

MATH 5312: Mathematical Statistics I

Fall 2016

Course Information

- Instructor: Jonghyun Yun
- Office Telephone Number: (817) 272-3261
- Email Address: "jonghyun" dot "yun" at-sign "uta" dot "edu"
- Course Webpage: TBA
- Office Hours: PKH 446, Tu/Thu 1:30-2:30 pm or by appointment
- Section Information: MATH 5312: Mathematical Statistics I
- Time and Place of Class Meetings: PKH 302, Tu/Thu 11:00-12:20 pm
- Prerequisite: MATH 5307 or concurrent registration or consent of instructor.
- Required Textbooks
 - Hogg, R. V., McKean, J. W. and Craig, A. T. *Introduction to Mathematical Statistics*. 7th Edition. Boston: Pearson, 2013. ISBN-10: 0-321-79543-1, ISBN-13: 978-0-321-79543-4
 - Other Recommended Textbooks and Resources
 - * Marden J. I. *Mathematical Statistics Old School*. 2012. <http://www.istics.net/pdfs/mathstat.pdf>

Course Content

This course is a calculus-based introduction to the concepts of mathematical statistics. The course covers the basic theoretical tools of statistics, with main focus on topics including but not limited to: Probability, conditional probability, random variables, transformation of random variables, distribution and density functions, joint and conditional distributions, various families of discrete and continuous distributions, moment generating functions (MGF), MGF technique for sums, convergence in probability, convergence in distribution, central limit theorem.

Student Learning Outcomes

Goals for this course include developing critical thinking skills, and the abilities to apply techniques of calculus (i.e., derivatives, integration, etc.) to understand basic concepts in probability and foundations of statistical inference.

Important dates

- 9/12/16: Census date
- 11/2/16: Last day to drop classes; submit requests to advisor prior to 4:00 pm

Grading

The usual grading scale will be used for this course.

A	B	C	D	F
100-90	89-80	79-70	69-60	below 60

Grade Distribution

- 25% Homework Assignments
- 50% Midterm Exams
- 25% Final Exam

Homework

Homework will be assigned weekly on the course webpage. Homework must be printed out and submitted in class. The instructors will not be able to print out e-mailed assignment submissions. Late coursework will not be accepted without a university approved excuse. It is imperative that you show all your work; simply stating an answer will result in no credit for the problem. You are encouraged to work with each other on the homework problems, but you must turn in your own work.

Exams

Three midterm exams (1h 20m) will be held at the regular class time. The final exam schedule is determined by the university. Exams will be closed book, open calculators. Calculators may not be shared on exams. Cell phone calculators are not permitted on exams. A single page (on US letter size paper), hand-written cheat-sheet is permitted for each exam. Make-up exams will only be given in rare cases. Students are expected to take exams at the scheduled times.

Midterm 1	Midterm 2	Midterm 3	Final
9/22/16	10/20/16	11/22/16	12/13/16

Lecture Attendance

At the University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I strongly encourage you to attend all lectures. You are responsible for any and all announcements made in class. You are also responsible for any material missed during class.

Drop Policy

Students may drop or swap (adding and dropping a class concurrently) classes through selfservice in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically

dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/aao/fao/>).

Academic Integrity

Students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents' Rule 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Americans with Disabilities Act

UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

- Office for Students with Disabilities (OSD): <http://www.uta.edu/disability> or (817) 272-3364.
- Counseling and Psychological Services (CAPS): <http://www.uta.edu/caps> or (817) 272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at <http://www.uta.edu/disability> or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX

The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit <http://www.uta.edu/titleix/>.

Electronic Communication

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey

At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures

Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

Student Support Services

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at (817) 272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/resources>.