

**MATH 11**

ROOM #533

Mr. Jose Garcia ([jogarcia@dinuba.k12.ca.us](mailto:jogarcia@dinuba.k12.ca.us))

Mr. Jim Gilmore

**Elementary Statistics FALL 2019**

Per. 1 M-F @ 8:00a-8:58a

Per. 6 M-F @ 2:10p-3:08p

**REEDLEY COLLEGE**

**WELCOME to Elementary Statistics:** Students who attend class regularly, come prepared to class, participate in class, take notes, do the assignments, and pass the assessments should be successful. You **MUST** make an effort and do your **BEST** to ensure success in this class. To pass this course you will need a C or better grade to move on to the next level.

**COURSE DESCRIPTION:** This course is an introduction to statistical methods and techniques with applications in the fields of business, behavioral and social science, as well as in science, technology, engineering, and mathematics. Topics include descriptive measures of central tendency and variability, probability, binomial and normal distributions, random variables, sampling, estimating, hypothesis testing (parametric and nonparametric), correlation and regression.

**BASIC SKILLS ADVISORIES:** English 1A

**SUBJECT PREREQUISITES:** Math 103 (**DHS-MATH 3**)

**TEXT:** Ron Larson, Elementary Statistics, Pearson, 7<sup>th</sup> Edition, 2017.

**NOTES:** Notes for this class will be required in class every day and will be provided.

**COURSE OBJECTIVES:**

In the process of completing this course, students will:

1. Distinguish among different scales of measurement and their implications;
2. Identify the standard methods of obtaining data and identify advantages and disadvantages of each;
3. Interpret data displayed in tables and graphically;
4. Calculate measures of central tendency and variation for a given data set;
5. Apply concepts of sample space and probability;
6. Calculate the mean and variance of a discrete distribution;
7. Calculate probabilities using normal and t-distributions;
8. Distinguish the difference between sample and population distributions and analyze the role played by the Central Limit Theorem;
9. Construct and interpret confidence intervals;
10. Determine and interpret levels of statistical significance including p-values;
11. Interpret the output of a technology-based statistical analysis;

12. Identify the basic concept of hypothesis testing including Type I and II errors;
13. Formulate hypothesis tests involving samples from one and two populations;
14. Select the appropriate technique for testing a hypothesis and interpret the result;
15. Use linear regression and ANOVA analysis for estimation and inference, and interpret the associated statistics; and
16. Use appropriate statistical techniques to analyze and interpret applications based on data from disciplines including business, social sciences, psychology, life science, health science, and education.

**COURSE CONTENT OUTLINE:**

A. Introduction to Statistics

1. Summarizing data graphically and numerically
  - a. Frequency distributions
  - b. Graphs
2. Descriptive statistics:
  - a. measures of central tendency: mean, median, mode
  - b. measures of variation: variance, standard deviation, quartiles, range
  - c. relative position
  - d. levels/scales of measurement

B. Probability

1. Sample spaces and probability
2. Random variables and expected value
3. Sampling and sampling distributions
4. Discrete distributions – Binomial
5. Continuous distributions – Normal

C. Sampling Theory

1. Simple random sample
2. Central Limit Theorem

D. Estimating Population Parameters

1. Estimation and confidence intervals from a small or large sample.
2. Sample size.

E. Hypothesis Testing (Parametric/Nonparametric)

1. One population, one and two sided tests.
  - a. z-test for means and proportions.
  - b. t-test for means (independent and dependent samples)
2. Two populations, sampling distributions
3. Chi-square (Goodness of Fit and Contingency Tables)

F. Correlation and Simple Linear Regression

1. Correlation coefficient
2. Regression coefficient
3. Test of hypothesis about the value of correlation/regression coefficient.
4. Analysis of variance (ANOVA)

G. Applications/Technology

1. Applications using data from disciplines including business, social sciences, psychology, life science, health science, and education
2. Statistical analysis using technology such as SPSS, EXCEL, Minitab, or graphing calculators

## **REQUIRED MATERIALS:**

- Paper 8 ½” by 11”
- Pencils
- No cell phones
- TI-84 or PLUS (Can be checked out at Reedley College Library)

**ASSIGNMENTS:** The assignments will account for 25% of your grade.

**TUTORIAL SERVICES:** Tutoring will available at DHS Friday 3:08PM-4:08PM.

- The Math Center in the FEM building at Reedley College, room 1. Hours: M-Th 8:00 AM - 4:00 PM and F 8:30 AM -12:00 PM. (559) 638-0300 ext. 3158
- The Tutorial Center at Reedley College is open M-F until 5:00.
- YouTube also has many good videos for help.
- [Video for the Academic Support Centers](#)
- **Note:** If you have any questions you would like to ask of me, your, please ask me during class time or contact me via email and I will do my best to help you.

**ASSIGNMENTS NOTEBOOK:** ALL assignments problems are to be worked out completely, with all work shown in your 8 ½” by 11” listed in the materials list. Your homework will be collected sometimes, and you will be given homework check often. Each homework assignment will be worth 10 points.

**QUIZZES:** There will be **weekly** in-class homework assignments quizzes. These quizzes will be given either at the beginning or the end of class. The quizzes will account for 10% of your grade.

**ATTENDANCE:** Everyone can learn math, but don’t do it alone! Come to class and be ready to learn! In class we will be working on developing your understanding of key concepts and we’ll be doing a lot of problem solving. Through actively participation in class activities will help you be prepared for quizzes and exams. Also, participation is truly an integral part of your learning process and will help you succeed in this course as well as in college. If you miss class, before you do anything else contact me by email.

