Course Syllabus for Mathematics of Finance I
ASC 385, Spring 2006
TuTh 2:00–3:20
Lynch 185

1 General Information

Name: Dr. Christopher Brazfield, Associate Professor
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Office Hours: MWF 9–10 AM,
MWF 1–2 PM,
TuTh 3:30–5 PM,
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2 Purpose

2.1 This Class
This course covers the material on the SOA Course MF and the CAS Part 2 professional examination. Doing all
the problems and understanding the concepts will help you to pass this professional exam. You will have to work
quickly in order to pass the professional exam.

2.2 Technology
Working quickly to pass the professional exam includes being able to work quickly with one of the approved calcula-
tors. Therefore you will be required to purchase one of the following: a battery- or solar-powered Texas Instruments
BA-35 model calculator (the official SOA/CAS calculator), the BA II Plus, the BA II Plus Professional, the TI-30X
or TI-30Xa (the official CAS calculator) or TI-30X II (IIS solar or IIB battery).

We will also have periodic assignments using spreadsheets. Microsoft’s Excel program will suffice.

3 Text

Mathematics of Investment and Credit, third edition by Samuel A. Broverman.

4 Homework and Quizzes

The reading in this course is not extensive, but there are many problems to do. The homework should force you to
read the text and master the material. Please see me or someone in class if you are having trouble with the homework.
Keep in mind that your submitted work must be your own. See the Section on Policies and Procedures below
for details.

On each day that a reading assignment is due there will be a short reading quiz at the beginning class over that
reading. Quizzes will be worth 17% of the class grade.

Homework will be collected at the beginning of class. If you are ill (or have some other valid reason) and you
notify me before class (by telephone, e-mail, leaving a message, sending word with another student, etc.), you will be
allowed to submit homework late. If you are not present when homework is collected and you have not given prior
notification as above, you will not be allowed to submit late homework.
The homework will be worth 2% of the class grade. Each homework assignment will be worth the same as every other homework assignment. The two lowest homework assignments will be dropped. The rubric for grading each homework problem is as follows:

- a 5 indicates that the problem is correct, well written (in complete sentences if appropriate), clear and concise;
- a 4 indicates the problem is correct but has a small problem that is easily fixed, is well written and clear;
- a 3 indicates the problem is correct but may have more than one minor mistake or it may be poorly written;
- a 2 indicates that the answer may be correct but the explanation is not acceptable because it is sloppy, poorly written, or unclear;
- a 1 indicates the problem is incorrect but significant progress was made toward a solution
- a 0 indicates that there is no basis for credit because the explanation is missing or it indicates that the idea(s) relating the question were not understood or misunderstood.

In addition to the graded problems, the assignment as a whole will be considered and graded according to the following rubric:

- a “plus” will be given for an assignment that is well written and missing no more than 20% of the assigned problems;
- a “minus” will be given for an assignment that is messy or it is clear that it is scratch work or it is missing more than 20% (but less than 50%) of the assigned problems;
- a “zero” will be given for an assignment that is missing more than 50% of the assigned problems.

On each assignment, for each problem graded, you earn 5 points for a “plus”, 2.5 points for a “minus”, and 0 points for a “zero”. Your final grade will drop by 1.5 percentage points for every unexcused assignment missed past the second.

5 Exams

There will be three exams each worth 17% percent of the total grade. If you miss an exam, you will receive a zero unless I am notified ahead of time. This notification does not entitle you to a make-up exam. If you have a legitimate foreknown reason to take an exam early or late, you must submit a written request to me 24 hours before the scheduled exam. Of course there are extenuating circumstances that arise and we will deal with those on a case-by-case basis. There Final Exam is comprehensive and is worth 30% of the total grade. The time scheduled for it is May 10 from 9:00 to 12:00 AM.

6 Grading

To recap the grading: Quizzes are worth 17%, Homework is worth 2%, each Exam is worth 17%, and the Final Exam is worth 30%. The grading scale is standard: 92% for an A, 90% for an A-, 88% for a B+, 82% for a B, 80% for a B-, 78% for a C+, 72% for a C, 70% for a C-, 68% for a D+, 62% for a D, 60% for a D-, etc.

7 Policies and Procedures

Students will adhere to all Procedures, Policies, and Codes given in the 2005-2006 Student Handbook. This includes but is not limited to policies on Academic Honesty.

