the course home page.

All due dates close at 11:59pm AZ time. All of the quizzes and exams need to be **completed and the assignments **submitted** by that time.*

| Module # & Dates | Module Topics | Learning Activities | Deliverables (due date, points) |
|----------------------------------|---|---|--|
| Week 1: Tue 5/16- Sun 5/21 | Orientation and Preparation | - Welcome & start here - Meet the instructor - Read Syllabus - Watch Excel Orientation | All due by Sun 5/21 - Take syllabus quiz (3 pts) - Post brief bio (3 pts) |
| | Summarizing a set of numbers: Graphs and descriptive statistics | - Chapter 1 - Chapter 2 (up to p.42) - Lectures | All due by Sun 5/21 - Tutorial quiz-1 (50pts) - Assignment-1 (50pts) |
| Week 2: Mon 5/22- Sun 5/28 | Z score; distribution and probability; sample and population | - Chapter 2 (p.43 to end) - Chapter 4 - Lectures | All due by Sun 5/28 - Tutorial quiz-2 (50pts) - Assignment-2 (50pts) |
| Week 3: Mon 5/29- Sun 6/4 | Inferring the big picture from a small set of numbers: Hypothesis testing | - Chapter 5 - Chapter 6 - Lectures | All due by Sun 6/4 - Tutorial quiz-3 (50pts) - Assignment-3 (50pts) |
| Week 4: Mon 6/5- Sun 6/11 | What does it mean when a hypothesis test is “significant”? | - Chapter 7 - Lectures | All due by Sun 6/11 - Tutorial quiz-4 (50pts) - Assignment-4 (50pts) - Exam 1 (100pts) |
| Week 5: Mon 6/12- Sun 6/18 | How is the group doing? – One-sample and paired-samples t-tests | - Chapter 8 - Lectures | All due by Sun 6/18 - Tutorial quiz-5 (50pts) - Assignment-5 (50pts) |
| Week 6: Mon 6/19- Sun 6/25 | Are the groups different? – Independent-samples t-test | - Chapter 9 - Lectures | All due by Sun 6/25 - Tutorial quiz-6 (50pts) - Assignment-6 (50pts) |

| | | | |
|--|---|----------------------------|---|
| Week 7: Mon 6/26- Sun 7/2 | When two variables are related: Correlation not causation | - Chapter 3 - Lectures | All due by Sun 7/2 - Tutorial quiz-7 (50pts) - Assignment-7 (50pts) |
| Week 8: Mon 7/3-Sun 7/9 | When you don't have a bell: Non-parametric options | - Chapter 11 - Lectures | All due by Sun 7/9 - Tutorial quiz-8 (50pts) - Assignment-8 (50pts) - Exam 2 (100pts) |
| Course work ends on 7/9/2017, even though the session officially ends on 7/10/2017. | | | |

Tutoring Services

SAM (Statistics and Mathematics) Lab, online or in-person

<https://newcollege.asu.edu/samlab>

University Statistics Tutoring, online or in-person

<https://studentsuccess.asu.edu/online>

COURSE POLICIES AND PROCEDURES

Grading Scheme for the Course

| Assessment Deliverables | Possible Points Earned | Percentage of Final Grade |
|---|------------------------|---------------------------|
| Tutorial Quizzes (50 points each) | 50 x 8 = 400 | 40% |
| Module Assignments (50 points each) | 50 x 8 = 400 | 40% |
| Course Exams (150 points each) | 100 x 2 = 200 | 20% |
| <i>Total</i> | <i>1000</i> | <i>100%</i> |
| Extra Credit (built into module assignments, syllabus quiz, and bio post) (5 points each) | 5 x 2 = 10 | -- |

Final Grade Conversion Table

| Final Grade | Point Range | Final Grade | Percentage Range |
|-------------|-------------|-------------|------------------|
| A+ | 970 or more | B- | 800-839 |
| A | 940-969 | C+ | 770-799 |
| A- | 900-939 | C | 700-769 |
| B+ | 870-899 | D | 600-699 |
| B | 840-869 | E/F | 0-599 |

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.

- Each tutorial quiz is automatically graded and the answers released for learning purpose.
- Each course exam is automatically graded and the answers and questions are accessible right after the due date for review via My Grades for 48 hours.
- The grade and feedback for each assignment will be available within 7 calendar days of the due date via *My Grades* at the Blackboard course site.

Please note that the exam questions and assignment problems are different in every session. Students retaking this course are expected to complete all course work according to 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 Tutorial Quizzes, Module Assignments, and Course Exams are firm. In the case of an emergency situation and the due date cannot be met for any course work, 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. There are no make-up exams available for any reason because the answers are released right after the original due dates.

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

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 regularly. The instructor communicates important information in the announcements that can help you succeed 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 your fellow students' questions if you happen to know the answers. Asking and answering questions here benefits the whole class.

Direct Email to Instructor

Don't hesitate to email (preferably through your ASU email) the instructor 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 "PSY230" 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 solve any problems.

Please remember that ASU email is the official means of communication among students, faculty, and staff. Students are expected to read and act upon emails in a timely fashion. Students bear the responsibility of missed messages that impact their grades.

Attendance and Preparation

Attendance in an online course means logging into Blackboard on a regular basis (preferably every day) and participating in all of the activities that are posted in the course. Preparation for the course requires reading the assigned readings and reviewing all course content required for that week.

This three-credit course requires approximately 135 hours of work. Please expect to spend at least 18 hours each week learning the course content and completing the course work. Consistent work 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: | May 17, 2017 |
| Course withdrawal deadline with 100% refund: | May 20, 2017 |
| Course withdrawal deadline (without refund): | June 5, 2017 |
| Complete session withdrawal deadline: | July 10, 2017 |

This course adheres to a compressed schedule and may be part of a sequenced program, as a result, there is a limited timeline to drop or add the course. Consult with your advisor and notify your instructor to add or drop 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 University Policy for Student Appeal Procedures on Grades.

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 <http://provost.asu.edu/academicintegrity>. Additionally, required behavior standards are listed in the Student Code of Conduct and Student Disciplinary Procedures, Computer, Internet, and Electronic Communications policy, and outlined by the Office of Student Rights & Responsibilities. 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 Instructor Withdrawal of a Student for Disruptive Classroom Behavior. 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 incident reports 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 ACD 304-06 Commercial Note Taking Services, 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 PSY230), 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 responsible for requesting accommodations and providing qualifying documentation 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 <https://eoss.asu.edu/drc>, 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)