Instructor: Stephen Harris
E-mail: stephen.harris@tamuc.edu
Office Hours: After class or by appointment
Office: Classroom
Classroom: UCD Wednesday nights
This course meets in downtown Dallas at UCD. You will need parking money.
Class Website: https://leo.tamuc.edu/ Choose eCollege once you login to myLeo.

Course Description:
A course dealing with statistical concepts including measures of central tendency and dispersion, probability distributions, the Central Limit Theorem, sampling, estimation, hypothesis testing, correlation and regression analysis.

Prerequisites:
Math 141, 175 or equivalent.

Textbook:
http://highered.mheducation.com/sites/0073401803/information_center_view0/index.html

Course Objectives:
The objective of this course is to provide an understanding for the undergraduate business student on statistical concepts to include measurements of location and dispersion, probability, probability distributions, sampling, estimation, hypothesis testing, regression, and correlation analysis, multiple regression and business/economic forecasting. By completing this course the student will learn to perform the following:

1) Calculate and apply measures of location and measures of dispersion.

2) Apply discrete and continuous probability distributions to various business problems.

3) Understand the meaning of a null and an alternative hypothesis as well as the meaning of Type I and Type II error. Further, to perform test of hypothesis as well as calculate confidence interval for a population parameter for a single mean, including use of the T and the Z test.

4) Compute and interpret the results of Bivariate Regression and Correlation Analysis.

5) Interpret regression results generated by a computer software.
## Rubric:

<table>
<thead>
<tr>
<th>Criteria (Course Objectives)</th>
<th>1 (Unsatisfactory)</th>
<th>2 (Emerging)</th>
<th>3 (Proficient)</th>
<th>4 (Exemplary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How to calculate and apply measures of location and measures of dispersion.</td>
<td>Student cannot calculate and apply any measures of location and measures of dispersion.</td>
<td>Student can calculate and apply some of the measures of location and measures of dispersion.</td>
<td>Student can calculate and apply most of the measures of location and measures of dispersion.</td>
<td>Student can calculate and apply all of the measures of location and measures of dispersion.</td>
</tr>
<tr>
<td>2. How to apply discrete and continuous probability distributions to various business problems.</td>
<td>Student cannot apply discrete and continuous probability distributions to any problems.</td>
<td>Student can apply discrete and continuous probability distributions to some problems.</td>
<td>Student can apply discrete and continuous probability distributions to most of the problems.</td>
<td>Student can apply discrete and continuous probability distributions to all the problems.</td>
</tr>
<tr>
<td>3. 1 Understand the Hypothesis Testing: Understand the meaning of a null and an alternative hypothesis</td>
<td>Student doesn’t understand the meaning of a null and an alternative hypothesis.</td>
<td>Student understands the meaning of a null and an alternative hypothesis.</td>
<td>Student understands the meaning of a null and an alternative hypothesis.</td>
<td>Student understands the meaning of a null and an alternative hypothesis.</td>
</tr>
<tr>
<td>3.2 Understand the meaning of type I and type II error.</td>
<td>Student doesn’t understand the meaning of type I and type II error.</td>
<td>Student understands the meaning of type I and type II error.</td>
<td>Student understands the meaning of type I and type II error.</td>
<td>Student understands the meaning of type I and type II error.</td>
</tr>
<tr>
<td>3.3 Be able to perform test of hypothesis</td>
<td>Student cannot perform test of hypothesis.</td>
<td>Student is able to perform some test of hypothesis.</td>
<td>Student is able to perform some test of hypothesis.</td>
<td>Student is able to perform some test of hypothesis.</td>
</tr>
<tr>
<td>3.4 Be able to calculate confidence interval for a population parameter for a single mean, including use of the t and the z test.</td>
<td>Student cannot calculate confidence interval for a population parameter for a single mean, including use of the t and the z test.</td>
<td>Student is able to calculate confidence interval for a population parameter for a single mean, including use of the t and the z test.</td>
<td>Student is able to calculate confidence interval for a population parameter for a single mean, including use of the t and the z test.</td>
<td>Student is able to calculate confidence interval for a population parameter for a single mean, including use of the t and the z test.</td>
</tr>
<tr>
<td>4. Compute and interpret the results of Bivariate Regression and Correlation Analysis.</td>
<td>Student cannot compute and interpret the results of Bivariate Regression and Correlation Analysis.</td>
<td>Student can compute and interpret some of the results of Bivariate Regression and Correlation Analysis.</td>
<td>Student can compute and interpret most of the results of Bivariate Regression and Correlation Analysis.</td>
<td>Student can compute and interpret all of the results of Bivariate Regression and Correlation Analysis.</td>
</tr>
<tr>
<td>5. Be able to interpret regression results generated by computer software.</td>
<td>Student cannot interpret regression results generated by a computer software.</td>
<td>Student can fairly interpret regression results generated by a computer software well</td>
<td>Student can interpret regression results generated by a computer software excellently</td>
<td>Student can interpret regression results generated by a computer software excellently</td>
</tr>
</tbody>
</table>
**Students with Disabilities:**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services  
Texas A&M University-Commerce  
Gee Library, Room 132  
Phone (903) 886-5150 or (903) 886-5835  
Fax (903) 468-8148  
StudentDisabilityServices@tamuc.edu

**Statement of Ethical and Professional Conduct:**

The College of Business and technology at Texas A&M University –Commerce faculty, staff and students will follow the highest level of ethical and professional behavior. We will strive to be recognized as a community with legal, ethical and moral principles and to teach and practice professionalism in all that we do.

In an academic environment we will endeavor to not only teach these values but also to live them in our lives and daily work. Faculty and staff will be held to the same standards and expectations as our students. Failure to abide by these principles will result in sanctions up to and including dismissal.

