**Instructor:** Sudha Kolathu- Parambil

**Best way to contact me:** Message me through **CANVAS Inbox or**

**e**-**mail:** skolathuparambil@sierracollege.edu

**Virtual Office Hours:** **W 10 AM to 11 PM**

**Communication:** I will be communicating with you through Canvas-announcements, Inbox-messages, e-mail, and Canvas-Modules.

**Prerequisite:** Completion of MATH D or E with grade of "C" or better or placement by matriculation assessment process or equivalent

**Course Description:** Introduction to the basic concepts of statistics. Emphasis on statistical reasoning and application of statistical methods. Areas included: graphical and numerical methods of descriptive statistics; basic elements of probability and sampling; binomial, normal, and Student's t distributions; confidence intervals and hypothesis testing for one and two population means and proportions; chi-square tests for goodness-of-fit and independence; linear regression and correlation; and one-way analysis of variance (ANOVA).

**Textbook:** Elementary Statistics, 3rd Edition by Navidi and Monk.

Students can access the eTextbook through Connectmath. All the homework, quizzes and tests will be assigned through Connectmath. Please click on “Connectmath Via CANVAS” tab on the course menu. Then select Connectmath (Not ALEKS). **It will give you the option of purchasing the Connectmathaccess code or you can use two weeks trial using the code: 023A8-CC23F-19819-8CB39.** Students must purchase the Connectmath code before the trial period ends. You have two options for buying this code/eTextbook.

* Looseleaf w/ Connect Access Card: ISBN: 9781260996296
* Connect Access Card: ISBN: 9781266168918

**Calculator:** A graphing calculator TI-84 or Excel or any app alternative to it.

**System Requirement for Connectmath:**

**Operating Systems:** Windows 7+, Mac OS X 10.11+

**Browsers:** Chrome60+, Firefox60+, Safari 11+(Mac only), No support for IE11 or Edge.

I recommend you use Google Chrome.

**Course Student Learning Outcomes (CSLOs):**

Upon completion of this course, students will be able to:

1. Recognize, label and identify data by type and level of measurement.
2. Construct and interpret data using graphical and numerical methods of descriptive statistics.
3. Calculate and interpret problems involving basic elements of probability and sampling.
4. Conduct hypothesis tests and construct confidence interval estimates for population means and proportions; chi-square tests for goodness-of-fit and independence; linear regression and correlation; and one-way analysis of variance (ANOVA).
5. Logically present clear, complete, and sufficiently detailed solutions to demonstrate understanding and communicate reasoning of statistical methods using technology when appropriate.

**Objectives:**

1. Distinguish among different scales of measurement and their implications;
2. Interpret data displayed in tables and graphically;
3. Apply concepts of sample space and probability;
4. Calculate measures of central tendency and variation for a given data set;
5. Identify the standard methods of obtaining data and identify advantages and disadvantages of each;
6. Calculate the mean and variance of a discrete distribution;
7. Calculate probabilities using normal and student’s 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.

**Grading Scale:**

Group Discussion/participation 8% (assigned through CANVAS)

Assignments 2% ((assigned through CANVAS)

Homework 25% (38 sets of homework through connectmath)

Quizzes 25% (7 quizzes through connectmath)

 Exams 40% (2 exams, 4th & 8th week, through connectmath)

There will be a mandatory quiz called the "Ticket to take the Exam" before each test. This quiz explains the rules/policies of the Exam. Your grade for the exam will be counted as "0" without passing this quiz. Please check Connectmath for the due dates of homework/quizzes/exams.

**Letter Grade:** 90-100% A, 80-89% B, 70-79% C, 60-69% D, 0-59%

**Homework, quizzes, exam:**. Please Check Connectmath for the due dates of homework and quizzes. One lowest quiz grade and two lowest homework grades will be dropped while calculating the final grade. There is no make-up for exams.

**Discussion:** Discussion topic will be posted on CANVAS-weekly module. This a graded discussion. The instructions and the due date of each discussion will be provided with the topic.

**Lecture Videos:** All the lectures based on each section are available through Canvas/Weekly-Modules. Additional video lectures based on each topic is available on Connectmath/Home.

**Time needed for this class:** If this class is offered in the regular 16-week semester, students should spend an average of 10 hours per week for this class to receive an average grade in this class. Since it is offered in the summer (8-weeks) you need to spend **at least 20 hours each week** for this class. Each group discussion/lab will take 30 minutes or more depending on the topic. Plan on spending at least 2.5 hours per day to stay on track. Please make a study plan appropriate to your schedule. Decide on when and how you are going to complete this course successfully and stick with that plan.

**Design of this online class:** Your weekly tasks are organized under “Modules” (tab on the left side). Please complete the tasks listed in that module for that week.

Each week you will be assigned read some chapters. Video lectures created by your instructor based on the chapter/sections will be under each weekly module and which goes along with the guided notes. You can watch the video lecture based on the topic of each chapter on connectmath. The PowerPoint lecture slides, and the guided notes are available on CANVAS. You can use that to take notes while reading or watching the PowerPoint presentations. You can study according to your learning style. Then do the homework problems on Connectmath. Complete the quiz or test by the due date. Discussion topics will be assigned through CANVAS weekly Modules.

**Important dates:** June 21st- Add/Drop/Refund deadline

June 28th- Pass/ No Pass deadline

July 4th -5th- Independence Day, No class, Campus closed.

Attendance Policy:This class is completely online (Asynchronous).

* If you fail to complete any of the task given below by June 16th, I will assume that you are not interested in this class and you will be dropped from this class.
	+ - * Syllabus Quiz
			* Introduce yourself to your class
			* update your photo on your canvas account
			* create connectmath account

Please check the CANVAS-Modules-Week-0 to complete the above task.

* If you are inactive in this class/connectmath for 5 days, you will be dropped from this class.

**Academic Honesty Policy:** Some examples of Academic Dishonesty:

* Allowing other person to do your work.
* Using devices or aids that are not allowed during the quiz/test/exam.
* Copying from another or allowing another student to copy your own paper.
* Sharing the questions or answers of the quizzes/exams with the other person.
* Submitting another person’s work as your own work.

Please do not cheat. **Violations of these rules are grounds for disciplinary actions from the Disciplinary Officer which could result in suspension and expulsion from the college, see Board Policy 5500 and Administrative Procedure 5520.**

**Special Accommodations: If you are a student with a learning or physical disability or have special needs, please let me know as soon as possible about what accommodations are needed. Also, please send me the documentation for the accommodation.**

**Title IX:** As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. Under Title IX as a member of the college community, I have the responsibility to report any instances of sexual harassment, sexual or domestic violence, and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment, sexual violence or discrimination to a confidential counseling employee who does not have this reporting responsibility, please let me know so that I can get you in contact with them. The “Confidential Employees” at Sierra College are: Elena Farrelly, Counselor, Rocklin Campus Stefanie Hopper, Counselor, Rocklin Campus Jennifer Alt, Dean of Student Services, Rocklin Campus Cheryl Axton, Counselor, Nevada County Campus Chris Old, Counselor, Tahoe Truckee Campus The District Title IX Officer at Sierra College is: Cameron Abbott, Title IX Coordinator, Rocklin Campus (916) 660-7119

**Disclaimer**: All information on the syllabus is subject to change if the instructor finds it necessary. Any changes will be announced through the canvas-announcements or e-mail. I highly recommend you set up a canvas notification for announcements and e-mails.