

Statistical Methods – MATH 2300 (Summer II 2012)

Instructor: Indika Wijayasinghe

Course and Section: MATH 2300 Section 203

Time: M-F 12:00pm – 1:50pm

Room: HOLDEN 152

Office: MA 301

Email: indika.wijayasinghe@ttu.edu

Office Hours: M-F 2:00pm – 3:00pm

Or by appointment

Main Math Office: MA 201

Math Office Phone: 742-2566

Prerequisites: 4 on MPE, 610 on SATM, 26 on ACTM, or C in a college level math.

Text Book: *Statistics: The Art of Learning from Data*, (2nd ed.), by Agresti & Franklin, Pearson/Prentice Hall, 2009

Learning Outcomes: M2300 satisfies the university core curriculum requirement in Mathematics: “*Students graduating from Texas Tech University should be able to demonstrate the ability to apply quantitative and logical skills to solve problems.*” It meets the TTU general education student learning outcomes for mathematics that students will:

- Apply arithmetic, algebraic, geometric, statistical and logical reasoning to solve problems.
- Represent and evaluate basic mathematical and/or logical information numerically, graphically, and symbolically.
- Interpret mathematical and/or logical models such as formulas, graphs, tables and schematics, and draw inference from them.

The students will learn the meanings of, and computational procedures related to, the elementary statistical concepts used by the general population in decision making. In particular

- Develop proficiency in solving real-world problems
- Compute various statistical measures, including the mean, median, mode, standard deviation, variance, and quartiles
- Utilize graphical representations of data
- Solve problems involving the binomial and normal distributions
- Apply the Central Limit Theorem
- Compute and interpret confidence intervals
- Conduct and interpret hypothesis tests
- Use linear regression models

Course Outline:

Chapter 1 – 1.1-1.3

Chapter 2 – 2.1-2.6

Chapter 3 – 3.1-3.4

Chapter 5 – 5.1-5.4

Chapter 6 – 6.1-6.3

Chapter 7 – 7.1-7.3

Chapter 8 – 8.1-8.3

Chapter 9 – 9.1-9.4

Chapter 10 – 10.1-10.4

Methods for Assessment of the Learning Outcomes: The expected learning outcomes for this course will be assessed through one or more activities such as exams, in class practice problems, quizzes, class discussion, board work, homework assignments, and other optional activities deemed appropriate by the instructor. It is important to note that all of these assessments are for your learning benefits but NOT all of them will affect your grade.

Important Dates: There will be two In Class Exams and the Final Exam. The Final Exam will be comprehensive.

July 13	Last day for student-initiated drop (without penalty)
July 18	In class exam 1
July 25	In class exam 2
July 30	Last day for student-initiated drop (with penalty)
August 1	In class exam 3
August 8	Last day of classes
August 9	Final Exam (Time: 8:00am-10:30am Location: HOLDEN 128)

Grading and Scale: Your course grade will be determined by the average of your grades on homework, in class exams, and the comprehensive departmental final exam. They will be weighted as follows:

In Class Exam 1	15
In Class Exam 2	15
In Class Exam 3	15
Homework	30
Final Exam	25
Total	100

Percentage	Grade
90 - 100	A
80 – 89.9	B
70 – 79.9	C
60 – 69.9	D
59.9 and below	F

Quizzes and Homework: Homework will be assigned for each chapter.

Attendance: Class attendance is extremely important to success in this course. Roll will be taken at class meetings. Student with less than 3 missed classes for the entire semester will receive 3 points for the cumulative score.

Missed Work: If you miss a class, it is your responsibility to find out what you missed (assignments, notes, etc); you may do so by asking a fellow student, or stopping by during the office hours.

Make-up Exams: No makeup exams will be given unless you have made specific arrangements with me beforehand or appropriate documentation for an absence is provided.

Absence due to Religious Observance: The Texas Tech University Catalog states that a student shall be excused from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

Absence due to Officially Approved Trips: Department chairpersons, directors, or others responsible for a student representing the university on officially approved trips should notify the student’s instructors of the departure and return schedules in advance of the trip. The instructor so notified must not penalize the student, although the student is responsible for material missed. Students absent because of university business must be given the same privileges as other students (e.g., if other students are given the choice of dropping one of four tests, then students with excused absences must be given the same privilege).

