AP® Statistics

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Course Information   The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad skill categories:

1. Selecting Statistical Methods: Selecting methods for collecting and/or analyzing data for statistical inference.
2. Data Analysis: Describing patterns, trends, associations, and relationships in data.
3. Using Probability and Simulation: Exploring random phenomena.
4. Statistical Argumentation: Developing an explanation or justifying a conclusion using evidence from data, definitions, or statistical inference.

Important components of the course will include the use of technology, projects and laboratories, cooperative group problem-solving, and writing, as a part of concept-oriented instruction and assessment. For more information, visit https://apcentral.collegeboard.org/pdf/ap-statistics-course-and-exam-description.pdf

Technology   Students are will learn and understand the statistical capabilities of a graphing calculator and of the provided software. Students will be issued their own *TI-84 Plus graphing calculator*, for which they will be held financially responsible if lost or damaged. They will use the calculator in class, at home, and on the AP exam. It is highly recommended that students pay close attention to the functions of the calculator so that they may fully learn its features how to interpret its output.

> *Students will become proficient not only in the computational capabilities of technology, but, more importantly, they will demonstrate how to fully interpret and understand the output from different forms of output from these devices.*

Primary Textbook   Yates, Moore, and Starnes. *The Practice of Statistics,* 3rd edition.
The textbook is an excellent resource, and students will be expected to read through each chapter thoroughly as we progress through the semester. Normally, students are expected to have each chapter read with notes taken on important concepts, main ideas, definitions and terms *before* the day that we will formally talk about the chapter in class.

Secondary Resources

BVD   Bock, David; Velleman, Paul; De Veaux, Richard. *Stats: Modeling the World, Third Edition*. Boston: Pearson Addison Wesley, 2004.

POD   Peck, Roxy; Olsen, Chris; Devore, Jay. *Introduction to Statistics & Data Analysis, Fourth Edition*. Boston: Brooks/Cole, 2012.

BLU   Bluman, Allan G. *Elementary Statistics: A Step by Step Approach, 7th edition*. Boston: McGraw Hill, 2007

OL   Ott, R. Lyman; Longnecker, Michael. *An Introduction to Statistical Methods and Data Analysis, Fifth Edition*. Pacific Grove, CA. Duxbury, 2001

ABS   Scheaffer, Richard L. *Activities Based Statistics, 2nd edition*. Key Curriculum Press, 2008

FR   Free Response Practice Questions from Released AP Exams

SP   Supplemental Resources

Materials: Each student should bring the following items to class daily:

- Three-ring binder
- Paper, Graph Paper, Pencil
- Textbook – The Practice of Statistics 3rd edition
- Graphing calculator (A TI-84 Plus will be issued to you, but is recommended that you purchase your own.)
- A device that can access Google Classroom and AP Classroom

Course Content and Chapter Correlation

Analyzing Data: Looking for Patterns and Departures from Patterns
Chapter 1 Exploring Data
   1.1 Displaying Distributions with Graphs
   1.2 Displaying Distributions with Numbers
Chapter 2 Describing Locations in a Distribution
   2.1 Measures of Relative Standing and Density Curves
   2.2 Normal Distributions
Chapter 3 Examining Relationships
   3.1 Scatterplots and Correlation
   3.2 Least-Squares Regression
Chapter 4 More about Relationships between Two Variables
   4.1 Transforming to Achieve Linearity
   4.2 Relationships between Categorical Variables
   4.3 Establish Correlation

Producing Data: Surveys, Observational Studies, and Experiments
Chapter 5 Producing Data
   5.1 Designing Samples
   5.2 Designing Experiments

Probability and Random Variables: Foundations for Inference
Chapter 6 Probability and Simulation: The Study of Randomness
   6.1 Simulation
   6.2 Probability Models
   6.3 General Probability Rules
Chapter 7 Random Variables
   7.1 Discrete and Continuous Random Variables
   7.2 Means and Variances of Random Variables
Chapter 8 The Binomial and Geometric Distributions
   8.1 The Binomial Distribution
   8.2 The Geometric Distribution
Chapter 9 Sampling Distributions
   9.1 Sampling Distributions
   9.2 Sample Proportions
   9.2 Sample Means

