

**ACT 240H1F Summer 2010**  
**Fundamentals of Investment and Credit (Preliminary Version Apr 28, 2010)**

**Text**

Prof Broverman's Fall 2008 or later study guide for Exam FM, to be made available to ACT 240 students for about \$40. Please buy when available in lectures, and make sure you have it no later than May 18 – it is printed specially to give you a low price and won't be available after that. You are expected to read and understand the descriptive portions of the guide yourself.

**Calculator**

ACT240 tests and exams require you to have one of the calculators allowed on Society of Actuaries exam FM ([www.soa.org/education/exam-req/exam-day-info/edu-calculators.aspx](http://www.soa.org/education/exam-req/exam-day-info/edu-calculators.aspx)) Of the SoA calculators, we recommend the Texas Instruments BA II Plus or BA II Plus Professional Edition for ACT240, 245 and 349; those two models are currently allowed for use also on SoA, CAS and CFA exams ([www.cfainstitute.org](http://www.cfainstitute.org)). Stores such as Staples/Business Depot/Grand and Toy often have this model, but you may wish to save your time by calling the store first.

**Intended Audience**

Students who expect to take the professional actuarial exams of the Society of Actuaries ([www.soa.org](http://www.soa.org)) or Casualty Actuarial Society ([www.cas.org](http://www.cas.org)). The professional exams are rigorous and ACT240 and ACT245 are intended to help students prepare for the exam FM. Hence ACT240 is structured around the syllabus and the examination philosophy of the SoA and CAS: numerical multiple choice questions which must be quickly and accurately done. Non-actuarial students should take ACT230 instead.

**Exams**

As for many professional exams, care will be taken to ensure the privacy of your answers by use of assigned seating and by the provision of several versions of tests and final, with different question orders. At least 40% of the marks on the tests and final exam will be from assignments and pop quizzes, with small changes such as to the interest rate. The best preparation for this type of exam is 'problems, problems, problems'. The reading materials have many exam-type questions. You will wish to do all the relevant assignment questions before each test and final exam, and preferably many others as well. There will be a few pop-quiz micro-tests in lecture and tutorials during the term, not announced in advance. The in-tutorial pop quizzes are expected to test mainly the assignment completed for that class.

**Privacy and Participation lasers:**

- a) Photographs of all students will likely be taken in some classes and in term tests and final to aid in identification.
- b) Please leave your participation laser in one of the piles at the end of every lecture.

**Course Objective:**

Preparation for SoA Exam FM. Please see [www.soa.org](http://www.soa.org) for details, for sample exams and to submit exam applications. You are expected to read the text ahead of the lectures. Questions and in-class discussions are encouraged. You will find it useful to sometimes read the *Wall Street Journal* (print or [www.wsj.com](http://www.wsj.com)) or *Globe and Mail Report on Business*. This course relates closely to 'real world' situations.

**Lectures**

Lecture and tutorial attendance is obligatory. Lectures will not be posted on the web.

**Marking Scheme:**

Lecture: pop quizzes	Worst two disregarded, so can miss two without penalty. Graded 7-10.	5%
Tutorials	Assigned by TA based on attendance and/or pop quizzes	5%
Test 1	Multiple choice	20%
Test 2	Multiple choice, concentrates on material since test 2	20%
Final	Multiple choice, on entire term	50%

If you miss more than two in-lecture pop quizzes, and claim medical reasons, you will need to show medical certificates for all missed pop quizzes, including the 'giftie' first two. The same 'giftie two' applies to the tutorial grade. Weightings will not be changed, either for the whole class or (for fairness to the whole class) for any individuals. At least 40% of the marks on the tests and final exam will be from the known-in-advance pool: (assignments, pop quizzes) with small changes such as to the interest rate.

