AP Statistics
High School Course Syllabus, Mr. Felling, 2025-2026

Contact Information / Office Hours

Contact Info:
Email: sfelling@tuhsd.k12.az.us or sfelling@tempeunion.org (both forward to same account).
Phone: (480) 706-7900 ext. 70556
The best way to contact me is via email, although phone messages work too – I usually respond within a day or two at most - if I don't, try contacting me again, because something happened to your message.

Online information is in our course in Canvas.
I also maintain a mirror of most content on the general internet at: www.mrfelling.com

Office Hours/Tutoring: I work with students in our classroom in C105 both before and after school every school day except after school on Wednesdays (due to early release meetings). No appointment needed, just come to C105 before or after school!

Course Description

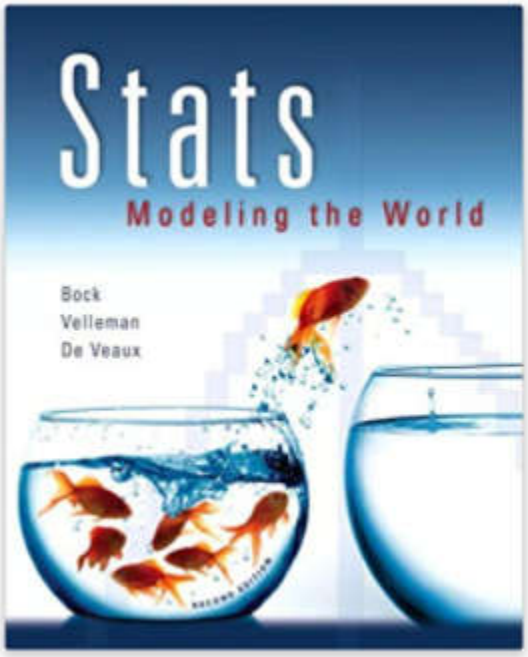
This 200-level college level course is designed to explore data analysis, standard deviation, scatter plots, correlation, residual plots, experimental design, bias, probability, central limit theorem, margin of error, null hypothesis, alternative hypothesis, assumptions rules of thumb, p-value, alphas level, type I & II errors, confidence intervals, inference by z-tests, I & II sample and tests, I & II proportion tests, Chi-squared tests, 2-sample f-tests, and linear regression t-tests. After completion of this course, the student may wish to take the Advanced Placement Statistics examination.

My goals for you: at the end of this course, I want all students to…
1) …know how to correctly use a large number of statistical analysis mathematical procedures and tools.
2) …have the ability to think critically and utilize these procedures and tools appropriately in order to analyze real-world information and to interpret and present meaningful results and conclusions which can be legitimately drawn from the information.
3) …be prepared to do well on the AP Statistics Exam if they choose to take it at the end of the year.

A more detailed course description listing individual topics is available on my website.

Textbook

The textbook for this course is “Stats: Modeling the World” by Bock, Velleman, and De Veaux.



However, we will be working from my own lesson notes developed from this textbook along with other textbooks and practice work will be from selected problems from a number of sources built into practice packets It is not required that you check out the course textbook from the DV bookstore.

While I will be covering the main ideas during our classroom lessons for some topics the textbook will go into more depth and provide additional information that you may wish to read about, especially if you are trying to achieve a ‘5’ on the AP Statistics Exam or if you are planning on majoring in a statistics-heavy major. In that case, you can check out a copy of the textbook from the DV bookstore.

Classroom Policies

Respect is expected – In order to learn, we must have an effective learning environment. We don't usually have behavior issues in honors math classes, but behaviors that disrupt the learning environment will not be tolerated. Learning also requires open communication, and people must feel safe to share their thoughts and ideas. I respect my students, and I expect students to respect me, each other, and themselves.

Attendance: Desert Vista policy is to consider students up to 20 minutes late to class tardy, and students more than 20 minutes late to class absent. Please note: Students with non-school related absences of 11 or more days from a class (excused or unexcused) in a semester may lose course credit for that semester. Please keep absences (including school-related) to a minimum. If you do need to miss class, information about what we covered and homework is always available at www.mrfelling.com.

Bathroom:

- Students should only use the bathroom for emergencies, please do not assume that you will go to the bathroom during class every day. If a student is using the bathroom frequently, I contact parents to report this. Time away from the classroom makes it difficult to stay caught up and learning.
- Only 1 student can be out of the room at a time, and they must obtain the bathroom pass from me.
- Students must return within a reasonable amount of time.
- Per school-wide policy this year, students must give me their cell phone in order to obtain the bathroom pass from me, and they must sign-in and sign-out noting the times out of the room.

