

STA 5362: 3 credit hours

SPRING 2018

THEORY AND APPLICATIONS OF PROBABILITY AND STATISTICS II

Class Meeting Times:

LDB 205: Tuesday, Thursday 9:30-10:50 A.M.

Instructor:

Dr. Ferry Butar Butar, LDB 439 C, Phone 294-1596.

Email: butar@shsu.edu

Homepage: http://www.shsu.edu/~mth_fbb

Office Hour: LDB 439 C

Mon, Wed 1:00-2:00 p.m.

Tue, Thurs 11:00 a.m -12:00 p.m., 1:00 - 2:00 p.m. or by appointment.

Text:

Casella, G. and Berger, R.L. (2002). *Statistical Inference*, 2nd ed. Duxbury.

Prerequisite:

STAT/MATH 5361 (Probability and Statistics I)

COURSE OUTLINE:

We will cover chapter 5 - 9.

COURSE DESCRIPTION:

This course introduces the theory of statistics in master level and its applications. It covers the standard foundational topics in mathematical statistics and is the second course of a two semester sequence. Topics include statistical sampling distributions, method of moment, maximum likelihood estimation, sufficient statistics, complete statistics, mean square error, best unbiased estimators, point and interval estimations i.e., pivotal quantity, testing hypothesis, most powerful test, Neymann-Pearson lemma, uniformly most powerful test and likelihood ratio test. Students also will study how to generate random sample, simulation techniques using Monte Carlo.

APPROACH:

Lectures on new concepts and applications.

Assigned problems for experience and familiarities with techniques.

Classroom discussions

Examinations to demonstrate understanding and ability to utilize methods.

GRADING POLICY:

During the semester there will be home works, quiz, three in-class exams and a cumulative final exam.

Item	Total point	Date
Quiz	50	Every two weeks
Home Works	100	Every week
Exam 1	100	Thu, Feb 8
Exam 2	100	Tue, March 6
Exam 3	100	Thu, April 5
Exam 4	150	Tue, May1

Your final course will be determined by your cumulative score out of a maximum possible of 600. There is no set formula used to determine the letter grade for the course, but the following are some guidelines,

Total point	Grade
540 – 600	A
480 – 539	B
420 – 479	C
360 – 419	D
≤ 359	F

ACADEMIC HONESTY:

All work that is handed in for evaluation is to reflect solely your individual performance. Cheating will not be tolerated. A violation will result a grade of F for the semester.

Attendance policy:

Class attendance is a requirement of this course. Regular attendance will indicate the amount of interest and effort a student is willing to exert in learning. It is generally the borderline student for whom absences can be of vital importance.

STUDENT ABSENCES ON RELIGIOUS HOLY DAYS POLICY:

Section 51.911(b) of the Texas Education Code requires that an institution of higher education excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence.

University policy 861001 provides the procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first fifteen days of the semester or the first seven days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

STUDENTS WITH DISABILITIES POLICY:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and

achievement opportunities are not impaired. SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see: <http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

Classroom Rules of Conduct:

Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. **Cellular telephones and pagers** must be turned off before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

Visitors in the Classroom:

Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.

This policy is not intended to discourage the occasional visiting of classes by responsible persons. Obviously, however, the visiting of a particular class should be occasional and not regular, and it should in no way constitute interference with registered members of the class or the educational process.