

Math/Stat 170: Introduction to Actuarial Science

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Web <http://www.math.purdue.edu/~rcp/MA170/MathStat170.html>

Office Hours: MATH 822, Tu, Tr, 12:15-1:30

General Information

The notes for the Interest Theory portion of the class are on the website.

Calculators

On tests, you may only use one of the following calculators. Either one of the last two are particularly recommended.

TI-30Xa

TI-30XIIS

TI-30XIIB

TI-30XS MultiView

TI-30XB MultiView

These are all made by Texas Instruments. None are financial calculators. The proctor will check your calculator before the exam. If you don't have an approved calculator, and cannot borrow one, you will be required to take the exam without a calculator. **If you are found using an unapproved calculator during an exam, you will get a zero for the exam.**

Many of the problems in this class can be solved simply with a financial calculator. In this class, you will always be expected to solve the problems using the formulas, not using a financial calculator. On both homework and exams you will be required to "show work" which means writing down the formulas being used as you use them.

Procedures

There will be frequent homework, a midterm test, and a final exam.

For homework and tests, answers are expected to include all the work necessary to do the problem.

Homework

14%

Exams

52% (2@26 % each)

Lab Projects 26% (3% each except for Lab 6 which is 6%)
Attendance: Required at all talks 7% (1% each)

All work in this class must be your own. You may discuss the homework or labs with a classmate, but you must complete the work independently. **Copying any portion of someone else's homework or lab, no matter how small the portion, or allowing any portion of your work to be copied, is considered cheating and will result in an automatic zero on the assignment for all parties involved. Repeated instance of cheating may result in more severe penalties.**

Academic Adjustments

In this mathematics course accommodations are managed between the instructor, student and DRC Testing Center.

Students should see instructors outside class hours before or after class or during office hours to share your Accommodation Memorandum for the current semester and discuss your accommodations as soon as possible.

Course Outline

While this outline tries to be complete and accurate, there **will** be changes in the schedule of the course; these will be announced in class and on the web. The meetings highlighted in **yellow** are in the indicated room. Those highlighted in **red** are required attendance.

Date	Topic
8/23	What is an actuary?, Richard Penney, Co-Director Actuarial Science Program
8/25	Interest Theory WTHR 160 , Assignment #1 due
8/30	Interest Theory , Assignment #2 due
9/1	Lab 1: Mortality Table, Assignment: Begin Lab 1 BEFORE Lab Class
9/6	Interest Theory, Assignment #3 due
9/8	Interest Theory WTHR 160 , Assignment #4 due
9/13	Interest Theory, Assignment #5 due
9/15	Lab 2: PU Life Profit Begin Lab 2 BEFORE Lab Class
9/20	Interest Theory , Assignment #6 due
9/22	Adam Michalek, WTHR 160 Swiss-Re (Talk 1)
9/27	Interest Theory, Assignment #7 due
9/29	Lab 3: Pricing an Annuity Interest Theory Begin Lab 3 BEFORE Lab Class
10/4	Kristen Schaffer, Humana (Talk 2) SMTH 118
10/6	Lab 4: Pricing: Term Begin Lab 4 BEFORE Lab Class
10/11	No Class – FALL BREAK
10/13	Robert Astleford, WTHR 160 State Farm (Talk 3)
10/18	(Exam Review)
10/20	Midterm exam, During Lab Time: Bring an approved calculator!
10/25	Intro to Lab 6 Jeff Beckley (Talk 4a)
10/27	Lab 6: (WTHR 160)
11/1	Lab 6: (Conclusion) Life Insurance Pricing (Talk 4b)
11/3	Principles of Insurance – Chapter 1 WTHR 160 , Assignment #8 due
11/8	Ann Jackson, Milleman (Talk 5)
11/10	Lab 5: Macros Begin Lab 5 BEFORE Lab Class
11/15	Ken Fikes, The Infinite Actuary (Talk 6)
11/17	Lab 7: Claim Reserves Begin Lab 7 BEFORE Lab Class but AFTER Ken Fike's talk.
11/22	Principles of Insurance – Chapter 2, Assignment #9 due
11/24	Thanksgiving
11/29	Rate Making and Loss Reserving – Chapter 2, Assignment #10 due
12/1	Lab 8: Probability Begin Lab 8 BEFORE Lab Class
12/6	Rate Making and Loss Reserving – Chapter 2, Assignment #11 due
12/8	Review for Final WTHR 160, Assignment #12 due
12/14	Final: BRNG 2280, Bring an approved calculator!