STAT 1342.001 Statistical Decision Making (3 Semester Credit Hours)
Spring 2021 Syllabus

Class Information				
Class Section	***Class Room***	***Course Platform***	***Days/ Time***	***Instructional Mode***
STAT 1342.001	SLC 1.102	Microsoft Teams	MW 8:30am-09:45am	Traditional

Instructor Information	
Instructor: Dr. Ajaya Paudel	***E-mail:*** ajaya.paudel@utdallas.edu
Office: FO 3.611	***Phone:*** 972-883-6589
Office Hours: TR 10.15 am-11.15 am & by appointment.	***Office Hours Platform:*** MS Teams

Course Modalities and Expectations:	
Instructional Mode	Traditional
Course Platform	Microsoft Teams will be used to live-stream the lectures for the students who are enrolled in this traditional mode but choose to learn remotely.
Expectations	For remote/virtual synchronous learning, students must download Microsoft Teams and log in using UTD log in credentials.
Asynchronous Learning Guidelines	I will post the recording of the lectures (with caption) and/or other relevant materials on elearning for the asynchronous learning option.

General Course Information	
Pre-requisite	MATH 1306, 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.
Learning Outcomes	This course will give students a working knowledge of the ideas and tools of practical statistics. Students will develop the skills: **(i)** Graphical presentation of data histograms, stem and leaf display, scatter plots for regression data.**(ii)** Explanation of numerical summaries (such as mean, median, variance and standard deviation, correlation and regression summaries).**(iii)** Basics in Probability Theory (probability rules, independence and conditional distributions, continuous distributions and density functions, random variables, and their expected values, and other moments). **(iv)** Sampling distributions of various statistics with application of statistical inferences based on descriptive statistics. **(v)** Statistical Inferences (hypothesis testing and confidence intervals).
Recommended Texts	The textbook is *Understanding Basic Statistics, 6th Edition,ISBN 13: 978-1-111-82702-1 / ISBN 10: 1-111-82702-8, C. H. Brase and C. P. Brase.* Its 7th edition is also okay. Additional source of reading is *Fundamentals of Statistical Thinking: Tools and Applications, 1st Edition, ISBN:9781516511631, Yuly Koshevnik.* This book is now available for purchase in both print and digital formats through the student e-commerce store (https://students.universityreaders.com/store/).
Required Supplies	(i) Regular access to a printer. (ii) Regular access to a stapler.
e-Learning	Log on regularly at `https://elearning.utdallas.edu` and go to the eLearning page of STAT 1342.001. Under this course on elearning: exams will be assigned, a grade book will be maintained, and other important announcements will be posted. You will also access the Homework Assignments and Quizzes through this course on eLearning.
UTD E-mail	Your official UTD E-mail address will be used to send you important course information.
Calculators	A scientific calculator and Tables 2-5 from the book are required. All electronic devices are NOT permitted in class or during exams.
Additional Resources	The UTD Math Lab: (http://www.utdallas.edu/studentsuccess/mathlab/)

Honorlock:

This course will use `Honorlock` – an online exam proctoring tool. To successfully take an exam, you must have a web camera with microphone, a laptop or desktop computer (no tablets/phones), Chrome browser, a reliable internet connection and your photo ID. You will be prompted to install the Honorlock Chrome Extension (which you can remove after you finish the test). You will then access the exam within your eLearning course and go through the authentication process. The web camera will monitor you throughout your test. Please see the `Testing Guidelines` and `Support Information` for additional information."

Course Policy & Grading Scheme:	
Homework (15%)	There will be 7 homework assignments. Each unattempted homework gets a 0 grade. 2 lowest homework grades will be dropped. An average score taken over your 6 best homework scores in a 100-point scale contributes 15% into overall grade. A pdf file of the homework will be posted on eLearning. You can print the pdf of the homework, and write your solutions in the space provided. If printer is not available, write the solutions on separate sheets of paper. Be sure to write your name, and lecture section number clearly. **Scan your homework solution as a single pdf and upload it on elearning via eLearning assignment function on or before 8.00 PM of the due date**. A homework solution received after the deadline will get a zero. You must show all of your work to earn full credit. Correct answers without sufficient supporting work will receive no or reduced credit. **Note:** Only a subset of assigned problems will be graded. You will not be told in advance which ones.
Quizzes (10%)	There will be 7 quizzes. Each unattempted quiz gets a 0 grade. 2 lowest quiz grades will be dropped. An average score taken over 6 best quiz scores in a 100-point scale contributes 15% into overall grade. A pdf file of the quiz will be posted in the course home page of the e-Learning of STAT1342.001 at **7:15 PM** of those Fridays on which a quiz will be assigned. You can print the pdf of the quiz, and write your solutions in the space provided. If printer is not available, write the solutions on separate sheets of paper. Write your name, and lecture section number clearly. Scan your quiz solution as a single pdf and upload it on elearning through the eLearning Assignment function **on or before 8.00 PM**. A quiz solution received after the deadline will get a zero. You must show all of your work to earn full credit. Correct answers without sufficient supporting work will receive no or reduced credit. For the training purpose, the quiz preceding Exam I (see below) will be offered using Honorlock.
Exams (75%)	There will be 3 exams. Each unattempted exam gets a 0 grade. Each exam grade is presented in a 100-point scale. Each exam contributes 25% into your overall grade. Exam information will be posted on the course home page of the e-Learning of STAT 1342.001 tentatively one week before each exam.
Attendance	Although there is no extra credit for attendance, you are expected to attend the class and be active during each session. It is entirely your responsibility to catch up with the course material that you missed and then use instructor's office hours to clarify the topics covered in class.
Grade Scale	**[0,60): F** **[60,63): D-** | **[70,73): C-** | **[80,83): B-** | **[90,93): A-** **[63,67): D** | **[73,77): C** | **[83,87: B)** | **[93,97): A** **[67,70): D+** | **[77,80): C+** | **[87,90): B+** | **[97,100]: A+**