Electronics:

- If I see electronics out at inappropriate times, I may choose to confiscate put the item on the teacher desk at the front of the classroom. Students may reclaim their item from the desk when the bell has rung at the end of class if I have not returned the item before then.
- For frequent offenders – at my discretion, I may opt to keep the item and turn it in to the front office administrators. School policy is to confiscate – and require parents to retrieve at the front office.
- **Please note that, in accordance with school policy, I am not, and the school is not, liable for loss of, or damage to confiscated items**. To be safe, students should not have electronics out of their backpacks in the classroom unless I specifically indicate it is appropriate.

Cheating: - Any communication during or after a test or quiz, or any other form of cheating, may result in penalties up to and including receiving a zero on the entire test or assignment..

How Your Grade is Determined

Letter Grade
A letter grade is issued for each semester separately for the high school transcript. (If a student is taking the course for Rio Salado college credit, because this is a single-semester course in college, the college-credit transcript grade will be the average of the two semester grades.) The semester grade is made up of 40% for each quarter plus 20% for the semester final exam. The quarter grades are each determined by a percentage of total points (and all points count the same in this course).

Grading Scale:
A: 90%-100%
B: 80%-89%
C: 70%-79%
D: 60%-69%
F: 59% or lower

Rounding: For students earning borderline grades (for example, 89.5%) I determine rounding on a case-by-case basis, generally by considering your chapter test scores and your score on the final exam.

Grades will be updated on a regular basis (usually every weekend). You can check your grades online using your parent or student login for the Synergy online grade system. If you have questions about your grade, please feel free to email me at any time.

Late work policy: Late work will be accepted, but will generally receive less than full credit if late.

What Makes Up Your Quarter Grade

- 80%-90%: **Assessments of your knowledge**

    - **Unit tests**: each unit (which is a series of chapters) culminates in a summative test which covers all major ideas learned in the unit. The expectation is that students will use the lessons, practice, and quizzes to thoroughly learn and review the material in a unit by the date of the unit test. Tests will usually be worth 100 points each.

      The tests in this class are patterned after the AP Statistics Exam, but focusing only on a single unit. As a result, there is an 'AP Statistics grading curve' which is applied to all unit tests, and our standard curve is to add 12% to the raw score. This is because the unit/AP-like tests are more difficult than exams would be in the corresponding college course because we are helping students prepare to take the very difficult AP Statistics Exam, so the curve allows us to give a more challenging AP-like exam, but have the scores fall in the range where typical scores would be for students taking this course in college. **Note: in order to receive the AP Statistics grading curve on a unit exam, the exam must be taken on the test day with the class and if a student is absent, a specific procedure must be followed to notify the instructor prior to the day of the exam, or the student will not receive the grading curve and the raw score will be used.**

    - **Chapter quizzes**: Throughout the unit, we will usually check understanding of each chapter with a chapter quiz, usually worth 10 points per chapter included each. (Quizzes are not grade-curved because they are not AP-style and we include parallel reviews in the required practice packets).

    - **Projects**: We may also assign projects to provide a variety of ways of thinking about and demonstrating understanding in statistics.

- 10%-20%: **Level of Effort**

    - Required Practice Packets: Each chapter will have a required practice packet which must be completed and submitted by its deadline. Because we are teaching a semester long college course over a full year, we have more time to devote to practice work during class, so about 75% of the course practice work is done during class rather than as homework. However, any remaining work to finish the packet will need to be completed at home. Practice packet work is graded for completeness and quality of the work, but not for correctness. The required practice packet for a chapter is usually due on the day of the quiz for that chapter.

- In-class activities: We will participate in a variety of in-class activities including data collecting experiments, group statistical analysis activities, and competitive games. These may or may not be graded, and may be graded for correctness, completion, or quality of effort.

- **Extra Credit Opportunities**
  For Rio Salado college credit classes at DV, we follow Rio Salado's policy that the student's grade be a reflection of degree of math understanding and not be artificially boosted by excessive extra credit. However, we do include some ability for students to earn extra credit (always tied to math content). The intent of this extra credit is to allow students to demonstrate math understanding in alternate ways to compensate if they happen to score lower than expected on one or two unit exams (which are more difficult than a usual statistics college course due to preparing students for the AP exam).

  There is one main way to earn extra credit:

  - **Extra Credit Packets**
    For each chapter, there is a required practice packet which contains the main practice for the chapter and all students are required to complete, but a 2nd 'extra' credit practice packet is also available which provides additional enrichment and advanced practice which can be helpful for students, especially those students wanting to score a 4 or 5 on the AP Statistics exam. To encourage students to complete this extra work, some extra credit is earned by completing and submitting extra practice packets by the deadline (which is usually on the day of the unit exam for that section).

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Absences, Makeup and Retakes Policy

The goal of this class is to guide students toward a complete mastery of course material. This is done by making incremental progress steadily throughout the course – much of the later material depends upon mastery of the previous course material. **It is very important that students attend class. New material or very important practice work happens every day.**

If you miss class, that class lesson is generally no longer available to you. So, you will need to find alternative ways to learn the material. The best way is to watch the lesson videos which I've recorded for each of the lessons which teach the material in a similar way to what we've done during class. You could also read the textbook, review online lecture notes, or ask other students in class for help. Note that you are still responsible for knowing the material, even if you miss class. Our makeup and retake policy aims to encourage students to stay caught up at all times because this is so critical to overall success in the class.

