Instructor: Jaime Sanchez, Ph. D.

How to Reach: Office: Eng. Building room E201H
Phone: 747-6394
E-mail: jsanchez21@utep.edu

Office Hours: 9:00 to 10:20 am and 5:00 to 5:50 pm on Tuesday and 12 noon to 1:30 pm on Thursday or By Appointments

Class schedule Lectures 10:30:00 to 11:50 TR.

Prerequisite: Calculus I, II & III


Software: Minitab Release 14 or 15.

Assignments: Homework Problems will be assigned during class. They are due one week later after they have been assigned. Assignment will be graded. Assignments will not be accepted after due date and solution to the problems must be hand written. When computer outputs are needed the conclusions must be hand written.

Class Attendance: Attendance will have impact on the class participation portion of your grade. Only in case of emergency, missing a class is acceptable.

Exams: There will be three exams during the semester and a final, as well as two pop quizzes. Exam dates will be announced in class.

Reading Students will be responsible for doing the reading assignments. Quizzes will be mostly from reading assignments.

Class Content: Data summary and Presentation.
Probability, Random Variables and Distributions.
Hypotheses Testing for One and Two Samples
Simple Linear Regression
Chapters 1 through 6.

Grading scheme:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>First Exam</td>
<td>20%</td>
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<tr>
<td>Second Exam</td>
<td>25%</td>
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<tr>
<td>Third Exam</td>
<td>30%</td>
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<tr>
<td>Quizzes + Attendance</td>
<td>5%</td>
</tr>
<tr>
<td>Assignments</td>
<td>20%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
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Final Exam (optional) to improve the overall grade

Plagiarism: Plagiarism or cheating will not be tolerated, anyone caught cheating will receive a failing grade for the class.

Accessibility: If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu.
Topics to be covered

The Following sections are the taken from the Textbook “Engineering Statistics, Fifth Edition by Douglas C. Montgomery, George C. Runger and Norma F. Hubele. Sections not listed below will not be studied in the course.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
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</table>
| 1    | 1. Summarizing and Presenting Data  
1.1. Collecting Engineering Data  
1.2. Stem-and-Leaf Diagram |
| 2    | 1.3. Histograms  
1.4. Box Plot |
| 3    | 1.5. Scatter Plot  
1.6. Correlation  
Quiz 1 |
| 4    | 2. Probability  
2.1. Introduction  
Exam 1 |
| 5    | 2.2 Basic Rules |
| 6    | 2.2. Conditional Probability  
2.3. Random Variables |
| 7    | 3. Commonly Used Distributions  
3.1. The Normal Distribution  
3.2. Probability Plots |
| 8    | 3.3. The Lognormal Distribution  
3.4. The Binomial Distribution |
| 9    | 3.5. The Poisson Distribution  
3.6. The Exponential Distribution |
<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
</tr>
</thead>
</table>
| 10   | 3.7. The Central Limit Theorem  
Exam 2 |
| 11   | 4. **Hypothesis Tests for a Single Sample**  
4.1. Point Estimation  
4.2. Hypothesis t Testing  
4.3. Inference on the Mean of a Population, Variance Known  
Quiz 2 |
| 12   | 4.4. Inference on the Mean of a Population, Variance Unknown  
4.5. Inference on the Variance of a Population  
4.6. Inference on the Population Proportion |
| 13   | 5. **Inference for Two Samples**  
5.1. Inference on the Means of a Two Population, Variances Known  
5.2. Inference on the Means of a Two Population, Variances Unknown |
| 14   | 5.3. Inference on the Difference Between Two Proportions  
5.4. Inference Using Paired data |
| 15   | 6. **Inference In Linear Models**  
6.1. Simple Linear Regression  
6.2. Inference Using the Least-Square Coefficients  
6.3. Checking Assumptions  
Exam 3 |
| 16   | Final exam |