Please read the [Student Guidebook](#) for complete details.

**Actionable Conduct:**

These are five different types of actions that will bring sanction. They are:

1. Illegal activity: Violation of any local, state or federal laws that prohibit the offender from performance of his or her duty.

2. Dishonest conduct: Seeking or obtaining unfair advantage by stealing or receiving copies of tests or intentionally preventing others from completing their work. In addition falsifying of records to enter or complete a program will also be considered dishonest conduct.

3. Cheating: The unauthorized use of another’s work and reporting it as your own.

4. Plagiarism: Using someone else’s ideas and not giving proper credit.

5. Conclusion: Acting with others to perpetrate any of the above actions regardless of personal gain.

**Sanctions:**

In the case of staff or faculty the immediate supervisor will be the arbiter of actionable behavior and will use Texas A&M University Commerce and/or Texas A&M University System Policy and Procedures as appropriate to guide sanctions.

Faculty, guided by clearly delineated policy in the course syllabus, will be arbiter for in-class violations. All violations will be reported to the dean of the college of Business and technology to assure equity and to provide appropriate counsel. In addition, the Dean will maintain the records of violations by students.
Second violations will be reviewed by the Dean and sanctions beyond those of the faculty up to and including suspension and permanent expulsion from Texas A&M University – Commerce will be considered. Faculty and students are guided by the current undergraduate and graduate catalogs of the university as well as The Students Guidebook.

Faculty, Staff and Students will always be afforded due process and review as appropriate.

**Grading Policy:**

Evaluation of student performance will be based upon four equally weighted exams. Each exam will count 25% of the course grade. There is no comprehensive final exam. Grades for the course will be determined by achieving the following average ranges:

<table>
<thead>
<tr>
<th>Average Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>A</td>
</tr>
<tr>
<td>80-89</td>
<td>B</td>
</tr>
<tr>
<td>70-79</td>
<td>C</td>
</tr>
<tr>
<td>60-69</td>
<td>D</td>
</tr>
<tr>
<td>Below 60</td>
<td>F</td>
</tr>
</tbody>
</table>

**NOTE THE FOLLOWING:**

1. Certain topics may be stressed more or less than indicated in the text and, depending on class progress, certain topics may be omitted.

2. Homework problems will be **ASSIGNED, BUT WILL NOT BE COLLECTED OR GRADED.** Selected Problems will be solved in class during lectures. Several problems from the homework may be assigned to be solved using Excel or other software on the computer.

3. Exam schedule: You will be informed at least one week before each of the four exams.

4. Missed examination: A missed examination may be made-up during the week of final exams only if your absence is excusable. Excusable absences are defined in the current University Catalog. This make-up exam will be comprehensive.

5. Classroom Demeanor: “All students enrolled at the university shall follow tenets of common decency and acceptable behavior conducive to a positive learning environment”. See the [Student Guidebook](#).

6. Attendance Policy: This is an online course. Each week begins on Monday (except week 1) and ends on Sunday night at 11:59PM (CST). You should, at the least, login to the class website once each week. However, it is recommended you login in more often to review announcements and discussion boards. You should also check your myLeo email often.

**Computers and Internet:**

This class will utilize Microsoft Excel, Microsoft Word, and/or other statistical software for every homework and exam. You will also need access to the internet. Computer labs are available at TAMU-Commerce, Metroplex Center in Mesquite, Rockwall center, and at UCD.

**Important Dates:**

20JAN2015 to 15MAY2015: Class in Session
16-22MAR2015: Spring Break
See the Academic Calendar for more details.

http://www.tamuc.edu/admissions/registrar/academicCalendar.aspx

Class Schedule:

The schedule will depend on class progress. Chapter assignments and tests may be altered as the class progresses. Students should read chapters, do as many of the identified homework problems as possible and be familiar with the chapter summaries and the end of chapter self-examinations.

*The schedule below is tentative.

<table>
<thead>
<tr>
<th>Text Assignment</th>
<th>Topic</th>
<th>Date (Week of)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>What is Statistics?</td>
<td>20-25JAN</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Describing Data- Frequency Distribution and Graphic Presentation</td>
<td>26JAN-1FEB</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Describing Data: Numerical Measures</td>
<td>2-8FEB</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Describing Data: Displaying and Exploring Data</td>
<td>9-15FEB</td>
</tr>
<tr>
<td>Exam 1</td>
<td>Chapters 1-4</td>
<td>Due 22FEB</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>A Survey of Probability Concepts</td>
<td>23FEB-1MAR</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Discrete Probability Distributions</td>
<td>2-8MAR</td>
</tr>
<tr>
<td>Chapter 7</td>
<td>The Normal Probability Distribution</td>
<td>9-15MAR</td>
</tr>
</tbody>
</table>

Spring Break 16-22MAR

Exam 2          | Chapters 5-7                                  | Due 25MAR      |
Chapter 8       | Sampling Methods and the Central Limit Theorem | 23-29MAR       |
Chapter 9       | Estimation and Confidence Intervals            | 30MAR-5APR     |
Chapter 10      | One-Sample Tests of Hypothesis                | 6-12APR        |
Exam 3          | Chapters 8-10                                 | Due 19APR      |
Chapter 11      | Two-Sample Tests of Hypothesis                | 20-26APR       |
Chapter 13      | Linear Regression and Correlation             | 27APR-3MAY     |
Chapter 14      | Multiple Regression and Correlation Analysis  | 4-10MAY        |
Exam 4          | Chapters 11, 13, and 14                       | 11-15MAY       |

Useful Links:

eCollege is accessible after logging into MyLeo - https://leo.tamuc.edu/

Commerce Campus – computer labs

Metroplex Campus – computer lab

Rockwall Campus – computer lab

UCD Campus – computer lab