

Spring 2013

9:00 – 9:50 TT Bouillon 101

**Instructor:** Dr. Cen-Tsong Lin**Office:** Bouillon 108B, Tel: 963-2842, E-mail: [ctl@cwu.edu](mailto:ctl@cwu.edu)**Office Hours:** 11:00 – 11:50 Monday – Friday

**Course Goals:** Helping actuarial science students studying and pass exam FM/2. We will review the interest theory and financial economics topics that are important in actuarial science and study efficient ways of solving problems that might appear on Exam FM/2 which is administrated by Preliminary Actuarial Examinations/SOA.

**Prerequisite:** Math 418B, I assume students are concurrently enrolled in Math 418C

**Required Text:** Matthew J. Hassett, Michael I. Ratliff, Toni C. Garcia, Amy C. Steeby, *ACTEX FM/2 Study Manual, February 2013 Edition*, ACTEX Publications

**Calculator:** A **BA II Plus** calculator is recommended for writing SOA exams.

**Tentative Schedule:**

Week 1	March 28, 30	Introduction, Module 1: The value of money
Week 2	April 2 and 4	Module 2: Annuities
Week 3	April 9 and 11	Module 3: Loans
Week 4	April 16 and 18	Test 1; Module 4: Bonds
Week 5	April 23 and 25	Module 4: Bonds; Module 5: Yield rate
Week 6	April 30 and May 2	Module 6: Term Structure of Interest rates; Module 7: Asset Liability Management, Duration and Immunization
Week 7	May 7 and 9	Test 2; Module 8: Introduction to Derivatives Securities
Week 8	May 14 and 16	Module 9: Options
Week 9	May 21 and 23	Module 10: Investment Strategies, Module 11: Hedging
Week 10	May 28 and 30	Module 12: Forwards and Futures, Module 14: Swaps

**Evaluation:**

- Homework assignments 30%
- Two tests 40%, 4/6 and 5/7
- Comprehensive final exam 30%, Thursday, June 6, 10:00 – 12:00

**Homework:** Homework assignment will be given in each meeting and is due Wednesday of the following week.

**Tests:** 8 multiple-choice questions

**Final Exam:** 20 multiple-choice questions

Exam FM/2 Information:

- The Financial Mathematics exam is called Exam FM by the SOA and Exam 2 by the CAS. This three-hour exam consists of 35 multiple-choice questions. The examination is administered by Preliminary Actuarial Examinations/SOA. The examination is jointly sponsored and administered by the CAS, SOA, and the Canadian Institute of Actuaries (CIA). The examination is also jointly sponsored by the American Academy of Actuaries (AAA) and the Conference of Consulting Actuaries (CCA).
- The Learning Objectives of Exam FM/2 is available from the website of **Ba An Actuary** (<http://www.beanactuary.org/exams/preliminary/exams/syllabi/2013-06-exam-fm.pdf>)

I. Interest Theory (65-80%)

- A. Time Value of Money (5-15%)
- B. Annuities with payments that are not contingent (5-20%)
- C. Loans (5-20%)

- D. Bonds (5-20%)
- E. General Cash Flows and Portfolios (5-20%)
- F. Immunization (5-15%)

II. Financial Economics (20-35%)

- A. General Derivatives (0-5%)
- B. Options (5-10%)
- C. Hedging and Investment Strategies (5-15%)
- D. Forwards and Futures (0-10%)
- E. Swaps (0-5%)

- Date and deadlines: (six times a year)

<u>Administration</u>	<u>Registration Deadlines</u>	<u>CBT Dates</u>
June 2013	April 25	June 6 -17
August 2013	June 27	August 8-19
October 2013	August 27	October 8 - 19
December 2013	October 28	December 9 - 20

- Fees: \$200.00