

FIN 4340 Actuarial Finance (ONLINE)

CRN: 17677

Fall 2020

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Office Hours: by appointment (Virtually via Blackboard Collaborate)

COURSE DESCRIPTION

This course provides an introduction to actuarial cash flow models. Simple, compound, rate of discount, and effective interest functions are analyzed. These functions are used in the calculation of present value and future values of various types of annuities, loans, and more complex cash flow streams.

Students enrolled in FIN 4340 should have successfully completed FIN 3310.

EXPECTED LEARNING OUTCOMES

- Understand and be able to perform calculations relating to the present value, current value, and accumulated value.
- Describe different annuities and their cash flows.
- Understand the time value of money among different types of annuities as well as more complex cash flow streams.
- Understand key concepts concerning loans and how to perform related calculations.
- Teach actuarial cash flow models, which constitute the theoretical foundation of actuarial science.
- Develop analytical problem-solving skills to solve complex problems from first principles rather than memorization.

LEARNING MODULES

This course is designed using a modular format—that is, each week is “packaged” as a single module so that all the materials (lecture notes and videos) are in one area for a given week.

HOMEWORK ASSIGNMENT SOFTWARE

Coaching Actuaries is an online software that allows students to submit homework assignments and check their work online. Access to Coaching Actuaries is required for this course.

GRADING AND HOMEWORK ASSIGNMENTS

Grade Distribution:

1430 - 1287 = A 1286 - 1144 = B 1143 - 1001 = C 1000 - 858 = D 857 and Below = F

- 300 points: Exam 1 (Sep. 16)
- 300 Points: Exam 2 (Oct. 14)
- 300 Points: Exam 3 (Nov. 11)
- 300 Points: Exam 4 (Dec. 7)
- 220 points: 11 Homework Assignments (each worth 20 points)
- 10 Points: Syllabus Quiz (Aug. 30)

Exam 1, Exam 2, Exam 3 and Exam 4: All exams will be blackboard tests which requires **Respondus LockDown Browser**. Suspicious behaviors may be reported to **the Office of Student Conduct**. All exams will be closed-book, and no formula sheet is allowed. Students are required to bring their own calculators (smartphones are not allowed). 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 make-up exams include severe illness, family emergencies, or other unavoidable events, including dangerous weather conditions and car accidents. Exam format for make-up exams may be different from the original exam.

Homework Assignments: The homework assignments aim to help you understand the theories covered in the class and to prepare you for the exams. You are allowed and encouraged to collaborate on these problems, although every student must submit their own answers. **Late homework is not accepted**. Please complete your assignments well in advance.

Syllabus Quiz: The Syllabus Quiz helps to clarify any misconceptions about course content or policies, such as late work.

TECHNOLOGY REQUIREMENTS

Course content is delivered via the Internet through the Blackboard learning management system. Ensure your UTEP e-mail account is working and that you have access to the Web and a stable web browser. Google Chrome and Mozilla Firefox are the best browsers for Blackboard; other browsers may cause complications. When having technical difficulties, update your browser, clear your cache, or try switching to another browser.

You will need to have access to a computer/laptop, scanner, a webcam, and a microphone. You will need to download or update the following software: Microsoft Office, Adobe Acrobat Reader, Windows Media Player, QuickTime, and Java. Check that your computer hardware and software are up-to-date and able to access all parts of the course.

If you do not have a word-processing software, you can download Word and other Microsoft Office programs (including Excel, PowerPoint, Outlook and more) for free via UTEP's Microsoft Office Portal. Click the following link for more information about [Microsoft Office 365](#) and follow the instructions.

IMPORTANT: If you encounter technical difficulties beyond your scope of troubleshooting, please contact the UTEP [Help Desk](#) as they are trained specifically in assisting with

technological needs of students. Please do not contact me for this type of assistance. The Help Desk is much better equipped than I am to assist you!

COURSE COMMUNICATION

Because this is an online class, we won't see each other in the ways you may be accustomed to: during class time, small group meetings, and office hours. However, there are a number of ways we can keep the communication channels open:

- **Office Hours:** We will not be able to meet on campus, but I will still have office hours for your questions and comments about the course.: My office hours will be held on Blackboard Collaborate and are by appointment.
- **Email:** UTEP e-mail is the best way to contact me. I will make every attempt to respond to your e-mail within 24-48 hours of receipt. When e-mailing me, be sure to email from your UTEP student account and please put the course number in the subject line. In the body of your e-mail, clearly state your question. At the end of your e-mail, be sure to put your first and last name, and your university identification number.
- **Discussion Board:** If you have a question that you believe other students may also have, please post it in the Help Board of the discussion boards inside of Blackboard. Please respond to other students' questions if you have a helpful response.
- **Announcements:** Check the Blackboard announcements frequently for any updates, deadlines, or other important messages.

