

South Plains College Department of Mathematics and Engineering

Math 1442.201: Business Statistics MW 5:20-6:55 Reese 216

Fall 2019 Course Syllabus

Instructor: Alma Lopez

Email: alopez@southplainscollege.edu

Office: Levelland Campus Math 113

Office Hours:

Telephone: (806) 716-2664

MW before class or by appointment

Prerequisites: College Algebra (Math1314), Math Analysis I (Math1324), or consent of instructor

Credit: 4 hours

Lecture: 3 hours

Lab: 3 hours

This course satisfies a math requirement for Business Majors and some nursing majors (BSN)

Course Description: This course is an introduction to the techniques of collection, presentation, analysis, and interpretation of numerical data. Applications of correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, and mathematical models will be covered. This course may require lab time on the computer using EXCEL.

Course Objectives: The purpose of this course is to provide a transferable course in the elements of business statistics. Upon completion of this course and receiving a passing grade, the student will demonstrate mastery of the following concepts:

1. represent raw data using frequency distributions
2. represent raw data using stem & leaf plots, ogives, histograms, bar graphs, and pie charts
3. calculate measures of central tendency, variation, and position for both grouped and ungrouped data and interpret in writing the significance and meaning of the calculations
4. calculate coefficients of variation and skewness and interpret in writing the significance of the calculations
5. calculate classical and empirical probabilities
6. apply binomial, Poisson, and normal distribution properties to calculate probabilities and interpret in writing the significance of the calculations
7. calculate mean, variance, and standard deviations of probability distributions and interpret in writing the significance of test results
8. evaluate a hypothesis testing situation to determine the appropriate test to be used
9. use parametric and non-parametric tests for hypothesis testing and interpret in writing the significance of test results
10. calculate simple and multiple linear regression equations and use equations to make predictions
11. calculate coefficients of correlation, determination, and non-determination and interpret in writing the significance of the calculations
12. use a computer statistics program and/or a statistical calculator to help with computations

Course Materials:

- Textbook: *Elementary Statistics using EXCEL*, by Mario Triola, 6th Ed., published by Pearson
Book Options (All 3 options include access to the electronic version of the book)
 - 1) Purchase a new physical book that includes a pre-paid web access code.
(physical book and e-book)
 - 2) Purchase a used book, then purchase the web access code separately on www.pearson.com/mylab .
(physical book and e-book)
 - 3) Do not purchase a physical book; purchase only the web access code directly from www.pearson.com/mylab.
(no physical book; only e-book)

Note: No matter how you are going to pay for the access code, MyStatLab does allow a grace period/temporary access for about 14 days where you don't have to pay for the access. Go ahead and get registered for the course on MyStatLab under the grace period and just make sure to enter your access code before the grace period ends.

- Calculator: A graphing calculator with the statistics package is required and you are required to bring your calculator to EVERY class. TI-83, TI-83+, TI-83+TI-84+ are preferred, but many others are also acceptable. Any other graphing calculator, you will need to read your manual to determine how to make the processes work. Cell phones and similar devices may NOT be used as calculators and no sharing of calculators is allowed. If you have any questions about your calculator, check with the instructor immediately.
- Working, reliable internet access

Methods of Learning Assessment: Students will be continually assessed throughout the course via in-class group work, questioning, and board work. Other methods of assessment include:

- **Attendance:** Attendance and effort are crucial for success in this course. It is your responsibility to make sure that I have marked you present for each class. Class attendance may be taken at any time during the class period, so please do not arrive late or leave early. The last day for student-initiated drops is Thursday, November 14th.
- **Homework:** Homework will be assigned at each class meeting. The homework is not a tool by which I torture you, but rather an opportunity for you to practice the skills presented in class which you will be responsible to demonstrate on a quiz the following class period. If you are interested in passing the class, you will need to do well on the exams. Late homework is not accepted.
- **Excel Assignments:** Some assignments you will need to complete using Excel. When grading these projects, neatness and presentation will count.
- **Exams:** Exams must be taken in pencil during the normal class period. Students are not allowed to leave the examination room until they have turned in their test for grading. The tentative exam dates are as follows:
Exam 1: Monday, September 30th Chapters 1, 2, 3, & 10
Exam 2: Monday, October 28th Chapters 4, 5, & 6
Exam 3: Monday, November 25th Chapters 7, 8 (This is the Monday before Thanksgiving!)
- **Final:** The comprehensive final will be given on Monday, December 9th from 5:30 – 7:30 as directed by the official South Plains College Schedule. No make-up final will be given. The final will cover all material covered in-class including chapters 1, 2, 3, 10, 4, 5, 6, 7, 8, 9.
- **Make-up:** Make-up work is given at the discretion of the instructor. NO make-up exams are given without prior notification AND proper documentation. If are absent from class, have given prior notification and proper documentation of your absence, you MUST make arrangements to take the quiz or exam BEFORE the next class period. Students who do not take exams in-class, early or late, forfeit the right to attempt any extra credit on that exam.

