

Syllabus For Statistics 2301

Professor: Jing Cao

Office hours: Tuesday 2:00 – 4:00 pm

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Other times by appointment

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Course Objectives:

- Enable you to understand and explain quantitative information using graphs, tables, and summary statistics (e.g., means, proportions, standard deviations) and to create such displays using Microsoft Excel.
- Enable you to apply the basic principles of statistical sampling and critique the validity of observed samples.
- Enable you to validly calculate probabilities for some key probability distributions (e.g., normal distribution).
- Enable you to understand and explain the critical concept of variability in data and summary statistics.
- Enable you to calculate, correctly use, and correctly interpret inferential statistics for means and proportions.

REQUIRED TEXT: The Practice of Statistics for Business and Economics (Third Edition). New York: W.H Freedman.

GRADING:

Item	% of Final Grade	Comments
Midterm Exam	45	15% each = 45%
Homework	10	2 lowest scores dropped
In-class Quiz	15	2 lowest scores dropped
Final Exam	30	It is cumulative.

Lecture	Lecture Topic & Associated Text Sections
1	Introduction To STAT2301
2	Displaying Data with Graphs (Section 1.1)
3	Describing the Center of a Distribution (Section 1.2)
4	Describing the Spread of a Distribution (Section 1.2 cont'd)
5	The Normal Distributions (Section 1.3)
6	More on the Normal Distributions (Section 1.3)
7	Scatterplots and Correlation (Sections 2.1 and 2.2)
8	Least Squares Regression (Sections 2.3)
9	Cautions about Regression (Section 2.4)
EXAM 1 – EXAMS GIVEN IN LECTURE SECTIONS (Lectures 1 – 9)	
10	Designing Samples, Part I (Section 3.1)
11	Designing Samples, Part II (Section 3.1)
12	Toward Statistical Inference (Section 3.2)
13	Randomness and Probability Models (Sections 4.1 & 4.2)
14	Random Variables (Section 4.3)
15	Central Limit Theorem (Sections 4.4)
EXAM 2 – EXAMS GIVEN IN LECTURE SECTIONS (Lectures 10 – 15)	
16	General Probability Rules (Section 5.1)
17	General Probability Rules (Section 5.1 cont'd)
18	Conditional Probability (Section 5.4)
19	Estimating with Confidence (Section 6.1)
20	Estimating with Confidence (Section 6.1 cont'd)
21	Tests of Significance (Section 6.2)
22	Tests of Significance (Section 6.2 cont'd)
EXAM 3 – EXAMS GIVEN IN LECTURE SECTIONS (Lectures 16 – 22)	
23	Multiple Regression (Section 11.1)
24	Review for Final

IN-CLASS QUIZ will NOT be announced ahead of time.

NO MAKE-UP will be given for exams, in-class quizzes, homework.

NO LATE WORK WILL BE ACCEPTED.

ALL COURSE-RELATED MATERIALS ARE/WILL BE AVAILABLE ONLINE! GO Blackboard at [https:// courses.smu.edu/](https://courses.smu.edu/), where you can view, download and print lecture notes, homework/reading handouts and solution keys, you can also check your grades! **Please print out the lecture notes before each lecture and bring it to class.**

You should be assigned a new Blackboard account if you have enrolled in this course and you don't have one. Your **user name** should be your **8-digit SMU ID** and your **initial password** should be your 'access.smu' password. Please contact me as soon as possible if you cannot access your account or in your account you cannot find a link to STAT 2301 course web pages.

Grading:

Your 2 lowest quiz grades and 2 lowest homework grades will be dropped before computing your term grade. These "drops" are to protect you from excusable absences that sometimes occur during the semester. Examples of excusable absences are university sponsored activities (e.g., athletic events), religious observances, illness requiring a doctor's care, or death in the family. You should SAVE the documentation for ALL EXCUSED ABSENCES in case you exceed the absence limit. If you miss an assignment, you are still responsible for all material covered on that assignment or exam. If you must miss a class due to religious observance, athletics or some other university sponsored activity, all assignments due on that day, including exams, must be turned in or made-up BEFORE the missed class period. **If you have a personal problem that affects your performance in class, it is up to you to notify Dr. Cao with supporting document so that she can accommodate it before it's too late. After the final grade is determined, there will be NO change in your grade.**

Exams:

There will be 3 midterm exams and a comprehensive final. **Dr. Cao will provide the formula sheet. The students are NOT allowed to bring extra notes.** On the final exam you will be responsible for all material covered during the course. **No exam can be dropped.** Please note that **no make-up exams** will be given based on a student's plan to travel out of town. Students are only permitted to take the final exam early if they can demonstrate that they have three exams scheduled for the same day and that no other exam has been changed. You need to bring your photo ID to all the exams.

