

ACTUARIAL SCIENCE 650
ACTUARIAL MATHEMATICS 1
FALL, 2002

INSTRUCTOR: E. W. (Jed) Frees, 5274A Grainger Hall, 262-0429
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OFFICE HOURS: M 2:30 - 3:30 p.m., W 12:45-2:00 pm and by appointment

I am in my office more frequently than these hours might suggest. Please feel free to visit in the afternoons whenever you find me in the office. I urge you to make an appointment to see me if you have something important to discuss and you find these times inconvenient.

REQUIRED READINGS:

Actuarial Mathematics, Bowers, Gerber, Hickman, Jones and Nesbitt, Second Edition, Society of Actuaries, 1997.

Errata: <http://www.soa.org/eande/actmath.html>.

BUSINESS SCHOOL LIBRARY RESERVE:

Prior year exams.

IMPORTANT DATES:

Item	Date	% Grade
Midterm #1	Sept 20	10
Midterm #2	Oct 11	20
Midterm #3	Nov 1	20
Midterm #4	Nov 22	20
Final	Dec 16 (2:25 pm)	20

(Quizzes and Participation account for the remaining 10% of the Grade.)

COURSE PHILOSOPHY

The exams (described below) will be based on problems. Most of the course will be geared to helping you work through the problems. The lecture will be devoted to explaining the key concepts of the material and working illustrative examples. You will work problems for the Quizzes and Participation (described below). You will also have a lot of sample problems to work through (see Course Web page).

EXAMINATIONS

The examinations are not cumulative, although there is some overlap in coverage from exam to exam. I will announce the examination topics one week before the examination. All examinations will be closed book, closed notes, with the exception that you are allowed two (2) 8-1/2" x 11" sheets (both sides) of notes. I expect everyone to have a small electronic calculator, having at least one memory and capable of taking a logarithm, exponential and square roots, for use in all exams.

QUIZZES

Quiz on most Fridays except for examination weeks. I will give no make-ups for the quizzes. The quizzes account for 10% of the course grade.

Each weekly (Friday) quiz will consist of one problem taken directly from the homework or text examples assigned during the previous week with at most some numbers changed. I will give you the quiz during the first ten minutes of class. I will drop the lowest two quiz scores.

ATTENDANCE

I encourage you to attend class and to be on time; I want you in my class.

PARTICIPATION

Each person will have to present one or more problems throughout the course of the semester. This will be on Mondays and Wednesdays, at the beginning of the lecture. I will assign the problems; you make the solution available to everyone (handout). Then, at the beginning of lecture, you explain your solution.

COURSE WEB PAGE

The course web page will primarily point you to lots of problems that you will be working. Quiz problems will be primarily from the text (unless I find some really good ones that I want everyone to see). Examinations from last year (that Professor Rosenberg taught) are on reserve as are the exams from the last time I taught the course in Fall of 1993 (I'm amazed I still have them). Also there are links as well as sample professional exams from the Society of Actuaries and Casualty Actuarial Society.

GRADING

The following scale gives the lowest grade you can earn:

93-100	A
88-92+	AB
83-87+	B
78-82+	BC
70-77+	C
60-69+	D
0-59+	F.

CLASS SCHEDULE

Number of 50 minute Lectures	Reference and Topic	Topic Items
1	Overview	Overview
9	Chapter 3 – Survival Distributions and Life Tables	Survival functions, life tables, assumptions for fractional ages
7	Chapter 4 – Life Insurance	Endowment and varying benefit insurance, time of payment of benefit
7	Chapter 5 – Life Annuities (5.1-5.4)	Continuous, discrete and <i>m</i> thly annuities
6	Chapter 6 – Benefit Premiums (6.1-6.4)	Continuous, discrete and <i>m</i> thly premiums
9	Chapter 7 – Benefit Reserves (7.1-7.6)	Continuous, discrete and <i>m</i> thly reserves
39	Total	