Grading Policy:

| | |
|--|-------------------------|
| Daily Work (HW, labs Excel Assignments,) | 20% |
| Exams (3 total) | 20% each (total of 60%) |
| Comprehensive Final | 20% |

Grading Scale:

| | |
|-----------|---|
| 90-100% | A |
| 80-89% | B |
| 70-79% | C |
| 60-69% | D |
| Below 60% | F |

This course and its grade will be recorded on your official transcript. Grades will be posted on Blackboard during the semester usually after exams.

Student Responsibilities and Expectations:

1. Come to class on time and prepared to learn. (Pencils, homework, notebook, calculator)
2. Read the syllabus.
3. Take notes, participate in class, and complete course assignments early enough to seek help if needed.
4. Food and drink are not allowed in class, with the exception of bottled water.
5. Cell phones and any other electronic devices must be silenced and put away before entering the classroom. Use of these devices during class will result in a zero for that day's quiz, homework, or exam.
6. Be courteous and respectful to your instructor and classmates at all times.
7. Use only pencil for all written assignments.

Resources:

- I am your first and BEST resource for this class! Feel free to come by during my office hours or email me at jkbartlett@southplainscollege.edu .
- Free tutoring is available in M116 on the Levelland campus. Hours for the tutors will be posted by the door of M116.
- Form study groups: Networking is an essential tool both in the classroom and in the workforce!
- Your book that you have already purchased.
- Websites that contain helpful videos: patrickjmt.com khanacademy.com

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Religious Holy Days: In accordance with Section 51.911, Texas Education Code, South Plains College will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within seven (7) calendar days after the absence. Students are required to file a written notification of absence with each instructor within the first fifteen (15) days of the semester in which the absence will occur. Forms for this purpose are available in the Student Services Office along with instructions and procedures. "Religious holy days" means a holy day observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Non-Discrimination Statement: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the SPC policy at: (http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

Sexual Misconduct Statement: As a faculty member, I am deeply invested in the well-being of each student I teach. I am here to assist you with your work in this course. If you come to me with other non-course-related concerns, I will do my best to help. It is important for you to know that all faculty members are mandated reporters of any incidents of sexual misconduct. That means that I cannot keep information about sexual misconduct confidential if you share that information with me. Crystal Gilster, the Director of Health & Wellness, can advise you confidentially as can any counselor in the Health & Wellness Center. They can also help you access other resources on campus and in the local community. You can reach Ms. Gilster at 806-716-2362 or email cgilster@southplainscollege.edu or go by the Health and Wellness Center for assistance. You can schedule an appointment with a counselor by calling 806-716-2529.

4.1.1.4 Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact Crystal Gilster, Director of Health and Wellness at 806-716-2362 or email cgilster@southplainscollege.edu for assistance.

Math 1442.201 Tentative Schedule

| Week | Date | Topic | Assignment Due |
|------|-----------|---|----------------|
| 1 | Aug 26 | Syllabus Chapter 1, Lab 1 | |
| | Aug 28 | Chapter 1, Lab 2 | |
| | Aug 30 | Last Day to Add a Class | |
| 2 | Sept 2 | No Classes – Labor Day | |
| | Sept 4 | Chapter 2, Excel 1 | Ch 1 |
| 3 | Sept 9 | Chapter 2, Excel 1 | |
| | Sept 11 | Chapter 3, Excel 2 | Ch 2, Excel 1 |
| 4 | Sept 16 | Chapter 3, Excel 2 | |
| | Sept 18 | Chapter 10 | Ch 3, Excel 2 |
| 5 | Sept 23 | Chapter 10, Lab 3, Excel 3 | |
| | Sept 25 | Exam 1 Review | Ch 10 |
| 6 | Sept 30 | Exam 1: Chapters 1, 2, 3, 10 (20%) | |
| | Oct 2 | Chapter 4 | Excel 3 |
| 7 | Oct 7 | Chapter 4 | |
| | Oct 9 | Lab 4 | Ch 4 |
| | Oct 11 | No Classes – Fall Break | |
| 8 | Oct 14 | Chapter 5 | |
| | Oct 16 | Chapter 5, Chapter 6 | |
| 9 | Oct 21 | Chapter 6 | Ch 5 |
| | Oct 23 | Exam 2 Review | Ch 6 |
| 10 | Oct 28 | Exam 2: Chapters 4, 5, 6 (20%) | |
| | Oct 30 | Chapter 7 | |
| 11 | Nov 4 | Chapter 7 | |
| | Nov 6 | Chapter 8 | Ch 7 |
| 12 | Nov 11 | Chapter 8 | |
| | Nov 13 | Lab 5 | Ch 8 |
| | Nov 14 | Last Day to Drop any Class at SPC | |
| 13 | Nov 18 | Excel 4 | |
| | Nov 20 | Exam 3 Review | |
| 14 | Nov 25 | Exam 3: Chapters 7, 8 (20%) | |
| | Nov 27-29 | No Class – Thanksgiving | |
| 15 | Dec 2 | Chapter 9 | |
| | Dec 4 | Final Exam Review | Ch 9, Excel 4 |
| 16 | Dec 9 | Final Exam: Chapters 1, 2, 3, 10, 4, 5, 6, 7, 8, & 9 (20%) 5:30-7:30pm | |