Quizzes:

The syllabus indicates the material that should be read before each class period. At the beginning of the lectures, you will be given a short quiz over the reading assignment. The schedule of the quizzes will be not be announced ahead of time. The quizzes will be based on your understanding of terms and main concepts. **There will be no make-up quizzes. This includes quizzes missed because of being late to class. Also, you will receive a zero score for the quiz if you leave before the class ends.**

Homework:

The purpose of homework assignments is to help you learn the course material. Assigned homework problems are shown on Blackboard. Problems are assigned weekly. These problems will not be taken up. However, you will complete a homework summary "quiz" on line that is based on the assigned problems, and your homework score for the course will be determined by these quizzes. The quiz must be time stamped by the due date and time. Blackboard will not accept late homework. A computer network that is down in the last few hours before the homework is due is not an adequate reason for a late homework, nor is a malfunctioning computer, unless the entire SMU or Blackboard system is down for a full 24 hours before the homework is due. You are expected to complete and submit every homework assignment, unless you have an extended illness or other excusable absence, for which you must present written documentation. If you miss two homework assignments due to an excusable absence, you are not required to have your documentation checked, and your grade will not be penalized. If you miss more than two homework exercise due to an excusable absence, you will need to turn in your documentation FOR ALL THE ABSENCES in order not to be penalized. Thus, you should SAVE the documentation for ALL EXCUSED ABSENCES in case you exceed the two omission limit. (If you have a university sponsored trip, the homework should be submitted before you leave.) You should feel free to work together on the assigned problems. Just remember that in order for the homework to do its job (teach you something), you should understand it. A substantial fraction of test questions will be modeled on homework items.

*All the scores will be updated on the Blackboard. If your score is not updated, you need to talk to your TA **within ONE weeks**. Otherwise, the score will NOT be redeemed.*

If you add the course after the beginning of the semester, you are responsible for making up any work that you have missed!

Calculator:

It is recommended that you bring a calculator to class with you each day. An expensive calculator is not necessary; the only requirement is that it be able to do basic mathematical functions.

Guidelines for Using E-mail:

Please put "Statistics 2301" in the subject line of your message. I am in the habit of deleting e-mails without reading them from addresses that I do not recognize. Placing the correct title in the subject line will prevent me from deleting your e-mail. Also, please allow me 48 hours to respond to your request.

Classroom Environment

SMU Student Code of Conduct 2.09: Students will, at all times and in all activities, respect the rights of others, maintain responsible behavior conducive to the teaching and learning environment, and uphold the integrity of the University both on and off campus.

We should maintain a proper academic learning environment in the classroom. Toward that end, here are some rules.

- ALL cell phones are to be turned OFF and put away. We don't want to hear any phones going off and interrupting the class.
- Remain seated. Do not walk around. Go to the bathroom before or after class.
- Do not read newspapers or other stuff during class. This is quite rude to everyone else.

- Don't yak with your neighbors. This bothers everybody else. Save the chatter for after class.
- Do not eat during the class. This particularly means crunchy snacks or other noisy food.

For a student who has **disruptive behaviors** in class, we will **fail his quiz, remove him from the classroom and inform his advisor**. In the worst case (e.g., talking in class repeatedly), we will **drop him from the course** or let him **fail automatically**.

Disability Accommodations:

Students needing academic accommodations for a disability must first contact Ms. Rebecca Marin, Coordinator, Services for Students with Disabilities (214-768-4557) to verify the disability and establish eligibility for accommodations. They should then schedule an appointment with the professor to make appropriate arrangements. (See University Policy No. 2.4.)

Religious Observance:

Religiously observant students wishing to be absent on holidays that require missing class should notify their professors in writing at the beginning of the semester, and should discuss with them, in advance, acceptable ways of making up any work missed because of the absence. (See University Policy No. 1.9.)

Excused Absences for University Extracurricular Activities:

Students participating in an officially sanctioned, scheduled University extracurricular activity should be given the opportunity to make up class assignments or other graded assignments missed as a result of their participation. It is the responsibility of the student to make arrangements with the instructor prior to any missed scheduled examination or other missed assignment for making up the work. (University Undergraduate Catalogue)