

2012 AP Statistics Course Description

Institute Overview

Welcome to the wonderful world of AP Statistics! I am looking forward to working with all of you and hope that you will leave feeling prepared and excited about the opportunity to teach AP Statistics.

My goals are to review important topics from each of the four major content areas in AP Statistics (Exploring Data, Collecting Data, Probability, and Statistical Inference), provide activities that help illustrate these topics, and provide instruction and opportunities to use various types of technology, including graphing calculators and computer software. Also, we will review the history of the AP Statistics program, discuss the creation of the AP Statistics exam, and review the scoring of the 2012 AP Statistics exam in great detail. Finally, we will discuss how to start an AP Statistics program, how to select materials for use in class, how to recruit students, how to assess students, how to prepare students for the AP exam, and of course, anything else that participants want to know!

Institute Preparation

You will be receiving a CD or flash drive with all of my lesson plans, chapter tests (with answer keys!), examples of projects, and many other resources. It would be helpful to have a laptop computer, but it is not necessary. It will be necessary, however, to bring a graphing calculator. I will be modeling instruction using a TI-84, so bringing a TI-83 or TI-84 would be great. You will also be receiving copies of several textbooks, so you will not need to bring any of your own.

Institute Schedule

Monday:

Introduction:

- The History and Growth of AP* Statistics, including Recent Developments
- Overview of Workshop Schedule and Materials
- Resources for Starting an AP* Statistics Program
- Structure and Construction of AP* Statistics Exam
- Grading of the AP* Statistics Exam
- AP* Audit
- Teaching and Assessment Strategies
- Preparing Students for the AP Exam

Collecting Data:

- Types of Sampling
- Bias in Sampling
- Observational Studies
- Experimental Design
- Current and Previous AP* Questions

- Projects

Tuesday:

Exploring Data:

- Univariate Data
- Bivariate Data
- Calculator and Computer Skills
- Current and Previous AP* Questions

Probability:

- Rules of Probability
- Simulations
- Random Variables
- Calculator and Computer skills
- Current and Previous AP* Questions

Wednesday and Thursday:

Probability:

- Sampling Distributions
- Calculator and Computer skills
- Current and Previous AP* Questions

Inference:

- Confidence Intervals
- Hypothesis Tests
- Errors in Hypothesis Testing
- Using Simulation for Inference
- Calculator and Computer skills
- Current and Previous AP* Questions
- Projects