

General Information

Course Overview: Statistics and Research Methods covers the content of an undergraduate statistics course, with an additional emphasis on research methods. Although valuable for anyone who has passed Algebra II or Math III, it is geared for students who plan to major in social science majors in college. It is not intended for as a replacement for PreCalculus for students who want to advance in standard calculus-based math tracks in college. Specifically, it does not cover most material on math placement exams, since those exams tend to be mostly algebra-based.

Units of Study: Topics studied include research methods, graphs, descriptive statistics, probability, discrete distributions, normal distributions, sampling distributions, confidence intervals, and hypothesis testing with z , t , r , χ^2 , and F .

Course Level: Statistics and Research Methods is a college-level course that is rigorous in terms of both workload and curriculum. However, many students who have found previous math classes difficult have enjoyed this class because although it is challenging, it is directly applicable. Most problems from the text, notes, and assignments use real data. In addition, because Statistics does not build directly on previously learned material, students who have struggled with algebra are not at a significant disadvantage as they would be in PreCalculus or Calculus. However, the topics within the course build extensively upon each other, making it difficult for students to catch up if they let themselves fall behind.

Calculator: A graphing calculator is required. Students will begin using their own TI-83 or TI-84 calculator in class daily, beginning October 5. New TI-84 Plus CE calculators are available for around \$100 on Amazon, and cheaper options are also available by considering used or older models. Other brands of graphing calculators are also available, but are not recommended. Please contact me if acquiring a graphing calculator prior to September 1 may present a financial hardship for your family.

Assignments

Online Quizzes: Each section has a five-question multiple-choice quiz based directly on the online notes. Online quizzes can be resubmitted until a perfect score is achieved.

Classwork: A set of problems aligned with each section of notes is done together as a class. In addition, a few points are given periodically for things such as class preparation and in-class practice problems.

Homework: There is homework for each section. The primary purpose of the assignments is not to practice skills, but rather to be aware where weak points in conceptual or procedural understanding may lie. Therefore, there is little to no redundancy within assignments. Homework is graded on completeness of work shown, including proper notation, and on corrections made in class, but not on accuracy.

Quizzes: To help students stay on top of the material, there is a quiz after each section, usually the following day. The material is reviewed explicitly before a quiz is handed out.

Projects: Given the real-world nature of the subject matter, each chapter has a project involving real data collection and analysis. Students have the option of working alone or in groups.

Reviews: Reviews are done in self-selected groups of four. Each group gets four different versions of the review are conceptually similar but that are different levels of difficulty, allowing each student to choose one that is at the level that would most help him or her prepare for the test. Reviews also serve as study guides, and students often take it upon themselves later to print a different version at home to practice.

Tests: Though a significant portion of tests is based on applying statistical procedures, the course content leads to more emphasis on conceptual understanding than is found in typical math classes. A portion of the points missed on chapter tests can be regained by submitting careful explanations of how to do the missed problems correctly. Test explanations can be turned in until the day before the next test.

Things to make life easier

Notes and Book: All class notes and most other course materials are available online at ewyner.com. All assignments except tests are open-notes and open-book. Electronic devices may be used, without sound, at all times except during tests.

Extensions: Students who feel they may need extra time to turn in an assignment, because they will be absent when it is due or for any other reason, can have me sign an extension request form before the assignment is due to change the due date to a different date before the test. In some circumstances, a new due date on or after the test date may be granted. Extensions must be requested in person and are not granted once an assignment is due, so please plan ahead.

Free C: Students may request a "Free C" on any nontest assignment once per grading period. When the assignment is due, it can be turned in normally, or the Free C form can be turned in in its place for a score of 70%. The Free C form must be signed by me before the assignment's due date.

Score Increases: All quizzes can be retaken until the day before the test. Test scores can be increased by doing test explanations, in which students carefully explain how to do the problems originally done incorrectly.

Study Sessions: At any point, a group of 4 to 12 students can arrange a formal teacher-led study session, given availability.

Absences and Late Work

Unplanned absences such as illness: To receive full credit, turn in all late work at least one day before the test. Parents will receive an email at the end of each chapter to confirm that the absences were unplanned.

Planned absences such as sports, school activities, vacation, or medical appointment: To prevent falling behind, students should check in before the days of absence. They can choose to complete assignments, including quizzes and tests, before they leave, or they can request an extension (see above).

For all absences: It is important not to fall behind. Other than quizzes and tests, all course content and assignments are available online. Online quizzes should still be completed on time. Other than online quizzes, students may have extra time for assignments that were turned in when they gone, but not for assignments collected after they return, including quizzes and tests. Late work that is not excused will still receive most of its points as long as it is turned in before the test. No assignments other than projects will be graded if turned in after the test has been handed out.

Signatures

We have read and understood this course information sheet.

Parent

Name: _____

Signature: _____

Student

Name: _____

Signature: _____

Please return this entire page. It is available online for later reference.