

Summer July B 2019 COURSE SYLLABUS

STAT 2331

Introduction to Statistical Methods

July 23- Aug 06 :1.00p.m. – 5.00p.m.

INSTRUCTOR: Dr. Mahesh Nilanka Fernando

E-MAIL: mfernando@smu.edu

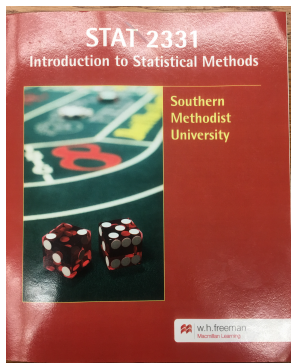
OFFICE: Heroy 308

OFFICE HOURS: After the class (5.00p.m.-6.00p.m) or by appointment!

TA's:

TBA

TEXT: Required



ISBN: 9781319151133

Course Description

Introduction to Statistical Methods introduces you to basic statistical concepts and techniques needed for collecting, analyzing, and interpreting quantitative information. The overall theme of the course is the proper use of data to make decisions or to interpret the results of studies.

Emphasis in the course is on using graphical and numerical statistical methods to convey and interpret quantitative information that is of importance to you either in your education or in your intended employment after graduation. No previous knowledge of statistics is required for this course.

Student Learning Outcomes

STAT 2331 is a Quantitative Foundations Course, designed to help you achieve the following learning objectives:

1. Students will be able to solve problems using algebraic, geometric, calculus, *statistical*, and/or *computational methods*.
2. Students will be able to interpret and/or draw inferences from mathematical models, *data*, *graphs*, or *formulas*.

All lecture notes are available on **Canvas** at the university web site <http://canvas.smu.edu>. The lecture notes are cross-referenced with the textbook to facilitate the integration of the textbook and the lecture notes. If it is helpful to you, download the lecture notes ahead of class so that you can write any comments that you feel are important directly on the lecture notes.

Graphing Calculator:

You must have a calculator for use on assignments and exams. TI-84 or similar (TI- 83 plus or TI- 84 plus calculator) is recommending for this course. It is your responsibility to bring your calculator to classes and all on-campus exams. Students may **NOT SHARE** calculators during exams. Cell phones, iPads, etc. will not be permitted as calculators nor will they be allowed to be visible during examinations.

GRADING POLICY:

Attendance & Quizzes	5%
HW	15%
2 Exams	25% each
Final Exam	30%

Attendance & Quizzes

Attendance to all lectures is mandatory. You are expected to be on time at every class meeting, so do not schedule anything else during class time. Attending class sessions is crucial to your understanding of Statistics. There will be no make up exams, quizzes or class assignments for students who are absent. In the event of an absence, you are responsible for all material covered and announcements made during class. Each absence or late arrival will result in a deduction in the Class Participation Grade (5%). **Also, early departure will also count as an absence even if the student took the quiz.** The reason is that (aside from missing valuable information) arriving late or leaving early is very distracting to others in the class.

Excused Absences: Absences for official school activities are excused with prior approval from the instructor. Any other excused absence may be granted after the student provides a doctor's note with address and phone number. All notes and documentation should be turned in to me in paper form. Aside from Emergencies, an initial email **MUST** be emailed **BEFORE** the absence. For sickness, notes and documents can of course be emailed after the missed class; but be sure and provide the initial email before class unless it is an emergency.

COURSE WORK

This course requires at least 2 hours per day of your time outside of class. Of course, it may take some students considerably more time to be successful in this class. Students who can't schedule at least 2 hours per day outside of class, are advised not to enroll.

HOMEWORK

Homework assignments are given solely to enhance your understanding of the course material. They also provide quick feedback to me about the class's mastery of the topics covered. No hw may be turned in late. There are no make-ups for missed hw. Lowest will be dropped.

You are permitted to give and to receive help on assignments so long as the work turned in has been completed by you. I encourage you to get help on assignments if you are having any difficulty with the material. If you simply copy someone else's work, no learning takes place and you will seriously jeopardize your ability to succeed on the major examinations.

In order to be successful in this class and to truly understand the material (which is our ultimate goal!) , **In order to master this material, YOU MUST work on and practice each skill outside of class.** I will also provide you with the full solutions to each of inclass worksheets so that you can check your solution and work yourself closer to understanding. The strategy I have found that works best is to attempt these problems on your own first and then to check your answer afterwards. If you have found a mistake, you should then rework the problem until you can solve it without looking at the solution.

EXAMS

There will be two tests during the term and one *comprehensive* final examination. The two regular examinations will be held on the dates listed in the syllabus. Barring unforeseen circumstances, these dates are firm. These examinations are not comprehensive but the subjects covered in each of the blocks of instruction that precede the exams often build on previous material. Practice exams are available on Canvas.

You are permitted to bring a calculator and one 3" x 5" note card to each of the exams (written on two sides). The note cards are intended as an aid in organizing your preparation for the exams. The note card must have your name on it and it must be written in your own handwriting (the Honor Code applies here). You may be required to turn the index card in with the completed exam. The index card will be returned. For the final examination, you may bring one 8 ½ x 11" sheet of paper, written on one side only, so long as it is your handwriting and prepared by you.