NETIQUETTE

As we know, sometimes communication online can be challenging. It's possible to miscommunicate what we mean or to misunderstand what our classmates mean given the lack of body language and immediate feedback. Therefore, please keep these netiquette (network etiquette) guidelines in mind. Failure to observe them may result in disciplinary action.

- Always consider audience. This is a college-level course; therefore, all communication should reflect polite consideration of other's ideas.
- Respect and courtesy must be provided to classmates and to the instructor at all times. No harassment or inappropriate postings will be tolerated.
- When reacting to someone else's message, address the ideas, not the person. Post only what anyone would comfortably state in a face-to-face situation.
- Blackboard is not a public internet venue; all postings to it should be considered private and confidential. Whatever is posted on in these online spaces is intended for classmates and professor only. Please do not copy documents and paste them to a publicly accessible website, blog, or other space.

ATTENDANCE AND PARTICIPATION

Because this is an online course, attendance is determined by class participation online. Participation is determined by completing all Homework Assignments and Syllabus Quiz

EXCUSED ABSENCES AND/OR COURSE DROP POLICY

I will not drop you from the course. However, if you feel that you are unable to complete the course successfully, please contact the [Registrar's Office](#) to initiate the drop process before Oct. 30. If you do not, you are at risk of receiving an "F" for the course.

ALTERNATIVE MEANS OF SUBMITTING WORK IN CASE OF TECHNICAL ISSUES

I strongly suggest that you submit your work with plenty of time to spare in the event that you have a technical issue with the course website, network, and/or your computer. I also suggest you save all your work in a separate Word document as a back-up. This way, you will have evidence that you completed the work and will not lose credit. If you are experiencing difficulties submitting your work through the course website, please contact the UTEP Help Desk. You can email me your back-up document as a last resort.

ACCOMMODATIONS POLICY

The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Reasonable accommodations will be made unless it is determined that doing so would cause undue hardship on the University. Students requesting an accommodation based on a disability must register with the [UTEP Center for Accommodations and Support Services](#) (CASS). Contact the Center for Accommodations and Support Services at 915-747-5148, or email them at cass@utep.edu, or apply for accommodations online via the [CASS portal](#).

SCHOLASTIC INTEGRITY

Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Cheating may involve copying from or providing information to another student, possessing unauthorized materials during a test, or falsifying research data on laboratory reports. Plagiarism occurs when someone intentionally or knowingly represents the words or ideas of another as ones' own. Collusion involves collaborating with another person to commit any academically dishonest act. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. All suspected violations of academic integrity at The University of Texas at El Paso must be reported to the [Office of Student Conduct and Conflict Resolution \(OSCCR\)](#) for possible disciplinary action. To learn more, please visit [HOOP: Student Conduct and Discipline](#).

TEST PROCTORING SOFTWARE

All exams will make use of Respondus Lock Down Browser and Respondus Monitor inside of Blackboard to promote academic integrity. You are encouraged to learn more about how to use these programs prior to the first test.

Please review the following guidelines:

- The assessments will only be available at the times identified on the course calendar.
- You may take the test at any time during the 24-hour window. (You can start any time from midnight am to 11:59 pm. Once you start, you need to finish the exam within 80 minutes.)
- A reliable Internet connection is essential to completing the exam. If you must go to a location to take the exam (such as the library), be sure to follow their health and safety requirements.
- Once the window closes, your answers will be saved, and no changes can be made.
- Respondus Lockdown Browser will require that all internet tabs are closed prior to the start of the test.
- Respondus Monitor requires a webcam and microphone.
- You will be required to show the webcam your student ID prior to the start of the test.
- Your face should be completely visible during the test. Blocking the camera will disable the test.
- No notes or textbook materials are permitted during the test. Respondus Monitor requires you to take a video of your surrounding area (desk, chair, walls, etc.)
- You should not have conversations with other people and/or leave and return to the area during the test.

COPYRIGHT STATEMENT FOR COURSE MATERIALS

All materials used in this course are protected by copyright law. The course materials are only for the use of students currently enrolled in this course and only for the purpose of this course. They may not be further disseminated.

