

A.P. Statistics Course Syllabus

2009-2010

Instructor(s) Information:

Tonja Johnson
Planning hours: 4th and 5th
Classroom Location: Room #215
tonja.johnson@dcsdk12.org
303-387-0771 ext. 64221

John “Mike” Lynch
Planning hours: 3rd and 4th
Classroom Location: Room #222
john.lynch@dcsdk12.org
303-387-0771 ext. 64244

Course Description

AP Statistics is the high school equivalent of a one semester, introductory college statistics course. In this course, students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Students design, administer, and tabulate results from surveys and experiments. Probability and simulations aid students in constructing models for chance phenomena. Sampling distributions provide the logical structure for confidence intervals and hypothesis tests. Students use a TI-83/84 graphing calculator, Fathom and Minitab statistical software, and Web-based java applets to investigate statistical concepts. To develop effective statistical communication skills, students are required to prepare frequent written and oral analyses of real data.

Course Goals

In AP Statistics, students are expected to learn...

Skills

- To produce convincing oral and written statistical arguments, using appropriate terminology, in a variety of applied settings.
- When and how to use technology to aid them in solving statistical problems

Knowledge

- Essential techniques for producing data (surveys, experiments, observational studies, simulations), analyzing data (graphical & numerical summaries), modeling data (probability, random variables, sampling distributions), and drawing conclusions from data (inference procedures – confidence intervals and significance tests)

Habits of mind

- To become critical consumers of published statistical results by heightening their awareness of ways in which statistics can be improperly used to mislead, confuse, or distort the truth.

Textbook

The Practice of Statistics (3rd edition), by Yates, Moore, and Starnes, W. H. Freeman & Co., 2008.
(referred to below as TPS) ISBN: 0-7167-7309-0

Each instructor will have a classroom set of textbooks; however, these books are not checked out to students for overnight use. ***It is highly recommended that you purchase your own textbook.*** You can find them new or used at amazon.com. Please keep in mind that it is likely you will be able to re-sale your book to a student taking the course the following year.

Course Grades

Your final semester grade is a weighted average of your semester grade (80%) and your semester final exam (20%). The final exam for the course is the A.P. Statistics Mock Exam, which everyone will take.

<u>Course Grades</u>
Your <u>semester grade</u> is a weighted average of:
Tests, quizzes, and projects = 80%
Homework, HW Quizzes, Definitions = 20%

<u>Grading Scale</u>	
90.00 - 100%	= <u>A</u>
80.00 - 89.99%	= <u>B</u>
70.00 - 79.99%	= <u>C</u>
60.00 - 69.99%	= <u>D</u>
Less than 60%	= <u>F</u>

Homework, Homework Quizzes, and Definitions Sheets

Homework is assigned regularly. Homework is important because it correlates to and prepares you for the tests. If you treat each assignment as a test and do your best to get each problem correct the first time or go back and try to figure out each incorrect solution immediately, you should do well on the tests. Homework is to be completed in pencil. Data displays should be displayed neatly and/or electronically. Include your name, period, and assignment details at the top right of first page. Homework is to be completed before the next class. We will go over questions during the next class. Homework will be collected weekly. The week's worth of assignments will usually be collected on Tuesday of the following week. Please check the calendar on www.phsmath.org to see when the week's assignments will be collected.

Each week, the homework will be worth 10 points, broken down as follows:

<i>Neatness</i>	: 4 points	(Work is done neatly and easy to follow. Graphs are neat.)
<i>Completeness</i>	: 4 points	(All necessary work is shown. All parts of the problem addressed.)
<i>Correctness</i>	: 2	(Randomly selected problems will be checked.)

Total = 10 points

**** Neatness can not exceed Completeness**

To claim the full points on an assignment, you must have attempted every problem, showing appropriate work (in the teacher's opinion) that supports your answer. When necessary, graphs should be done neatly and full sentences should be used. Learning proper techniques for solving problems is an important part of the course. After answers are checked, it is up to you, and in your best interest, to correct any problems you have worked incorrectly. If you have not fully attempted every problem as described, you will receive a lower score on the assignment. A few problems not attempted would result in a deduction of your score. Unexcused absences result in no credit for assignments due or tests scheduled for that day.

Late homework is not accepted, unless in the event of an excused absence! Then, it is due the day the student returns.

Each student should concentrate on doing assigned homework and studying for tests on a continuing basis throughout the course. There is no extra credit work available.