Retakes: We allow no retakes for tests or quizzes in this course.

Makeups: Test must be taken by the date of the test except in very exceptional circumstances. In college, if you know you cannot attend on a test day, you usually have to make arrangements with the professor to take the test early. If you just fail to show up on the day of the test, you may simply get a zero which cannot be made up. The policy for our class regarding makeups is similar, but less extreme.

If you know ahead of time that you cannot attend on a test day, you must notify me before the day of the test, and we will arrange a time for you to take an alternate version of the test (usually taking it early). Here are the times you can take the makeup test:

- Before or after school in our classroom.
- During our class time, the day before (in another room).
- After the scheduled test date in our classroom (rarely, and with prior arrangement).

What happens if you are absent on the day of the test and didn't notify me beforehand? That depends upon why you were absent:

- If it is an extremely extraordinary situation which could not have been anticipated (car accident, sudden extreme illness, death in the family, etc.) then you can take the test at the next possible opportunity before or after school or in class. The test will be graded as usual with the grading curve.
- If it is anything other than an extreme, rare circumstance then you will take the test at the next opportunity in class **but you will not receive the AP Statistics grading curve and your raw score will be used as your scaled score.**

Materials and Supplies

Please have the following with you during all class sessions:

- Graphing calculator: You will need a graphing calculator which includes statistical test and matrix functions - it is not possible for you to complete this course without a personal calculator (we use a calculator more in this class than in any other math class). I recommend the Ti-84 calculator (any edition). Ti-83 will also work but is missing a couple of features we use in this course (however, there are workarounds for these functions available). We do not need any of the more advanced features of calculators like the Ti-89 or nSpire and those calculators have more complicated user interfaces, so if you are purchasing a calculator for this class, we highly recommend the Ti-84plus.

  We will use a Ti-84 for all class demonstrations. You can choose to use other calculator models, however, you will be responsible for learning your calculator's interface on your own (there are often good YouTube videos showing how to do things on calculator). Your calculator must have all of the following functions for this course:
  - Matrices
  - Normal curve probability distribution functions: normalcdf, invNorm
  - T-distribution functions: tcdf, (invT is also helpful)
  - Statistical graphs: scatterplot, histogram, boxplot, normal probability plot
  - 1-variable statistics: mean, median, standard deviation, Q1, Q3
  - Linear Regression functions: LinReg (a+bx) and ability to generate a residual plot.
  - Statistical inference tests: Hypothesis tests and confidence intervals for 1,2-proportions, 1,2-means, Chi-squared test, Chi-squared goodness-of-fit test, and Linear Regression hypothesis test and confidence interval.

- Paper and pencil/eraser

Keys to Success in this Course

Class Notes: Lessons parallel the topics covered in our textbook, but I usually explain things in alternative ways. On Canvas and www.mrfelling.com, I provide printable 'blank class notes' for each chapter. We do need to spend some time in 'lecture mode' but to minimize time spent in lecture so you can spend more time practicing during class, the class notes greatly speed note-taking. Alternatively, you may choose to take your own, more abbreviated, notes. Class notes are not graded, but I highly recommend saving all class notes for the course and bringing them every day for use during practice.

Calculators: You must have a personal calculator with the abilities of a Ti-84 or equivalent to use both in class and at home for homework/review.

Supplies:

- Graphing Calculator (please bring your calculator to class every day!)
- The current Required Practice Packet.
- Paper – any kind.
- Pencil w/eraser.
- Class notes for the course to date.

Use the online schedule to stay caught up: Please use Canvas or the www.mrfelling.com website to find the latest information on homework, upcoming tests and assignments. Our class page always displays the current week's schedule and homework. For previous or future weeks' homework assignments please click on the chapter calendar links below the weekly schedule.

A plan for success: If you do the following, you greatly improve your chances of succeeding in this class:

- Attend all lessons and work all the examples with me during class.
- If you are unable to get correct answers, or don't understand anything, ask questions as soon as possible in class. Keep asking questions until you understand. If there isn't enough time during class, come to after school tutoring.
- Don't wait until just before the unit test to ask questions - ask questions as soon as you don't understand something.
- Watch the lesson videos if you need to re-learn anything: I've personally recorded lesson videos for all new topic lessons – this can be very helpful :)
- Use all the provided review materials to spend significant time at home reviewing for unit tests.
- Complete all required homework on time.
- Take full advantage of any extra credit opportunities and participate regularly in during class.

I am looking forward to exploring this important and useful area of mathematics with you!
- Mr. Felling