Course Outline/Syllabus for STAT 1342, Statistical Decision Making
Fall 2019

Class location and times:
Mondays & Wednesdays, 8:30am – 9:45am | GR 3.302| Monday August 19 to Thursday December 05

Instructor information:
Mohammad **Shaha** A. Patwary | Office: FN 3.118A | Email: Mohammad.Patwary@utdallas.edu
Please include STAT 1342.001 (in the subject line) in every email you send to me.
Office Hours: M & W 3:00pm – 4:00pm

Course prerequisites:
College Algebra (MATH 1306 or MATH 1314 or equivalent)

Course Description:
Principles of quantitative decision making: summarizing data, modeling uncertainty, loss functions, probability, conditional probability, random variables. Introduction to statistics: estimation, confidence intervals, hypothesis testing, regression.

Student Learning Outcomes/Objectives:
This course will give students a working knowledge of the ideas and tools of practical statistics. Students will develop the following skills:

- Graphical presentation of data (histograms, stem and leaf display, scatter plots)
- Explanation of numerical summaries (mean, median, variance, standard deviation, correlation, regression)
- Basics in probability theory (probability rules, independence and conditional probability, discrete distributions, continuous distributions and density functions, random variables and their expected values)
- Sampling distributions of various statistics with application of statistical inferences based on descriptive statistics
- Statistical inferences (hypothesis testing, confidence intervals)

Required Materials:
Textbook: *Understanding Basic Statistics*, C.H. Brase and C.P. Brase, Seventh Edition.

Scientific Calculator: A scientific calculator is permitted on quizzes and exams. No other devices (e.g., smartphones, graphing calculators, laptop, tabs) are permitted.

Homework:

Homework will be posted through eLearning/Blackboard. Print it out, complete the problems, and submit it in class. Homework is only accepted in class at the due date and time. **Note that you are the grader for your own homework!** Homework keys will be posted on eLearning/Blackboard at 5pm the day before due date. Write your score on back of your submitted homework. Please staple your homework. Homework will be returned after uploading score on eLearning/Blackboard. The lowest score will be dropped.

Quizzes:

Five quizzes will be given and each of them at the end of a class. Quizzes and contents of quizzes will be notified in class. The lowest score will be dropped. There will be no make-ups unless the circumstances are extraordinary and well documented as well.

Quiz 1- Sep 04; Quiz 2- Sep 25; Quiz 3- Oct 23; Quiz 4- Nov 13; Quiz 5- Nov 20: Wednesdays

Exams:

There will be 3 exams. You can bring hand-written notes for exams. Details will be given in class. There will be no make-ups unless the circumstances are extraordinary and well documented as well.

Grading:

Weights:

10% Homework average

15% Quiz average

25% Exam I

25% Exam II

25% Exam III

Scales:

A+: 97-100, A: 93-96.99, A-: 90-92.99

B+: 87-89.99, B: 83-86.99, B-: 80-82.99

C+: 77-79.99, C: 73-76.99, C-: 70-72.99

D+: 67-69.99, D: 63-66.99, D-: 60-62.99

F: 0-59.99

Assignment and grade policies:

- Two sudden/surprise quizzes will be given for extra credit. This will contribute 1% in your final grade.
- Attendance will be collected, and extra credit will be given for attendance higher than 80%. This will contribute 1% in your final grade.
- No Final exam.
- No Late submission of HW.

Classroom policies:

- Attendance is strongly recommended to understand better the topics in this course.
- If you choose not to attend class, it is your responsibility to drop the course.
- Put away and silence all mobile devices (smartphones, laptops, tabs etc.) during class.
- Avoid leaving class early or coming in late.
- Participation in class is desired: avoid side conversations and instead raise your hand to speak.
- Solve homework questions by your own/group. I strongly encourage group work. This will help you to learn and understand in an engaging way and to prepare for exams.

Tentative Fall 2018 Topics:

Topics and exams	Chapters
Getting Started	1
Organizing Data	2
Averages and Variation	3
Correlation and Regression	4
Elementary Probability Theory	5
Exam I (October 02, Wednesday in Class)	***Chapter 1 to Chapter 5***
The Binomial Distribution	6
Normal Curves and Sampling Distribution	7
Estimation	8
Exam II (November 04, Monday in Class)	***Chapter 6 to Chapter 8***
Hypothesis Testing	9
Inferences about Differences	10
Introduction to Statistical Computing Package R	R is freely available online
Exam III (December 04, Wednesday in Class)	***Chapter 9 to Chapter 10***

No Classes on:

September 02, Monday – Labor Day
November 25, Monday & November 27, Wednesday – Fall Break

University Closings:
Thanksgiving holidays ..... Thurs. Nov. 28 – Sun. Dec. 1

UT Dallas Syllabus Policies and Procedures:

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The contents, descriptions, and timelines contained in this syllabus are subject to change at the discretion of the Instructor.