### Medical certificates not really believed:

Please do not take this course if you intend to be sick for term tests or final. Few medical certificates in this professionally-oriented course are accepted and even fewer of them are believed. Should you miss a term test, you are required by faculty regulation to submit, within one week, appropriate documentation to the course instructor or the Departmental office: SS6018. Print on the documentation your name, student #, the course number and the date. We are skeptical about accepting medical certificates unless the doctor specifically indicates that in his/her opinion there was a disabling health problem on the day of the test. Certificates saying "Needs rest" or "injured foot" or similar will be rejected, as will certificates from chiropractors. The doctor should be contactable by us for verification. It is expected that each student with accepted documentation will be required to take a rigorous make-up test at a chalkboard. If documentation is not provided or is not accepted, your test mark for the missed test will be zero.

### Continuation in Actuarial Science

There are rules regarding the minimum mark needed in ACT240, ACT245 and ACT247. It's important to visit the act-sci webpage for details ( [www.utstat.toronto.edu/sam/homep.html](http://www.utstat.toronto.edu/sam/homep.html) ).

### Actuarial Job Market

Enrolment in actuarial science programmes has rocketed in the last 20 years and entry level actuarial jobs have become much more difficult to find in Canada and most other countries. Employers tend to give a lot of weight to professional exam passes and to office work experience. Graduates with little work experience and mediocre communication skills have been having trouble finding an entry level job in an actuarial environment. However, non-actuarial employers are likely to see value in introductory courses on math-of-finance (like ACT230 and ACT240), finance, derivatives, accounting etc. Any students considering the Chartered Financial Analyst (CFA) exams will find such courses useful. Students enthusiastic about actuarial science and/or CFA are advised to safeguard their career prospects by developing a broader business background too, to ensure that their Excel skills are competitive, to get office work experience and perhaps to enhance communication skills e.g. by attending a Toastmaster club ( [www.toastmasters60.org/findClub.asp](http://www.toastmasters60.org/findClub.asp) ) and gaining the CTM certificate.

<b>ACT240H1F</b>	<b>L5101</b>	
<i>Lecture times, location</i>	TR7-9 First class is May 11, 2010 at 7:00pm. (no tute first day)	SS2127
<i>Course Web Site (please monitor)</i>	Blackboard portal. However, the outline will be at <a href="http://www.fisher.utstat.toronto.edu/sharp">http://www.fisher.utstat.toronto.edu/sharp</a>	
<i>Instructor</i>	Dr Keith Sharp FCIA FSA CFA <a href="mailto:sharp@utstat.toronto.edu">sharp@utstat.toronto.edu</a>	
<i>Instructor office hours</i>	R 4:00-5:00 or after class if a quick question	SS6007
<i>TAs:</i>	TR6 (p) SS 2127 (First is May 13)	SS 2127
<b>Approximate Coverage</b>	<b>Lecture/Pop Surprise Tests (5% weight total)</b>	<b>FM Study Guide Fall 2008+</b>
Effective rates, PV and equation of value	May 11 (No tutorial, lecture starts at 7:10pm)	1, 2
Nominal rates, discount, Force interest, Real rates	May 13 (Tutorial at 6:10pm, lecture 7:10 pm-9:00pm)	3
Level payment annuities	May 18	4, 5
TERM TEST 1 (20% weight) (NOTE TIME)	May 20 6:10 pm – 7:00 pm, for location see portal	
Generalizations	May 20 7.10 pm - 9:00 pm in lecture room	6, 7
Non-constant payments, Loan Amortization	May 25	8
Level payments, mortgages	May 27	9
Mortgages, Sinking funds	Jun 1	9, 10
TERM TEST 2 (20% weight) (NOTE TIME)	Jun 3 6:10 pm – 7:00 pm, for location see portal	
Bond prices & amortization	Jun 3 7:10 pm - 9:00 pm in lecture room	11, 12
Callable bonds,	Jun 8	12
Internal rate of return	Jun 10	13
Dollar & time-wtd yields, Portfolio & investment-year	Jun 15	13
Other topics	Jun 17	
FINAL EXAM	In Jun 21-25 exam week	

**GOOD LUCK**