**BEHAVIORIAL STANDARDS:** Your classmates and I would greatly appreciate that you take care of any personal needs (i.e., using the restroom, getting a drink, sharpening a pencil) before class begins. Please turn your phone off, put it out of sight, and remove any earbuds when you come into class. You may **not** use your phone as a calculator while doing class work or during testing time. Make sure to follow my rules posted in the classroom and the school policies to ensure success in this course. I am looking forward to have a good semester with all of you!

**EXAMS:**

- There will be exams with percent value. The exams cover at least **ONE-chapter** material.
- Missed exams must be made up in your own time by the next day. It is your responsibility to let me know as soon as possible.
- If you absolutely must be absent on the day an exam is scheduled, you must discuss with me the possibility of taking the exam **early**.

**IMPORTANT DATES:**

<b>January 7, 2019</b>	<b>(M)</b>	First day of school
<b>January 21, 2019</b>	<b>(M)</b>	Martin Luther King, Jr. Day (No School)
<b>February 11, 2019</b>	<b>(M)</b>	District Holiday/No School
<b>February 18, 2019</b>	<b>(M)</b>	Washington Day (No School)
<b>April 15-19, 2019</b>	<b>(M-F)</b>	Spring recess/Spring Break (No School)
<b>April 22, 2019</b>	<b>(M)</b>	District Holiday/No School
<b>May 20-24, 2019</b>	<b>(M-F)</b>	Final Weeks
<b>May 27, 2019</b>	<b>(M)</b>	District Holiday/No School
<b>May 31, 2019</b>	<b>(F)</b>	Last day of School (Minimum Day)

**SPECIAL NEEDS REQUESTS:** If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, you are encouraged to provide me with your notification of authorized services form from DHS counselor and consult with me immediately so that arrangements can be made.

**ACADEMIC INTEGRITY:** You are expected to be honest. In this course, that primarily means you should never submit work that is not your own. This does not mean that you are not allowed to work with other students. **I encourage you to collaborate on homework problems!** It is often more fruitful and enjoyable to work with other people when trying to figure something out. They can give you a fresh insight or different perspective on the problem. Conversely, explaining your idea to another person forces you to clarify your thoughts and can help to highlight flaws you may have previously overlooked. However, if you work with others to come up with a solution, afterward you should write up your work on your own. You should not base your homework on another's student's homework, and never put your name on something you do not understand.

Below is the official School policy on academic dishonesty, cheating and plagiarism.

**CHEATING** is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely.

**PLAGIARISM** is a specific form of cheating: the use of another’s words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights.

Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents.

**PERSONAL AND TECHNOLOGY EMERGENCIES:**

I am well aware that sometimes emergencies occur. To account for these unexpected events, I have made the following allowances:

- The lowest **two homework assignments grades** will be dropped.
- The lowest **two quiz grades** will be dropped.
- The final exam will replace the lowest exam (or a zero score if you miss an exam) if the final exam score is higher.

**FINAL EXAM:** The final may be used to replace a low exam score or a missed exam. The final may not be used to replace the homework assignment grade, or quiz grade.

**GRADING:**

Letter Grade		Categories	Percent of Grade
A	90%-100%	Assignments	25%
B	80%-89%	Quizzes	10%
C	68%-79%	Exams	65%
D	55%-67%		
F	0%-54%	<b>NOTE: This is a Transferable College Course</b>	

**EXAMPLE:** If you homework assignments average is 85, the average of your quizzes is 70, the average of the average of your exams and the final exam 76, then you would compute your grade as follows;

$$(.25)(85)+(.10)(70)+(.65)(76) = 21.25 + 7 + 49.4 = 78.65 \text{ or } 78.7$$

- Your grade will then be determined by reading the above chart with the grading scale. Thus, your grade in the above example will be 78.7% or C.

Mr. Garcia  
Math teacher  
Dinuba High School  
Mike Roberts, Ed. D Principal

Dear Parents:

I am pleased to be given the opportunity to teach \_\_\_\_\_ in my class. Your involvement is key to his or her success in **MATH 11**. It is very important that you go over the Syllabus with the student. After reading the Syllabus, please sign and date this letter in the space provided at the bottom of the page. Have the student return this page to me (**signed and dated no later than January 14, 2019**). It will be counted as a homework grade. The student can keep the rest of the syllabus on his or her binder as reference in the event any future questions about this course. If you still have any questions, then feel free to e-mail me at the e-mail located at the bottom at this page.

**CLASSROOM EXPECTATIONS:** Students who attend class regularly, come prepared to class, participate in class, take notes, and do the assignments should be successful. **This is a transferable college course** and you **MUST** do your **BEST** to ensure success in this class.

**NOTE:** All students will be expected to show appropriate behavior in the classroom and follow all school policies as well as my classroom rules.

**Classroom Rules:**

1. Come prepared to class and on time
2. Respect everyone equally
3. Listen and follow directions
4. Keep appropriate behavior
5. Keep calm and just learn

**NOTICE AGREEMENT:** By signing below, you have indicated that you have read the above information and acknowledge that these expectations are to be met in order for your student to be successful in this class.

_____	_____	_____
Print Student Name	Student Signature	Date

_____	_____	_____
Print Parent/Guardian Name	Parent/Guardian Signature	Date

I look forward to a great semester with each student. Parent/Guardian, please feel free to contact me --- by phone (DHS office), or e-mail ([jogarcia@dinuba.k12.ca.us](mailto:jogarcia@dinuba.k12.ca.us)). Thank you!