Important Dates

- Tuesday, January 19, 2021: Classes begin
- Wednesday, February 3, 2021: Last Day to Drop a class without a "W"
- ***Exam I: Friday 7:00-9:00 pm, March 5th, 2021; Location: Online***
- Spring Break: Monday, March 15 - Sunday, March 21, 2021- No classes.
- Monday, April 5: Withdrawal period ends.
- ***Exam II: Friday 7:00-9:00 pm, April 9th, 2021; Location: Online***
- ***Exam III: Friday 7:00-9:00 pm, May 7th, 2021; Location: Online***
- **Last Day of classes** - Saturday, May 8th.

Tentative Weekly Schedule and Homework Due Information:			
Week	Chapter: Topic	Monday (Homework due)	Wednesday (Quiz on Friday)
1	1: Getting Started	**Jan. 18: No class**	Jan. 20: Syllabus, Section 1.1
2	2: Organizing Data 3: Averages and Variation	Jan. 25: Section 2.1, 2.2	Jan. 27: Section 2.3, 3.1
3	3: Averages and Variation 4: Correlation and Regression	Feb. 1: Section 3.2, 3.3 **Homework 1** *Due: 8 PM*	Feb. 3: Section 3.3, 4.1 **Quiz 1** *7.15 PM-8 PM, Fri.*
4	4: Correlation and Regression 5: Elementary Probability Theory	Feb. 8: Section 4.1, 4.2 **Homework 2** *Due: 8 PM*	Feb. 10: Section 4.2, 5.1 **Quiz 2** *7.15 PM-8 PM, Fri.*
5	**No classes because of snow**		
6	5: Elementary Probability Theory	Feb. 22: Section 5.1, 5.2	Feb. 24: Section 5.2, 5.3
7	6: Binomial Distribution Exam 1 Review, Exam 1	Mar. 1: Section 6.1, 6.2 **Homework 3** *Due: 8 PM*	Mar. 3: Exam Review *Mar. 5, Fri.,7 PM:***Exam 1**
8	6, 7: Normal Distribution	Mar. 8: Section 6.2, 6.3	Mar. 10: Section 7.1, 7.2, 7.3 **Quiz 3** *7.15 PM-8 PM, Fri.*
9	**Spring Break (March 15- March 21)**		
10	7: Normal Distribution	Mar. 22: Sections 7.3, 7.4, 7.5 **Homework 4** *Due: 8 PM*	Mar. 24: Section 7.5, 7.6 **Quiz 4** *7.15 PM-8 PM, Fri.*
11	8: Estimation	Mar. 29: Sections 8.1, 8.2	Mar. 31: Section 8.2, 8.3
12	9: Hypothesis Testing Exam 2 Review, Exam 2	Apr. 5: Section 9.1 **Homework 5** *Due: 8 PM*	Apr. 7: Exam Review *Apr. 9, Fri., 7 PM:***Exam 2**
13	9: Hypothesis Testing	Apr. 12: Section 9.2	Apr. 14: Section 9.3 **Quiz 5** *7.15 PM-8 PM, Fri.*
14	10: Inferences about Differences	Apr. 19: Section 10.1, 10.2 **Homework 6** *Due: 8 PM*	Apr. 21: Section 10.2 **Quiz 6** *7.15 PM-8 PM, Fri.*
15	10: Inferences about Differences	Apr. 26: Section 10.3 **Homework 7** *Due: 8 PM*	Apr. 28: Section 10.3 **Quiz 7** *7.15 PM-8 PM, Fri.*
16	Exam 3 Review, Exam 3	May 3: Exam Review	May 5: Exam Review *May 7, Fri., 7 PM:***Exam 3**

Notes:

1. **Scanning and Uploading:** In order to submit a homework, quiz, or exam, you must print the pdf, write your solution on the space provided; scan and save your solutions as single pdf file; and upload it on elearning. You can look at the video at `https://www.youtube.com/watch?v=arcHpX6zH5Y&amp=&t=18s` to get an information about uploading your scanned pdf files on elearning. If you want to use a touch screen device, you can download the exam pdf, write the solutions without printing it, and upload it as single pdf. If you do not have a printer or touch screen device, you can write the solutions on blank sheets of paper, scan all pages, and upload as single pdf. Write solution to only question on one sheet of paper. When scanning, maintain the order of the questions. Do not upload "zip files" or cell phone pictures. If you do not have a scanner, you can download scanning apps such as: Cam Scanner or Office Lens
2. **Late/Missed Coursework:** There is no make-up for late or missed quizzes/exams, unless extreme circumstances with proper documentation accepted by the instructor.
3. **UT Dallas Syllabus Policies and Procedures:** Go to `http://go.utdallas.edu/syllabus-policies` to find information that constitutes university's syllabus policies and procedures segment of this syllabus.
4. The contents in this syllabus are subject to change at the discretion of the professor.