For each chapter, you will also receive a definitions sheet. At the end of each unit, you will turn this sheet in for 10 points (also using the "Neatness, Completeness, Correctness" criteria). It is highly recommended that you keep this sheet as an ongoing list of terms to study for the AP Statistics Exam.

Tests, Quizzes, and Projects

Test and quiz schedules are posted in the classroom and/or on www.phsmath.org and are given frequently. Quizzes are usually out of 15 to 20 points. Occasionally, there may also be “Partner Quizzes”.

Each test is cumulative and will consist of two parts: the multiple choice section (12 questions) and the free response section (3 questions). Each section will be weighted equally, as it is on the AP Statistics exam. On the multiple choice section of the test, you will be given +1 point for a correct response and -1/4 point for an incorrect response (again, as it is on the AP Statistics exam.). In other words, you do get penalized for guessing. Also, each free response question is graded on a 4 point scale. Thus, each section is essentially out of 12 points.

The raw scores for the test scores are then normed. The average for all AP Statistics sections on the test will be the cut-off for a **B** (any outliers will be removed from the data first). The standard deviation will determine the cut-off points for all other grade levels (i.e. average + 1 stand. dev. = **A**, average – 1 standard deviation = **C**). After this adjustment, the test will be taken out of 100 points.

Make-up tests and quizzes will be administered the first day back after an excused absence unless exceptional circumstances exist. ***Be prepared to take any missed test on the first day you return!***

AFTER THE AP EXAM: Students complete a final project, alone or in teams, on a topic of their choosing. Both a written analysis and a brief oral presentation are required for this project.

Calculators

A graphing calculator is highly recommended for this course. For a current approved list of calculators that are appropriate for this and for subsequent AP Mathematics courses, see the www.collegeboard.org web site. Popular models include the TI-83, TI-84, TI-89, and TI-nspire (CAS). The most recommended calculators for the course are the TI-83/84.

Attendance and Tardies

Regular attendance is important. If you miss a class due to an excused absence, it is your responsibility to find out what was missed and to make up any work. Tardies will be handled in accordance with the school’s tardy policy. You are tardy to this class if you are not in the room and quietly headed to your seat when the bell rings. If you are tardy, it not only reduces the time you have to learn in class, it disturbs others who were on time and ready to start at the bell. Be on time, every day. School rules on Tardy Policies and consequences will be followed. Ask to leave the room for emergencies only. ***Students will not be allowed out of class on a pass during the first ten and last ten minutes of class.***

Cheating Policy

If there is evidence of cheating, a zero will be recorded for all work involved and disciplinary action, including parental contact, will be initiated.

Class Rules

Class rules are designed to make the classroom a place where learning can take place efficiently and effectively. The rules are:

- 1. No cell phones! Cell phones = automatic detention assigned.**
2. Be in the room and headed quietly to your seat when the bell rings.
3. Stay in your seat unless permission to move is given.
4. Come to class prepared with proper math supplies, including textbook and calculator.
5. Be prepared to work from bell to bell. The ending bell is my signal to dismiss the class.
6. Use the restroom between classes whenever possible.
7. Speak only when you have permission.
8. Respect your teacher, your classmates, and yourself.
9. The school tardy and dress code will be enforced!
10. NO FOOD OR DRINK IN THE CLASSROOM! (Water in a closeable container is OK 😊)

We will treat each other and ourselves with dignity and respect. We must recognize and respect the right of the teacher to teach and the right of the students who want to learn, to be able to learn. Conduct that interferes with the educational process is unacceptable and will result in immediate consequences. Be aware of and follow all school rules and classroom rules. Consequences: 1st misconduct = teacher/student conference, 2nd misconduct = referral and/or call to parents, 3rd and subsequent misconducts = detention.

Helpful Websites

www.phsmath.org – Use this website to check answers to homework, assignment and test/quiz schedules, and course policies.

www.apcentral.collegeboard.com – Use this website to clarify any questions you have about the AP Statistics exam. There are even released exam questions from the free response portions of the test.

<http://bcs.whfreeman.com/tps3e/default.asp?s=&n=&i=&v=&o=&ns=0&uid=0&rau=0> – This website is used in conjunction with the text book. There is great practice for multiple choice questions, as well as computer applets that can assist in doing some of the homework problems.

--I have read and understand the class policies.

--I am aware that the Parent Portal (IC) is available for me to view my student's attendance and academic progress.

Student name (please print) _____ Student Signature _____

Parent name (please print) _____ Parent Signature _____

Parent Contact Number _____ Parent E-mail _____