

Mrs. Cowells AP Statistics Syllabus

2018-2019

Overview

This course is a non-calculus-based introduction to statistics exposing students to four broad conceptual themes: 1st semester: exploring data analysis, observing patterns and departures from patterns; planning a study, deciding what to measure and how to measure it; anticipating patterns in advance, introducing probability and simulation & sampling distributions; 2nd semester: statistical inference, confirming models for explanations of patterns. This class will prepare you for the Advanced Placement Exam that you will take in May. The course involves activities and discussions and will use the TI-84 plus calculator. In addition to the mastery of specific statistical techniques, the goal of the course is to get students to "...think about the background of the data, the design of the study that produced the data, the possible effect of outlying observations on their conclusions, and the reasoning behind standard methods of inference." You will learn to express your conclusions in a clear and concise way both written and verbal.

Class Expectations:

My philosophy is that this is a college level course and I expect students to work at a college level. You will be required to go above and beyond any regular college prep math class. You are expected to be ready to learn, teach, and discuss statistics at a high level each and every day. I will accept nothing less than 100% effort each day. This course requires you to spend more time than in the past on your math work, both inside and outside of class. Therefore, your expectations of me, yourself, your classmates, and this class should be very high. You should be ready to work individually, in a group, and as a class. You will be required to do all of the necessary reading prior to and during each chapter. I expect you to use your desire to learn and succeed to set yourself up to be more successful in both mathematical and statistical areas in the future. Many professional careers require statistical analysis for use in that field. What you put into this class you will get out of it. Do all of the work, readings, and practice and you will succeed. You and only you are responsible for your grade in this class.

Materials:

- Textbook. *The Practice of Statistics* 4th edition, by Starnes, Yates and Moore.
- Graphing calculator. There is a classroom set available for IN CLASS USE ONLY!
- 3-ring binder with dividers for class notes, quizzes/test, etc.
- Spiral Notebook for Homework Assignments

Grading:

- Homework/Participation 20%
- Quizzes/Tests/Projects 80%

Homework:

- Homework will be graded for effort and completion, not accuracy, and collected on test/quiz days. If I can't read your writing or follow your work, you won't receive credit. Show work and box final answers.
- Homework is assigned daily, as it is essential for reinforcing the concepts learned in class.
- Homework will be done in pencil in your spiral notebook. Label homework with name, date and assignment (chapter and problem numbers)

- Detailed answers to odd numbered problems are in the back of the book. This can be a valuable learning tool. Make sure to check your answers and the solution technique! Resist the urge to blindly copy solutions; the only one you'll be fooling is yourself.
- Answer Keys to assignments are on the class website as well. It is expected that you check your homework ahead of time. Answers will not be posted in class, but I will go over questions.

Tests/Projects:

- All tests and quizzes must be done in pencil. Points will be deducted for using pen.
- If you are absent for a test, you are expected to take the test the day you return so I may hand back tests promptly; Any Tests/HW not done within 2 periods of your return will result in a 0.
- Each semester a major project will be assigned. This project will count as a test and will require a poster and presentation. More details on the projects will be given during the

Absences and Late work:

- If a student is absent for any reason, it will be his/her own responsibility to obtain the notes and assignments from a fellow classmate or the class website.
- Upon return from an absence(s), the student will be given one class period for each class period absent to make-up the homework for full credit
- If you are going to be missing class due to field trip due to school event/field trip, you are still responsible to have that day's assignments completed when returning to class the next day.
- Utilize my class website mrscowells.weebly.com

Student Expectations:

- 1) Be on time
- 2) Be Respectful to Others
- 3) Be Prepared
- 4) Cell Phones are Put Away. They are not to be out unless I state otherwise. If cellphones are out, they will be taken.

The AP Exam:

- The AP Statistics exam will be given in early May and will cost around \$90.

Extra Help

- Utilize the class website mrscowells.weebly.com for extra resources to help you understand and practice concepts being learned
- Make study groups with classmates
- Email me with questions or to set up a time for extra help jessica.cowells@uticak12.org

Why should you take AP Statistics?

It is a fresh start: This isn't a typical math class. You don't need to remember how to factor a polynomial, graph a sine curve, or prove that triangles are congruent. However, this doesn't mean the class will be easy!

You will need good critical thinking and communication skills.

It is a great preparation for college. It is taught over a full year (instead of a semester in college) so you have more time to learn the material and the skills you learn will help you in a wide variety of fields. Current students will tell you that AP Statistics has already helped them in their psychology and science classes.

You will NEVER ask: "When will we ever use this?" Problems are almost always based on real-world studies in a variety of fields. We will read articles from current newspapers and magazines and learn how to think critically about claims made in the media.

Goals

The course will prepare students to pass the AP Statistics test administered by the College Board in May. The following is a sample of what colleges in Michigan require for credit as well as the class that the student would get credit for according to the Michigan Department of Education.

College or University	Score	Credit	College Class
Central Michigan University	3,4,5	3	STA 282
Eastern Michigan University	3,4,5	3	SOCL 250
Ferris State University	3,4,5	3	STQM 260
Grand Valley State University	3,4,5	3	STA 215
Kettering University	4,5	4	MATH 226
Lawrence Technological University	3,4,5	3	General Elective
Macomb Community College	3,4,5	4	MATH 1340
Michigan Technological University	4,5	3	MA 2710
Michigan State University	4,5	3	STT 200
Oakland Community College	3,4,5	4	MAT 158
Oakland University	3,4,5	4	STA 225
University of Detroit Mercy	3,4,5	3 hrs.	MTH 214 or STA 225
University of Michigan- Ann Arbor	4,5	4	Statistics Department
University of Michigan- Dearborn	3,4,5	3	MATH 363
Wayne State University	3,4,5	3 hrs.	STA 1020
Western Michigan	3,4,5	3 hrs.	STAT 160

Note to Parents/Guardians

It is an honor to have your son/daughter in my Advanced Placement Statistics class. This class will challenge them with a heavy workload and develop them into competent interpreters and investigators of statistical data and information. They will have daily reading and homework from the textbook. They will undertake more writing and explanation than in any other math class they have taken. I stress that they will need your support as well as mine to be successful both in the class and on the AP Exam in May. I look forward to a great year!

Please fill out the information below

I, _____, have read this document and understand the
(print student name)

rigor and demand that AP Statistics will place on me as a student. I am making a commitment to this class and all that is required to be successful on the AP Statistics Exam.

(student signature and date)

I, _____, as the parent or guardian of an AP
(print parent/guardian name)

Statistics student have read this document and understand the rigor and demands that will be placed on my child taking this class. I am making a commitment to support my child and the teacher to the best of my abilities in order to ensure success on the AP Statistics Exam.

(parent signature and date)

I, Jessica Cowells, have written this document and promise to do my very best in class every day to TEACH each willing student the skills and mathematics necessary to be successful on the AP Statistics Exam.



Parent/Guardian Name(s): _____

Best Phone # to contact you (give names if more than number)

Best email to contact you (give names if more than number)

