

**Math 416B Spring 2008**  
**Actuarial Problems III**

**Instructor:** Dr. Kathy Temple

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**Office Hours:** MWThF 2-2:50 PM, and by appointment.

**Course Goals:** First, to study and review the probability and mathematical statistics topics that are important in actuarial science. Second, to discuss and present efficient ways of solving probability problems that will appear on Exam 1/P of the SOA/CAS.

**Prerequisite:** Math 411A or permission. I will also assume that everyone has taken Math 411B.

**Required Text:** Samuel A. Broverman, *ACTEX Study Manual for SOA Exam P/CAS Exam 1*, 2007 Edition, ACTEX Publications.

**Chapters Covered:** Practice exams 1-7.

**Evaluation:**

- At-home practice exams (40%)
- In-class quizzes, every Wednesday (see below) (40%)
- Class participation (20%)

**Calculator:** A calculator suitable for use on Exam 1/P is required. I recommend the TI-30XII (S or B depending on whether you want solar or battery power).

**Class Format:** A schedule for what practice exams are due what week is below. In general, on Mondays we will talk about the practice exam due that day and the previous week's quiz, along with any special topics I/we decide should be covered. Wednesdays will be devoted to 8-question 'mini' practice exams. Note that you will be expected to put in substantial out-of-class time for this course; however, the course will finish before the end of the quarter.

**At-home practice exams:** You should take the practice exams in the study manual under timed conditions - choose a 3-hour block of time and a location where you can work uninterrupted. Do what you can in the three hours, then grade your solutions (e.g. count how many you got right). For those problems you got wrong or couldn't do in the time allowed, make sure you mark them clearly so you know to come back to them. You should re-work any problems you got wrong and go back to any problems you didn't get done when you are not under time pressure and make sure you know how to do them. This whole process will take a substantial amount of time - consider yourself forewarned! On Mondays, we will go over problems from these exams that you found particularly difficult - but be aware that my doing a problem at the board is no substitute for sitting down and doing it yourself! You should keep your work for these exams in a binder or notebook. I will check off their existence on Monday after class and will have them to return to you during 411.

**In-class quizzes:** These will follow the same format as last quarter. See 'Class Format' for more information.

**Miscellaneous:**

- I encourage you to form study groups; however, do remember that eventually you will have to be able to solve these problems on your own.
- I reserve the right to adjust or modify this syllabus during the course of the quarter. If you have feedback about the structure of the course, please let me know.

**Tentative Schedule:**

March 26: Introduction and stock-taking

March 31: Practice exam 1 due

April 2: In-class quiz 1

April 7: Practice exam 2 due

April 9: In-class quiz 2

April 14: Practice exam 3 due

April 16: In-class quiz 3

April 21: Practice exam 4 due

April 23: In-class quiz 4

April 28: Practice exam 5 due

April 30: In-class quiz 5

May 5: Practice exam 6 due

May 7: In-class quiz 6

May 12: Practice exam 7 due. Note: I encourage you to work this sometime earlier in the week, so that the weekend is free for final review.

May 13 - 19: Exam P window