KAP Statistics 2009-2010

Instructor: H. K. Shrader   Email: hshrader@berlin-milan.org
Text: Introduction to the Practice of Statistics (IPS) by Moore & McCabe   Room: 401

Course Content:

Part I: Looking at data:
   • Distributions
   • Relationships
   • Producing data
Part II: Probability and Inference
   • Probability: the study of randomness
   • Sampling Distributions
   • Introduction to Inference
   • Inference for Distribution
   • Inference for Proportions
   • Analysis of Two-Way Tables
   • Inference for Regression
Part III: Additional Topics
   • Nonparametric Tests
   • Statistics for Quality

Course Structure:

   • lecture
   • class discussions
   • Mini-tab labs
   • group activities, projects, individual assignments

Course Goals:

Successful students will:
   • Use statistical methods to organize and describe data.
   • Describe and compare distributions graphically and numerically.
   • Describe relationships between data and distinguish between association and causation.
   • Evaluate sampling designs.
   • Design and carry out experiments requiring statistical inferences to draw conclusions.
   • Use appropriate statistical inference to draw conclusions from collected data.
   • Demonstrate an understanding of basic probability.
   • Use the language of statistics and probability to justify conclusions in statistical inference.
   • Work with other students to complete group projects and to enhance learning through the analysis and discussion of their own and others' statistical work.
   • Accept responsibility for their learning by being prepared for class, by accepting constructive comments and by contributing to class discussions.

Calculator and Computer Requirements:
        Students will have the option of signing out a TI-84 for the year. You will be responsible for any damage to the calculator that you are assigned. CRUNCH IT, **Mini-tab**, and/or calculators are to be used on most homework, projects, quizzes, and tests. Without the use of a calculator or appropriate software statistical problems become time consuming and uninteresting.   With a calculator or appropriate software the problems are interesting to solve--not drudgery. However, I will still expect reasonable work to be shown!
        As long as the calculator can do basic two variable statistical functions and you have a **manual** for the calculator it should be good for this class. If in doubt, see me. **We will use Mini-tab extensively during class. You will have an option of using Mini-tab, CRUNCH IT, Excel, or a TI-84 for your homework. Minitab is installed on the school computers in the library, the labs and my room for your use during study halls and after school. CRUNCH IT is an inexpensive program available to download online.**

Grading Procedure:

Quarter One: There will be two tests (200 points), homework and labs (approximately 40 points), and one project (25 points).

Quarter Two: There will be two tests (200 points), one quiz (20 points), a comprehensive final that includes chapter five (200 points), homework and labs (approximately 40 points), one experiment (25 points), and one paper (25 points).

I reserve the right to modify the assignments (and total points) based on class events. I will notify you in a timely manner by posting changes on the class chalkboards.

A calendar of assignments and due dates is provided in the back of the syllabus. Quarter Three and Four will be graded in a similar manner. More details for quarters three and four, including a calendar, will be handed out next semester.

The grade for the Kenyon class will be the average of the two semester grades.

Late assignments will not be accepted; they will be assigned a score of zero. The only exception to this policy is as follows:
If you are absent on a day that a test or assignment is due, it is your responsibility to meet with me to explain the reason for the absence, to hand in the assignment, and/or to schedule the missed test. *If you are late to class (school), you need to get the assignments to me; any assignments turned in the following day will be graded as a zero!* It is expected that missed tests are made up on the day you return to class. I will place the test in study hall. It is your responsibility to obtain the test from the study hall monitor. If you do not have a study hall, the test is to be made up in room 401 between 2:40-3:40.

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Homework and Labs
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All homework and labs will be collected. I will select problems from each homework and LAB to grade.

Each problem will be scored a $1, \frac{1}{2}$ or 0 point. The grading process for each problem is as follows:

Grade--Point	Requirement
1	The process was correct, clearly shown, neat, and legible. Statistical notation and/or terminology were used correctly. The solution was correct or the error resulted from what appeared to be a minor copying or low-level computational error.
$\frac{1}{2}$	The process was mostly correct, shown, neat, and legible. There may have been minor errors in computation, process, notation or terminology. It is clear that the student understands the process.
0	The process shown had serious errors showing a major misunderstanding. Statistical notation and/or terminology may have been used incorrectly or missing. OR I could not follow the process to make a determination. OR The problem was missing or illegible.

Grading Scale:

100% or above	A+	77-79%	C+
93-99%	A	73-76%	C
90-92%	A-	70-72%	C-
87-89%	B+	67-69%	D+
83-86%	B	63-66%	D
80-82%	B-	60-62%	D-
		below 60%	F

Attendance:

It is expected that you attend class regularly. Habitual patterns of missing class will be evaluated on an individual basis. You are responsible for learning all missed content and announcements, and for completing all missed work!

Please be on time to class. I will start class promptly. Tardiness will disrupt the class. Tardiness is disrespectful to me and your classmates.

Disabilities:

If you have a disability, please notify me during the first week of classes in order to assure that appropriate accommodations are made.

Discipline Code:

You are required to conduct yourself in accordance with all high school policies. Class disruptions will not be tolerated. Copying of homework (or any type of plagiarism) is unacceptable and will result in disciplinary action.