

# Lassen Community College Course Outline

## Math 164 Elementary Statistics Lab

0.0 Units

### I. Catalog Description

The purpose of this course is to help Math 40 students with math deficiencies which impede their successes in the course. Students will learn how to use technologies to solve problems related to course work, develop skills to solve word problems, strengthen their weaknesses related to topics in algebra and learn good study habits. This course has been approved for online, hybrid and correspondence delivery.

**Co-requisite:** Math 40 Elementary Statistics

Does not transfer to UC/CSU

51 Hours Lab

Scheduled: Fall, Spring, Summer

### II. Coding Information

Repeatability: Not Repeatable, Take 1 Time

Grading Option: Pass/No Pass

Credit Type: Non-Credit

TOP Code: 170100

### III. Course Objectives

#### A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Use technologies to solve problems related to the course work.
2. Successfully complete all assignments and lab projects.

#### B. Course Objectives

Upon completion of this course the student will be able to:

1. Read word problems with comprehension.
2. Formulate strategies and choose the right formulas in solving applied problems.
3. Solve and analyze problems for both descriptive and inferential statistics, using at least one technology.
4. Perform the necessary algebraic calculations on formulas.
5. Improve study skills and time management.
6. Graph lines and scatterplots and interpret linear equations.

### IV. Course Content

The following topics may be included; however, the order of presentation, relative emphasis and the depth of treatment will depend on the preferences of the instructor.

1. Summarize data graphically and numerically, using technology.
2. Find measurements of central tendency, using technology.
3. Complete experiments in finding sample space and probability.
4. Find probabilities, using the Binomial Distribution and technology.
5. Find probability using the Normal Distribution and technology.
6. Demonstrate the Central Limit Theorem and its applications.

7. Solve and analyze the confidence intervals for population mean, proportion and standard deviation, using technology.
8. Solve and analyze hypothesis testing problems for population mean, proportion and standard deviation, using technology.
9. Solve and analyze the difference between two means, two proportions, and two variances, using technology.
10. Solve and analyze correlation and regression problems, using technology.
11. Solve and analyze analysis of variance problems, using technology.
12. Apply statistics concepts in word problems, where students formulate strategies and choose the right formulas to solve applied problems.

## V. Assignments

### A. Appropriate Readings

Students will be required to read the Math 40 textbook chapters. Sections from Math Study Skills (optional text) may also be assigned. Additional supplemental readings supplied by the instructor may be assigned.

### B. Writing Assignments

Additional coursework may be assigned.

### C. Expected Outside Assignments

Readings in text, handouts, syllabus and other selections as assigned.

### D. Specific Assignments that Demonstrate Critical Thinking

Class discussion of concepts from the text.

Application of statistics concepts in problems where students formulate strategies and choose the right formulas in solving applied problems.

Use of technology to solve and analyze a variety of statistics problems.

## VI. Methods of Evaluation

### Traditional Classroom Evaluation

May include exercises, quizzes, and participation in class discussions and activities.

Participation in collaborative activities.

### Correspondence Evaluation

Same as face to face with the exception the exclusion of participation in classroom activities. Students will be expected to complete assignments and activities equivalent to in-class assignments and activities. To fulfill correspondence students' collaborative activity requirements, there will be additional worksheets/assignments (for students to complete individually), which mirror the collaborative activities. Written correspondence and a minimum of six opportunities for feedback will be utilized to maintain effective communication between instructor and student.

### Online Evaluation

Same as face to face with the use of discussion forums as participation in class activities.

Students are expected to complete exercises, written responses and quizzes consistent with expectations for face-to-face class.

### Hybrid Evaluation

All quizzes and exams will be administered during the in-person class time. Students will be expected to complete online assignments and activities equivalent to in class assignments and activities for the online portion of the course. Electronic communication, both synchronous and asynchronous (chat/forum) will be evaluated for participation and to maintain effective communication between instructor and students.

### Web-enhanced course Evaluation

Additional information and resources may be made available to students online. , and

students may be required to do research and complete and/or submit assignments online. Quizzes may be administered online, but exams and summative assessments must be administered face-to-face.

## VII. Methods of Delivery

Check those delivery methods for which, this course has been separately approved by the Curriculum/Academic Standards Committee.

Traditional Classroom Delivery  Correspondence Delivery

Hybrid Delivery

Online Delivery

Web-enhance course

### Traditional Classroom Course Delivery

Methods of instruction may include, but are not limited to:

Lecture, laboratory, discussion, computer assisted instruction.

### Correspondence Course Delivery

Assigned readings, instructor-generated handouts, lecture materials, exercises and assignments equal to face to face instructional delivery. Written correspondence and a minimum of six opportunities for feedback will be utilized to maintain effective communication between instructor and student.

### Online Course Delivery

Assigned readings, instructor-generated typed handouts, typed lecture materials, web links to videos or resources, and assignments equivalent to face to face instructional delivery. Student-student and teacher-student interaction and a minimum of six opportunities for feedback will be utilized to maintain effective communication between instructor and student.

### Hybrid Course Delivery

A combination of traditional classroom and online instruction will be utilized. Each semester a 34 hours will be taught face-to face by the instructor and 17 hours will be instructed online through the technology platform adopted by the District. Traditional class instruction will consist of exercises/assignments, lectures, visual aids, and practice exercises. Online delivery will consist of exercises/assignments, lecture posts, discussions, adding extra resources and other media sources as appropriate.

## VIII. Representative Texts and Supplies

### All Delivery Modalities

Required:

Triola, Mario F., *Elementary Statistics, 13<sup>th</sup> edition*, 2018, Pearson. This textbook may be purchased in a cloth/paper bound version, ISBN: 978-0-134-462-455 or in a loose-leaf version, ISBN: 978-0-134-463-063, or as an eText version, ISBN 978-0-137-324-750 all without MyLab Statistics

When a Math 164 section requires the use of MyLab Statistics, the eText and MyLab may be purchased separately or as a bundle, ISBN 978-0-135-959-732 (18 week eTxt and MyLab access) or ISBN 978-0-134-464-404 (24 month eTxt and MyLab access).

Optional:

Alan Bass, *Math Study Skills*, 1<sup>st</sup> edition, 2008, Pearson Education, ISBN: 9780321513076

**IX. Discipline/s Assignment**

Mathematics

**X. Course Status**

Current Status: New

Original Approval Date: 03/05/2019

Board Approval: 03/12/2019

Chancellor's Office Approval: 03/15/2019

Revised By: Noelle Eckley

Curriculum/Academic Standards Committee Revision Date: 04/05/2022