Inference: Conclusions with Confidence
Chapter 10   Estimating with Confidence
   10.1 Confidence Intervals: The Basics
   10.2 Estimating a Population Mean
   10.3 Estimating a Population Proportion
Chapter 11   Testing a Claim
   11.1 Significance Tests: The Basics
   11.2 Carrying Out Significance Tests
   11.3 Use and Abuse of Tests
   11.4 Using Inference to Make Decisions
Chapter 12   Significance Tests in Practice
   12.1 Tests about a Population Mean
   12.2 Tests about a Population Proportion
Chapter 13   Comparing Two Population Parameters
   13.1 Comparing Two Means
   13.2 Comparing Two Proportions
Chapter 14   Inference for Distributions of Categorical Variables: Chi-Square Procedures
   14.1 Test for Goodness of Fit
   14.2 Inference for Two-Way Tables
Chapter 15   Inference for Regression

Grading Procedures
Major Assessments 45%
Minor Assessments   20%
Daily Assignments 15%
Final Assessment   20%   This course includes a cumulative final exam at the end of each semester.

Students and Parents are responsible for monitoring progress and grades on Infinite Campus.

Homework will be checked randomly and graded for completion. Homework must be done completely and legibly, on loose-leaf paper.

In the event of an anticipated absence or NI, it is the student's responsibility to ask for notes or make-up work in advance so he/she does not fall behind.

Tests and Quizzes will resemble the AP Exam and will include multiple choice and free response questions. They will be graded in the same manner as the AP Exam and will be timed accordingly.

This course will have a full-length cumulative mock College Board exam.

Expectation of Accountability -   Advanced Placement Statistics is a difficult course for several reasons and requires a great deal of studying outside of class. This course moves extremely fast. We will cover 900+ pages of material before spring break. It is essential that students complete all assignments on time and complete assigned readings to be successful. Students must study and practice regularly. I work hard to provide resources and opportunities for students to receive additional help and remediation to ensure content mastery. While I can strongly encourage students to take advantage of these opportunities, it is the student's responsibility to take full advantage of them.

Bathroom Policy - Students are expected to use the restroom in between classes. Passes will not be issued during instructional time. Students are expected to be in the classroom where learning takes place.

AP EXAM! Students who are enrolled in the course are expected to take the AP Exam on May 5th, 2022.

AP Exam timeline:
- ✓ 8.21.21– Deadline for students to electronically join all AP classes on College Board website (APcentral.collegeboard.org). *Help line for students and parents 1-888-225-5427
- ✓ 10.29.21 – Deadline for students to register for AP exams on the College Board website.
- ✓ 2.18.22 – Deadline to pay all AP exam fees.

AP Fees
Paid Students:
- • $96.00 per exam

Free and Reduced lunch students:
- • First exam regardless of course is paid for by GADOE and is free of charge to the student.
- • Additional exams for FR students are $53 each.

STEM exams
- • For students who do not qualify for College Board fee reduction, GADOE will pay for one AP STEM exam for each student enrolled in an AP STEM course.

Exams ordered after ordering deadline:
- • $40 fee per exam **regardless of free and reduced lunch/STEM status**.

Cancel or fail to take AP exam after ordering deadline:
- • $40 fee per exam **regardless of free and reduced lunch/STEM status**.
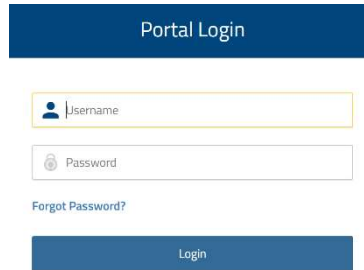
Google Classroom

To encourage blended learning, online assignments will be posted weekly through Google Classroom. Students should be familiar with how to navigate the online platform, communicate with their teacher, and submit assignments on time. If there are technology limitations, please notify the teacher.

Accessing Google Classroom

Step One: Go to the county's website and click on SSO Portal.
                   Or, use this link: https://portal.hcbe.net/_auth/Login.aspx?ru=L3Nzby9wb3J0YWw=

Step Two: Students should sign in *using their school/county username and password*. If you have questions on your username and password, please ask your teacher.

Step Three: Students should click on the Google Classroom app.

Step Four: When students initially sign into Google Classroom, they should see several "classrooms." Simply click on "JOIN" for each class.

                   Some courses require a class code in order to join. The class code for Mrs. Morris' AP Statistics class is

xlc4eth

Let's get to work! ☺

Advanced Placement Statistics Syllabus   Morris 2021-2022

I have read the syllabus for Advanced Placement Statistics and I understand its contents:

_____

Parent/Guardian (print name)

_____

Parent/Guardian signature   Date

_____

Parent/Guardian e-mail

_____

Cell Phone #   Alternate Daytime Phone #

_____

Student (print name)   Class Period

_____

Student signature   Date

_____

Student e-mail