It is academically honest to ask questions of fellow students and discuss problems from the homework and reading. It is not honest to look upon what someone intends to hand it and pass the work off as your own. It is honest to look in the back of the book for help on the homework and indicate on your paper that you looked there. It is not honest to copy what is written in the back of the book. Since the answers for most problems are in the back of the book if I see only the answer with no work to support it, I will assume you simply copied from the text. It is honest to help
a fellow classmate with a question. It is not honest to hand them your homework. You may share ideas, but not answers. If you do work with someone, you must indicate at the top of your homework who you worked with. That includes me as well. Just as you would cite a book you quoted from or from which you used an idea for a paper, so must you cite folks you work with.

If a student is found committing academically dishonest acts in this class, those acts will be reported to the administration and sanctions may include, but are not limited to, a reduction in grade or even failure of the course.

Disabilities and Medical Conditions: If you have a documented disability that requires accommodation, please let me know. In order to ensure that your learning needs are appropriately met, you must provide documentation of your disability or medical condition to the Coordinator of Disability Services in Humanities 206-D, 867-6071. The Office of Disability Services will then provide me with a letter of verification of disability.

8 Important Dates

Deadline for registration for Exam FM/Course 2: April 1, 2006.
Exam FM/Course 2 administered on May 25, 2006 8:30–10:30 AM.

9 Final Thoughts

One of the objectives of the Department of Mathematical Sciences especially the Actuarial Science program is to help you become an independent learner. We know this requires help. You have the responsibility to read the text, work on the homework and ask questions when necessary. I have the responsibility to help you when you need it. My door is open. When you need help, walk through it.

10 Assignments

ASC 385 S06 (tentative)
01/17 Introductions
01/19 Read Chapter 1 through 1.2.1 on pages 1–19.
    page 45 – §1.1: 1, 3, 4, 8, 10, 13, 15, 20; page 51 – §1.2: 4, 7, 11.
01/24 Read Chapter 1 sections 1.2.2 through 1.4 on pages 19–34.
    page 51 – §1.2: 9, 12, 14; page 55 – §1.3: 2, 4, 10; page 58 – §1.4: 1, 4, 8, 10.
01/26 Read Chapter 1 sections 1.5 and 1.6 on pages 34–43.
    page 61 – §1.5: 2, 4, 8, 14; page 64 – §1.6: 2, 3, 6.
01/31 Review.
    page 45 – problems 1.1.14, 1.2.18, 1.3.9, 1.4.14, 1.5.12.
02/02 Exam 1 on Chapter 1.

02/07 Read Chapter 2 through 2.1.1 on pages 67–79.
02/09 Read Chapter 2 section 2.1.2 on pages 79–87.
    page 138 – §2.1: 8, 10–12, 24, 25.
02/14 Read Chapter 2 sections 2.1.3, 2.2.1, 2.2.2 on pages 87–97.
    page 139 – §2.1: 15, 20, 29, 33; page 144 – §2.2: 1, 3, 5, 20.
02/16 Read Chapter 2 section 2.2.3 on pages 97–102.
    page 145 – §2.2: 6, 8, 10.
02/24 (FRIDAY @ 4:00) Read Chapter 2 sections 2.2.4 and 2.3.1 on pages 102–111.

Spring Break.

03/13 Review. (6:00 PM, Location TBA)

Spring Break.

03/14 Exam 2 on Chapter 2.

03/16 Read Chapter 3 through section 3.1.2 on pages 171–177.

03/21 Read Chapter 3 sections 3.1.3 through 3.2 on pages 177–190 (skip pages 188 and 189 on Canadian and US mortgages).

03/23 Read Chapter 3 section 3.3 pages 190-193.

03/28 Read Chapter 4 through section 4.1.1 on pages 223–232.

04/04 Read Chapter 4 sections 4.2 and 4.3.1 on pages 239–248.

04/06 Review.

04/11 Exam 3 on Chapters 3 and 4.

04/13: Read Chapter 5 through section 5.1.1 on pages 265–269.

04/18 Read Chapter 5 sections 5.1.2 and 5.2 on pages 269–272 and 276–282.

04/20 Read Chapter 5 sections 5.3.1 and 5.3.3 on pages 283–285 and 286–290.

04/25 Read Chapter 6 through section 6.1 on pages 303–315.

Easter Break.

05/02 Read Chapter 7 through section 7.2 on pages 345–368.

05/10 (9:00–12:00) Final Exam