Illness and Death Notification: The Center for Campus Life is responsible for notifying the campus community of student illnesses, immediate family deaths and/or student death. Generally, in cases of student illness or immediate family deaths, the notification to the appropriate campus community members occur when a student is absent from class for four (4) consecutive days with appropriate verification. It is always the student’s responsibility for missed class assignments and/or course work during their absence. The student is encouraged to contact the faculty member immediately regarding the absences and to provide verification afterwards. The

notification from the Center for Campus Life does not excuse a student from class, assignments, and/or any other course requirements. The notification is provided as a courtesy.

Academic Integrity: It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and a high standard of integrity. The attempt of students to present as their own any work that they have not honestly performed is regarded by the faculty and administration as a serious offense and renders the offenders liable to serious consequences, possibly suspension.

“Scholastic dishonesty” includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

“Cheating” includes, but is not limited to, the following:

1. Copying from another student’s test paper.
2. Using materials during a test that have not been authorized by the person giving the test.
3. Failing to comply with instructions given by the person administering the test.
4. Possessing materials during a test that are not authorized by the person giving the test, such as class notes or specifically designed “crib notes.” The presence of textbooks constitutes a violation only if they have been specifically prohibited by the person administering the test.
5. Using, buying, stealing, transporting, or soliciting in whole or part the contents of an unadministered test, test key, homework solution, or computer program.
6. Collaborating with or seeking aid or receiving assistance from another student or individual during a test or in conjunction with an assignment without authority.
7. Discussing the contents of an examination with another student who will take the examination.
8. Divulging the contents of an examination, for the purpose of preserving questions for use by another, when the instructor has designated that the examination is not to be removed from the examination room or not to be returned to or kept by the student.
9. Substituting for another person, or permitting another person to substitute for oneself to take a course, a test, or any course related assignment.
10. Paying or offering money or other valuable thing to, or coercing another person to obtain an unadministered test, test key, homework solution, or computer program, or information about an unadministered test, test key, homework solution, or computer program.
11. Falsifying research data, laboratory reports, and/or other academic work offered for credit.
12. Taking, keeping, misplacing, or damaging the property of the university, or of another, if the student knows or reasonably should know that an unfair academic advantage would be gained by such conduct.

“Plagiarism” includes, but is not limited to, the appropriation of, buying, receiving as a gift, or obtaining by any means material that is attributable in whole or in part to another source, including words, ideas, illustrations, structure, computer code, other expression and media, and presenting that material as one’s own academic work being offered for credit. Any student who fails to give credit for quotations or for an essentially identical expression of material taken from books, encyclopedias, magazines, Internet documents, reference works or from the themes, reports, or other writings of a fellow student is guilty of plagiarism.

“Collusion” includes, but is not limited to, the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any section of the rules on scholastic dishonesty.

“Falsifying academic records” includes, but is not limited to, altering or assisting in the altering of any official record of the university, and/or submitting false information or omitting requested information that is required for or related to any academic record of the university. Academic records include, but are not limited to, applications for admission, the awarding of a degree, grade reports, test papers, registration materials, grade change forms,

and reporting forms used by the Office of the Registrar. A former student who engages in such conduct is subject to a bar against readmission, revocation of a degree, and withdrawal of a diploma.

“Misrepresenting facts” to the university or an agent of the university includes, but is not limited to, providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual; or providing false or misleading information in an effort to injure another student academically or financially.

Civility in the Classroom: It is my hope that everyone behaves in a civil manner leading to an atmosphere that is conducive to learning. Talking while I am lecturing or am ready to start class is not acceptable. Neither is abusive language or behavior towards me or any classmates. Please turn your cell phones off, or at the very least turn them to their vibrate only setting (and even then, only in situations where you are expecting a very important call; e.g. your mother is calling to update you on your grandfather’s surgery). If you need to leave in the middle of class, please do so quietly and without fanfare.

ADA Accommodation: Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor’s office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office at 335 West Hall or (806) 742-2405.

Electronic Devices in Tests: Calculators are allowed during the exams. However, any kind of a device that can communicate with another device is forbidden.

Disclaimer: This syllabus provides a general plan; deviations may be necessary.