COVID-19 PRECAUTIONS

You must **STAY AT HOME** and **REPORT** if you (1) have been diagnosed with COVID-19, (2) are experiencing COVID-19 symptoms, or (3) have had recent contact with a person who has received a positive coronavirus test. Reports should be made at screening.utep.edu. If you know of anyone who should report any of these three criteria, you should encourage them to report. If the individual cannot report, you can report on their behalf by sending an email to COVIDaction@utep.edu.

For each day that you attend campus—for any reason—you must complete the questions on the UTEP screening website (screening.utep.edu) prior to arriving on campus. The website will verify if you are permitted to come to campus. Under no circumstances should anyone come to class when feeling ill or exhibiting any of the known COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, and alternative instruction will be provided. Students are advised to minimize the number of encounters with others to avoid infection.

Wear face coverings when in common areas of campus or when others are present. You must wear a face covering over your nose and mouth at all times in this class. If you choose not to wear a face covering, you may not enter the classroom. If you remove your face covering, you will be asked to put it on or leave the classroom. Students who refuse to wear a face covering and follow preventive COVID-19 guidelines will be dismissed from the class and will be subject to disciplinary action according to Section 1.2.3 *Health and Safety* and Section 1.2.2.5 *Disruptions* in the UTEP Handbook of Operating Procedures.

Course Resources:

UTEP provides a variety of student services and support:

Technology Resources

- [Help Desk](#): Students experiencing technological challenges (email, Blackboard, software, etc.) can submit a ticket to the UTEP Helpdesk for assistance. Contact the Helpdesk via phone, email, chat, website, or in person if on campus.

Academic Resources

- [UTEP Library](#): Access a wide range of resources including online, full-text access to thousands of journals and eBooks plus reference service and librarian assistance for enrolled students.
- [University Writing Center \(UWC\)](#): Submit papers here for assistance with writing style and formatting, ask a tutor for help and explore other writing resources.
- [Math Tutoring Center \(MaRCS\)](#): Ask a tutor for help and explore other available math resources.
- [History Tutoring Center \(HTC\)](#): Receive assistance with writing history papers, get help from a tutor and explore other history resources.
- [RefWorks](#): A bibliographic citation tool; check out the RefWorks tutorial and Fact Sheet and Quick-Start Guide.

Individual Resources

- [Military Student Success Center](#): Assists personnel in any branch of service to reach their educational goals.
- [Center for Accommodations and Support Services](#): Assists students with ADA-related accommodations for coursework, housing, and internships.
- [Counseling and Psychological Services](#): Provides a variety of counseling services including individual, couples, and group sessions as well as career and disability assessments.

Weekly Calendar (Subject to Change)

Week	Date	Topic	HW
1	8/24-8/30	Introduction	Syllabus quiz: due 8/30 11:59 pm HW1: due 8/30 11:59 pm
		1.1 Interest Rate Definitions (1)	
2	8/31-9/6	1.1 Interest Rate Definitions (2) 1.5 Time Value of Money Unknown Time, Interest rate, and Unknown Payment	HW2: due 9/6 11:59 pm
3	9/7-9/13	1.3 All-In-One Relationship Formula 1.4 Two Exceptions (Simple Interest and Variable FOI)	HW3: due 9/13 11:59 pm
4	9/14-9/20	Review 1	
		Exam 1 (Sep. 16)	
5	9/21-9/27	1.2 Force of interest rate	HW4: due 9/27 11:59 pm
		2.1 Level Annuities (1)	
6	9/28-10/4	2.1 Level Annuities (2)	HW5: due 10/4 11:59 pm
7	10/5-10/11	2.1 Level Annuities (3)	HW6: due 10/11 11:59 pm
8	10/12-10/18	Review 2	
		Exam 2 (Oct. 14)	
9	10/19-10/25	2.2 Non-Level Annuities: Geometric	HW7: due 10/25 11:59 pm
10	10/26-11/1	2.3 Non-Level Annuities: Arithmetic	HW8: due 11/1 11:59 pm
11	11/2-11/8	2.4 More General Annuities and Annuity Tricks	HW9: due 11/8 11:59 pm
12	11/9-11/15	Review 3	
		Exam 3 (Nov. 11)	
13	11/16-11/22	2.5 Yield Rate and Reinvestment Questions	HW10: due 11/22 11:59 pm
14	11/23-11/29	3.1 Loan Amortization	
		3.2 More General Loan Payment	
15	11/30-12/6	Stock	HW11: due 12/6 11:59 pm
		Review 4	
16	12/7	Exam 4 (Dec. 7)	