Math 501: Mathematical Foundations of Actuarial Analysis

-Spring 2019-

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Office hours: M,W: 11:30am-12:20pm, T,Th: 8:30-10:20am, or by appointment

Textbook: We will primarily use material from the following text:


Calculator: You will need access to a Texas Instruments TI-30Xa Calculator.

Course Goals: This course covers standard topics in probability and statistics as they relate to problems in actuarial science. We will cover basic counting, discrete probability, Baye's theorem, random variables, discrete and continuous distributions, variance and covariance, sampling, and normal distributions. This course is meant to prepare students for the Probability exam (Exam P/1) offered by the Society of Actuaries (SOA) and the Casualty Actuarial Society (CAS).

Evaluation: We will have regular homework assignments throughout the course as well as semi-regular short in-class quizzes (30% combined), two in-class midterms (40%), and a final exam (30%) (to be held on Friday, May 17, 11:50 – 1:40 pm). The final exam will be cumulative. It must be taken in order to receive a grade A-D. The content and date of the midterms and homework will be announced as we progress.

Information and Resources: Exam P is offered on a regular basis as a “Computer Based Test” (CBT) through the SOA. Currently, it costs $225 to register for a given testing window. Be advised that you will need to study additionally above-and-beyond this course alone. That said, it is possible to do that concurrently and pass Exam P directly after our class in the May window. If you want to do this, the deadline to register is April 3rd. Below are websites with more information about Exam P and the actuarial sciences:

- Casualty Actuarial Society -- www.casact.org/admissions/studytools/exam1/
- BeAnActuary -- www.beanactuary.org

\[1\] The TI-30Xa along with the TI-30X IIS, TI-30X IIB, TI-30XS MultiView, and TI-30XS MultiView are allowed on Exam P by the SOA and have all the features that we need. If you plan to take Exam P, pick one of these to not have to locate another calculator for the exam! You are free to use a different calculator for our course (e.g. a graphing calculator); however, you may not use a cellphone on any in-class evaluations.
Important Dates:

- January 22—first day of classes
- **Friday, February 22**—Exam 1 (Tentative)
- March 11-15—Spring Break
- **Friday, April 12**—Exam 2 (Tentative)
- May 10—Last day of classes
- **Friday, May 17, 11:50-1:40PM**, Final exam

Preparing your Homework

- Please always write legibly and present your solutions in an organized way.
- Please put your solutions in the exact order of problems in which they were assigned.
- For full credit, show your work in detail.

Statement Regarding Academic Honesty

Kansas State University has an Honor System based on personal integrity, which is presumed to be sufficient assurance that, in academic matters, one's work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor System. The policies and procedures of the Honor System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. The honor system website can be reached via the following URL: [www.k-state.edu/honor](http://www.k-state.edu/honor). A component vital to the Honor System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work." A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

Statement Regarding Students with Disabilities

Students with disabilities who need classroom accommodations, access to technology, or information about emergency building/campus evacuation processes should contact the Student Access Center and/or their instructor. Services are available to students with a wide range of disabilities including, but not limited to, physical disabilities, medical conditions, learning disabilities, attention deficit disorder, depression, and anxiety. If you are a student enrolled in campus/online courses through the Manhattan or Olathe campuses, contact the Student Access Center at accesscenter@k-state.edu, 785-532-6441; for Salina campus, contact Academic and Career Advising Center at acac@kstate.edu, 785-826-2649.

Expectations of Classroom Conduct

All student activities in the University, including this course, are governed by the Student Judicial Conduct Code as outlined in the Student Governing Association By Laws, Article V, Section 3, number 2. Students who engage in behavior that disrupts the learning environment may be asked to leave the class.