Make-up exams will NOT be given. If you have to miss an exam, we will simply let the Final Exam count for that grade as well (Making the final exam worth 55%).

No exam grades will be dropped. **In the calculation of the course grade, if class attendance is acceptable(1 OR LESS) and the final exam grade is higher than the lowest midterm exam grade, the final exam grade will be used both for the final exam grade and for the lowest of the other three exam grades.**

The SMU Honor Code will be strictly enforced. Students caught giving or receiving unauthorized help on examinations will either be given a course grade of F or taken before the Honor Council, depending on the nature and circumstances of the violation.

TIPS FOR SUCCESS:

- Come to class and be there on time!
- Review and print out the powerpoint slides before class. Put them in a folder and build a book!
- Listen attentively to the lectures, take careful notes and ask questions.
- Establish a daily routine for working on course materials

- Spend at least 2 hours per day studying outside of class.
- Get a free tutor - the ALEC Sunday - Friday, call 214-768-3648 for more details.
- Find a person or group to study with!
- Keep a positive attitude
- Effective communication with the instructor and fellow classmates is also important in helping you succeed COME TO OFFICE HOURS!

The amount of information presented in this class can be overwhelming. Follow these tips and you will increase your chances of succeeding and earning the grade you desire / need.

Accommodations for Students with Disabilities

Students needing academic accommodations for a disability must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities, at 214.768.4557 to verify the disability and establish eligibility for accommodations. They should then schedule an appointment with the instructor to make appropriate arrangements.

Religious Observances

Religiously observant students wishing to be absent on holidays that require missing class should notify the instructor in writing at the beginning of the semester and should discuss, in advance, acceptable ways of making up any work missed because of the absence.

Important and Serious: ACADEMIC INTEGRITY.

Cheating and plagiarism (using as one's own ideas, writings or materials of someone else without acknowledgement or permission) can result in any one of a variety of sanctions. Such penalties may range from an adjusted grade on the particular exam, paper, project, or assignment to **a failing grade in the course**. The instructor may also summarily suspend the student for the class meeting when the infraction occurs, as well as the following class meeting. For further clarification and information on these issues, please consult with your instructor or contact the office of the Assistant Dean of Student Affairs.

CHEATING is the copying of any test or quiz question or problem, or work done in a class that is not the student's own work. It also includes giving or receiving unauthorized assistance during an examination whether it was intentional or not. Obtaining or distributing unauthorized information about an exam before it is given is also cheating, as is using inappropriate or unallowable sources of information during an exam. To avoid unintentional copying of work, students should cover their own exams and quizzes, and not leave a test or quiz on the desk where another student may be tempted to look at it.

CLASSROOM BEHAVIOR:

At all times a student's conduct and language is expected to be respectful of others. Any student who decides to disrupt the class or hinder the progress of any other student will be asked to leave. Conduct that distracts from the learning process includes but is not limited to talking, **ringing cell phones**, arriving late to class, leaving class early, reading magazines or newspapers, sleeping and eating. Disruptive behavior will be dealt with in the following manner; first offense results in a verbal warning, second offense results in a one day expulsion from the class. Each expulsion will count as ONE absence.

Remember that YOU are in charge of your education, so take responsibility and learn the material as best you can. If you have a question, ask it. If you don't understand something, say

this, **I expect you to be patient and respectful of others who are asking questions in an effort to do well.** Make sure your cell phone is turned off when class begins.

ASSIGNING GRADES:

[93 – 100%]	A	[77 – 80%)	C+
[90 – 93%)	A-	[73 – 77%)	C
[87 – 90%)	B+	[70 – 73%)	C-
[83 – 87%)	B	[60 – 70%)	D
[80 – 83%)	B-	BELOW 60%	F

IMPORTANT DATES:

July 26 – Exam 1

Aug 01 – Exam 2

Aug 06 – 2.00pm – 5.00pm: Final Exam

Schedule of Course Activities

Days	
July 23	Lec 01 (Chapter 01: Data, graphs, describing distributions, Density curves and Normal distributions)
July 24	Lec 02 (Chapter 01: Normal probability calculations, backward calculations)
July 25	Lec 03 (Chapter 02 : Scatterplots, correlation, simple linear regression)
July 26	Exam 1/ Lec 04 (Chapter 03 : Sampling designs)
July 29	Lec 05 (Chapter 03: Designs of experiments) (Chapter 04:Probability models, Means and Variances of Random variables)
July 30	Lec 06 (Chapter 04 : General probability rules) (Chapter 05: Sampling distributions)
July 31	Lec 07 (Chapter 06 : Z interval and Z test)
Aug 01	Exam 02 / Lec 08 (Chapter 07: T interval, T test)
Aug 02	Lec 09 (Chapter 08- 1 prop Z interval and test)
Aug 05	Lec 10 (Two sample hypothesis Tests)/ Final review
Aug06	Final exam