

FIN 4340 Actuarial Finance (CRN 18872, SOA FM EXAM)

Fall 2018 Course Syllabus

- Class Hours:** Tuesday/Thursday 1:30 – 2:50 pm (BUSN 332)
- Instructor:** Chia-Chun (Cici) Chiang, Ph.D., FSA
- Office:** BUSN 247
- Phone** (915) 747-7167
- E-mail:** cchiang@utep.edu
- For faster replies, please use the prefix “FIN4340_18872” in the subject line of all emails.
- It is the policy of the finance department that all e-mails sent to professors or teaching assistants be of a professional nature and format. A formal greeting and salutation are required. Proper grammar, spelling, and format are required. You must clearly state the problem or question that will be addressed. You must identify the class, section, time, and location where the class meets. We reserve the right to not reply to any e-mail that does not meet these requirements and is not of a professional nature.**
- Office Hours:** Tuesday/Thursday 3:00 - 4:30 pm and by appointment
- Required Text:** ASM Study Manual for Exam FM, 12th or 13th Edition with StudyPlus+ - PRINTED [12-month Access to StudyPlus+] - \$162.00, ISBN: 978-1-63588-094-6
- This study manual can be purchased at www.actuarialbookstore.com or <https://www.actexamdriver.com/default.aspx> for \$162.
- Prerequisites:** FIN 3310 with "C" or better. **You need to have some familiarity with calculus, probability, and linear algebra.**
- Calculator:** Only calculators that are approved by the Society of Actuaries for use on Exam FM will be allowed to be used on exams in this class. I recommend Texas Instruments BA II Plus. I will use Texas Instruments BA II Plus in class and explain how to work various problems with it. Make sure that you bring your calculator to every class.
- <https://www.soa.org/education/exam-req/edu-exam-fm-detail.aspx>
- Blackboard:** I will use Blackboard to post important announcements and upload course materials. I expect you to check Blackboard daily. Make sure you receive Blackboard announcement emails in your inbox.
- Class E-Mail:** Each student is required to have the e-mail account that is associated with the *Blackboard system* up to date. Any class requirements sent in the e-mail messages through the Blackboard are considered delivered. You should check that e-mail account regularly.

Course Description and Learning Outcomes

This course is a **quantitative** course and focuses on the theory of interest (part II). The goal of this course is to prepare students for the Society of Actuaries Exam 2/FM. Upon completion of this course, students will have gained a deeper understanding in applications of financial mathematics, including annuities, non-contingent cash flows, loans, bonds, general cash flows and portfolios, and immunization.

Learning outcomes

Learning outcomes of this class include understanding the concepts concerning non-contingent payments, loans, bonds, yield curves, rates of return, cash flow matching, immunization, interest rate swaps, determinants of interest rates, and how to perform related calculations

Class procedures

1. The structure of this class makes your individual study and preparation outside class extremely important. Reading the assigned sections and having some familiarity with them before class will **greatly** assist your understanding of the lecture. After the lecture, you should study your notes and work relevant problems from the end of the section.
2. Practice: The best way to prepare for an actuarial exam is to practice, practice, and then practice some more. I strongly recommend that you practice problems DAILY. If you find that you struggle with certain problems the first time you work them, be sure to work them again AND work other problems that are similar.

Grade Components

Five exams, drop the lowest score (Four exams @19% each)	76%
Regular Homework Assignments	16%
Excel Homework Assignments	8%
Extra Credits	5%

Exams: All exams will be closed-book, and no formula sheet is allowed (and on all SOA exams as well!). Students who miss an exam without a valid reason will receive a zero on that exam. Make-up exams will be allowed only with pre-approval of the instructor or with an acceptable, documented reason. Acceptable reasons for makeup exams include severe illness, family emergencies or other unavoidable events including dangerous weather conditions and car accidents. Exam format for makeup exams may be different than the original exam.

There will be a final exam offered during the scheduled final exam period. Those students who are happy with their grade are not required to take the final. The final will replace the lowest exam score obtained on the four exams. The final exam must be taken at the

designated time. The only exceptions that will be made are for those students who have three or more exams scheduled on the same day, or two scheduled at the same time.

Assignments

The homework assignments aim to help you understand the theories covered in the class and to prepare you for the exams. The assignments will be posted on Blackboard. You are allowed and encouraged to collaborate on these problems, although every student must turn in their own answers. **Late homework penalty is 25% per day.** Please complete your assignments well in advance.

Attendance and Participation

Although there is no attendance point for this class, students are strongly encouraged to attend every class and participate in classroom discussions. Students who attend class regularly perform substantially better in the exams than those who do not.

If you pass the FM exam before Dec. 15th, you will get an A.

Grade Scale

A	B	C	D	F
90-100+	80-89	70-79	60-69	0-59

Students with Disabilities

If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.

Scholastic Integrity

The University of Texas at El Paso prides itself on its standards of academic excellence. In all matters of intellectual pursuit, UTEP faculty and students must strive to achieve excellence based on the quality of work produced by the individual. In the classroom and in all other academic activities, students are expected to uphold the highest standards of academic integrity. Any form of scholastic dishonesty is an affront to the pursuit of knowledge and jeopardizes the quality of the degree awarded to all graduates of UTEP. It is imperative, therefore, that the members of this academic community understand the regulations pertaining to academic integrity and that all faculty members insist on adherence to these standards.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission

for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures (HOP), and available in the Office of the Dean of Students, and the homepage of The Dean of Students (DOS) at www.utep.edu, may result in sanctions ranging from disciplinary probation, to failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others.

Tentative Schedule and Outline (I reserve the right to revise it)

Week	Date	Topic	Section
1	8/28	Introduction & Complex Annuities	4a-4b
	8/30	Complex Annuities	4a-4b
2	9/4	Complex Annuities	4c
	9/6	Complex Annuities	4d-4f, 4g
3	9/11	Complex Annuities	4h-4i
	9/13	Review 1	
4	9/18	Exam 1	
	9/20	Complex Annuities	4h-4i
5	9/25	Complex Annuities	4j-4k ,
	9/27	VBA	Excel Assignment I
6	10/2	Complex Annuities, Loans	4l-4m & 6a
	10/4	Loans	6a
7	10/9	Loans	6b-6c & 6d
	10/11	Review 2	
8	10/16	Exam 2	
	10/18	Loans	6e-6f
9	10/23	Loans, Bonds 7d-7f	6f & 7d-7f
	10/25	Duration, Convexity, and Immunization	10a-10b
10	10/30	Duration, Convexity, and Immunization	10c-10f
	11/1	Duration, Convexity, and Immunization	10g-10h
11	11/6	Review 3	
	11/8	Exam 3	
12	11/13	Duration, Convexity, and Immunization, Interest Rate Swaps	10i-10k, 11-a
	11/15	Interest Rate Swaps, Excel Assignment	11-a, Excel Assignment II
13	11/20	Interest Rate Swaps, Comparing Investments	11-b, 5a-5c
	11/22	Thanksgiving Day	
14	11/27	Comparing Investments	5d-5e
	11/29	Determinants of Interest Rates	9a-9i
15	12/4	Review 4	
	12/6	Exam 4	
16	TBA	Final Exam	