Instructor: Dr. Huy V. Nguyen
Office: Math House 214
Office Hours: MoWe 1:30pm-4:30pm, TuThu 3:30-4:30. Others by email appointment.
E-mail: nguyenhv2@sthom.edu

Class Meeting Time: TuTh 9:35AM - 10:50AM in O’Rourke 106.


Calculator: Any scientific calculator would suffice. However, you must show enough work. Answers without the proper supporting details will not receive full credit. Cellphone/calculator apps are NOT allowed.

Course Objectives:

- Introduce definitions of statistical terms, types of data, techniques for describing and analyzing data, methods of estimation, testing hypotheses and modeling data.
- Improve critical thinking and problem-solving skills by focusing on applying statistical techniques and concepts learned to visualize, analyze, and understand data from practical real-world problems.
- Practice using common computer softwares (Microsoft Excel, Google Sheet, Numbers...) for basic statistical calculations and data management.

Course Structure:

**Homework**
Graded out of 10 points. Design to give the students an opportunity to practice fundamental skills and problem-solving skills. Due every Tuesday at the beginning of class. Each turn-in has 2 portions:
- (8 points) Problems from the textbook. These will be assigned as we cover each section in the textbook.
- (2 points) 1-2 questions created by the instructor. These will be posted on Blackboard every Thursday by 5pm, along with which sections you need to turn in.

**Quizzes**
Graded out of 10 points. Will be given every Thursday at the end of class to see how well the students have learned the new materials since the previous Quiz. Each Quiz includes 2-4 problems that are very similar to the problems from the Homework.

**Report**
Graded out of 100 points. Due on the last day of class. Can be done individually or by teams of 2-4. Each student or team must collect/research a set of data, then type up a complete, detailed, and well-written 3-5 page Report using methods covered from this course to organize, summarize, graph, analyze, and clearly explain what conclusions they could draw from the data set. Each student/team is required to turn in a one-paragraph Summary of the Report which includes the name(s) of the member(s) of the team and a brief description of main report.

**Exams (2 total)**
Graded out of 100 points each. The problems on the Exams are very similar to those on the Homework and the Quizzes.

**Final Exam**
Graded out of 100 points. Comprehensive. Given at the end of the semester to give the students a chance to demonstrate the skills and knowledge they have obtained throughout the semester. The problems on the Final Exam are very similar to those on the Homework, Quizzes, and Exams.
Make-ups
No make-ups allowed. If you are late, you will not receive extra time. Any exceptions, university and/or emergency-related situations will be handled on a case-by-case basis. If you missed an exam or the final, you must contact the instructor within 24 hours.

Grading
Your grade will be calculated based on the following percentages:

- Homework: 10%
- Quizzes: 10%
- Report: 20%
- Exams (2): 40% (20% each)
- Final Exam: 20%

Your letter grades will be determined based on the following scale:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>92.5–100</td>
<td>A</td>
</tr>
<tr>
<td>86.5–89.4</td>
<td>B+</td>
</tr>
<tr>
<td>79.5–82.4</td>
<td>B–</td>
</tr>
<tr>
<td>72.5–76.4</td>
<td>C</td>
</tr>
<tr>
<td>66.5–69.4</td>
<td>D+</td>
</tr>
<tr>
<td>0–59.4</td>
<td>F</td>
</tr>
</tbody>
</table>

Blackboard
Blackboard will be our main platform of communication. Here you will find your grades, announcements, and any course documents. To access Blackboard, go to https://blackboard.stthom.edu/. The login credentials are your Celt username and password.

Important Dates
- Sep 6 – Last day to drop the course without academic penalty.
- Oct 6 – Exam 1.
- Oct 18 – Turn in a one-paragraph Summary of the Report.
- Nov 4 – Last day to drop the course and receive W (Withdraw)
- Nov 17 – Exam 2.
- Dec 1 – Deadline for turning in the Reports. (Can be turned in earlier during the semester)
- FINAL EXAM – THURSDAY, DEC 8 FROM 8:00AM–10:30AM – IN CLASS.

Attendance Policy
You must attend lectures in order to perform well in any math class. The official attendance policy of UST will be strictly enforced. Attendance will be taken every class and will be reported to the Office of the Registrar.

Classroom Conduct Policy
- No disruptive behaviors. Technologies are allowed as long as they are not distracting or interfering with another student’s learning.
- Be kind and respectful to each other.

Academic Integrity Policy
The official Academic Integrity Policy of UST will be strictly enforced.

Need help? Talk to me. Come by my office hours or email me to schedule an appointment if you have any question and/or concern. Any student with a disability requiring accommodations in this course is encouraged to contact Counseling and Disability Services in Crooker Center. Their offices can be reached at (713) 525-6953 or 2169.

HAVE A SUCCESSFUL SEMESTER! #GoCELTS
Course Outline

1. Introduction to Statistics
   1.1 Review and Preview
   1.2 Statistical and Critical Thinking
   1.3 Types of Data
   1.4 Collecting Sample Data

2. Summarizing and Graphing
   2.1 Review and Preview
   2.2 Frequency Distributions
   2.3 Histograms
   2.4 Graphs

   3.1 Review and Preview
   3.2 Measures of Center
   3.3 Measures of Variation
   3.4 Measures of Relative Standing and Boxplots

4. Probability
   4.1 Review and Preview
   4.2 Basic Concepts of Probability

5. Discrete Probability Distribution
   5.1 Review and Preview
   5.2 Probability Distributions
   5.3 Binomial Probability Distributions
   5.4 Parameters for Binomial Distributions

6. Normal Probability Distribution
   6.1 Review and Preview
   6.2 The Standard Normal Distribution
   6.3 Applications of Normal Distributions
   6.4 Sampling Distributions and Estimators
   6.5 Central Limit Theorem

7. Estimates and Sample Sizes
   7.1 Review and Preview
   7.2 Estimating a Population Proportion
   7.3 Estimating a Population Mean
   7.4 Estimating a Population Standard Deviation or Variance

8. Hypothesis Testing
   8.1 Review and Preview
   8.2 Basics of Hypothesis Testing
   8.3 Testing a Claim About a Proportion
   8.4 Testing a Claim About a Mean
   8.5 Testing a Claim About a Standard Deviation or Variance

9. Inferences from Two Samples
   9.1 Review and Preview
   9.2 Two Proportions
   9.3 Two Means: Independent Samples
   9.4 Two Means: Dependent Samples
   9.5 Two Variances or Standard Deviations

10. Correlation and Regression
    10.1 Review and Preview
    10.2 Correlation
    10.3 Regression