STEM Division

MATH 1342-48001, 3 Credit Hours
Elementary Statistical Methods
Fall - 2019

Classes are Tuesdays and Thursdays
Classes meet 11:00 a.m. to 01:50 p.m.
October 22nd – December 12th, 2019
Room C142

Instructor: Lewis Elam

Contact Information:
Office: C236 Eastfield College (Adjunct Faculty Teaching and Learning Center) - MailBox
Office Hours: by appointment only Phone: 972-391-1047 to leave message
Email Address: lewiselam@dcccd.edu
I will reply to emails within 24-48 hours during week days. Please state your name in all emails.

Course Description:
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended. (3 Lec.)

Prerequisite:
Two years of high school algebra and an appropriate assessment test score or Developmental Mathematics 0310.

Textbook and Other Course Materials:
- **Calculator:** Students are required to have access to a graphing calculator for this course. While other models may be acceptable, the TI-83 and TI-84 calculators are strongly preferred. Instructions on how to use technology to apply concepts are at the end of relevant sections under the heading “Technology Step-by-Step.”
- **MyMathLab** - Microsoft Windows 7 and 8 users should use one of the following browsers with MyMathLab courses—Chrome, Firefox or Internet Explorer 10 and 9. Click here for other system requirements.

Student Learning Outcomes:
After completing this course, the student should be able to:
1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.

Core Objectives:
MATH 1342 develops the following Core Objectives:

1. **Critical Thinking** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
2. **Communication** - to include effective development, interpretation and expression of ideas through written and visual communication.
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Core Objective Development Statements: MATH 1342 develops **Critical Thinking**, **Communication**, and **Empirical and Quantitative Skills** by requiring students to collect, analyze, present and interpret data and probability.

Grading Policy:
Student must complete homework course assignments using MyMathLab’s Course ID elam65423 when signed on to www.PearsonMyLab.com via the Internet which will count for 25% of final course grade and make satisfactory progress on the scheduled chapter assessments (tests) that will represent 50% of final course grade along with end of course (departmental final) exam that will account for 25% of final course grade respectively. Also this current semester; if student’s course participation has been productive and non-disruptive, and all assignments are completed; then lowest chapter test grade will be dropped and the remaining test grades will be averaged. This is a lecture course and attendance is expected and required.

**GRADING RATIONALE:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>A</td>
<td>90—100</td>
</tr>
<tr>
<td>B</td>
<td>80—89</td>
</tr>
<tr>
<td>C</td>
<td>70—79</td>
</tr>
<tr>
<td>D</td>
<td>60—69</td>
</tr>
<tr>
<td>F</td>
<td>BELOW 60</td>
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**FINAL EXAMINATION:** A comprehensive, departmental final examination, which will represent at least 25% of the class grade, will be administered in all statistic classes.

**POLICY ON MISSED TESTS AND ASSIGNMENTS:** If student misses a scheduled test, then the Final Exam grade may be substituted; but only one missed test is allowed. Late assignments may be docked 25% for each class it is late.

**Attendance Policy:**
You are expected to regularly attend all classes in which you are enrolled. Students have the responsibility to attend class and to consult with the instructor when an absence occurs. Class attendance will be recorded and reported as required. It is very important that punctual, regular attendance is maintained so student may be successful.
If a student is unable to complete a course (or courses) in which he/she is registered, it is the responsibility of the student to withdraw from the course by the appropriate date. (The date is published in the academic calendar each year and in each semester's class schedule). If a student does not withdraw, he/she will receive a performance grade, usually a grade of “F”.

Religious Holidays:
Absences for observance of a religious holy day are excused. Notification of the absence must be given to the instructor in writing at least two weeks prior to the date of the holy day. A student whose absence is excused to observe a religious holy day is allowed to contract with the instructor to take a make-up examination or complete an assignment within a mutually agreed upon time after the absence.

Obtaining Final Course Grades Using eConnect:
Final grade reports are no longer mailed. Convenient access is available online. Use your student identification number when you log into eConnect, an online system developed by the DCCCD to provide you with timely information regarding your college record. Your grades will also be printed on your Students Advising Report, which is available in the Admissions Office.

Drop Date:
Last date to drop with a grade of “W” is Friday, 11-29th-2019.

INSTITUTIONAL POLICY AND SERVICES:
Institutional Policies relating to this course can be accessed from the following link: https://www.eastfieldcollege.edu/au/fastfacts/legal/pages/policies-for-syllabi.aspx

ADDITIONAL RESOURCES
**Math tutoring is available in the second floor of the library (L200). Students are encouraged to take advantage of this service for additional help in their course work. Additionally, students can check-out TI – 84 calculators on a daily basis from the library.

COURSE COVERAGE:

<table>
<thead>
<tr>
<th>Sections</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1.1 – 1.6</td>
<td>Practices of statistics, Observational and experimental studies, Sampling, The design of an experiment</td>
</tr>
<tr>
<td>2.1 – 2.4</td>
<td>Qualitative and quantitative data, Time-Series data displays, Misrepresentation of data</td>
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<tr>
<td>3.1 – 3.5, 4.1 - 4.2</td>
<td>Measures of central tendency, Measures of dispersion, Grouped data, Measures of position, Outliers, Scatter Diagrams, Correlation, Regression</td>
</tr>
<tr>
<td>5.1 - 5.5</td>
<td>Probability rules, Addition and complement rules, Independence and multiplication rules, Conditional probability and the general multiplication rule, Counting techniques</td>
</tr>
<tr>
<td>8.1 – 8.2; 9.1 - 9.2 &amp; 9.4</td>
<td>Distribution of the sample mean and sample proportion, Estimating a population proportion and mean, Putting it all together</td>
</tr>
<tr>
<td>10.1 - 10.3 &amp; 10.5, 13.1</td>
<td>Language of hypothesis testing, Hypothesis testing for a population proportion and mean, Putting it all together, ANOVA</td>
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Revised: 08/11/17