

STA 4990 Introduction to Actuarial Science

Syllabus

Summer 2021

Instructor:	Dr. Jimmy Risk
Email:	jrisk@cpp.edu
Meeting Times:	Tuesday 5:00pm-7:05pm Thursday 5:00pm-7:05pm
Office Hours:	Monday 1:00pm-2:00pm Wednesday 1:00pm-2:00pm

Book / Class Notes

- This course will not have a book.
- There will be lecture notes; please see Canvas.

Online Course Logistics

- We will use **canvas** as the main hub of posted information for this course (lecture links, homework, announcements, etc.)
- Synchronous lectures will be done through zoom (see the link on Canvas).
- Lectures will be recorded and posted on Canvas.

Course Structure

- Each week will have:
 - Synchronous Zoom Meetings
 - A homework assignment (due Thursday 11:59pm) based on the prior week's material.
- All homework will be done through [WeBWork](#)
 - To log in, use your cpp name as **both** the username and password. (*For example, I will use jrisk as my username and jrisk as my password*)
 - You can change your password later.
 - If you do not have access, please let me know and I will add you.

Course Info

Course Objectives

- Understand: What is Actuarial Science?
- Reinforce knowledge of probability
 - Apply probability to actuarial related problems
- Learn the basics of mathematical finance
 - Interest Rate Theory
 - Annuities
 - Loans
 - Financial Derivatives
- Combining probability and finance

Grading Information

Grading Breakdown

- Homework (20%)
- Midterm 1 (20%)
- Mid-Semester Check In (10%)
- Midterm 2 (20%)
- End-Of-Semester Check In (10%)
- Final Exam (20%)

Homework and Weighing Explanation

- Your lowest two homeworks will be **dropped**.
- Homework scores will be *normalized* so that all homeworks count equally.
 - For example, let's say homework 1 is worth 25 points and you get 20 points. You obtain an 80% for that homework.
 - If homework 2 is worth 20 points and you get 18 points, you obtain a 90% for that homework.
 - The values 80% and 90% are ultimately what count toward your homework average, not the individual point values (20 and 18 respectively).
- The same is true for how the ultimate weighing works in the above scheme - the midterm and final *percentages* are what count toward your final letter grade.
- Please let me know if this is confusing or you want additional explanation.

Exam Information

- Exams will be given during exam time and will be done through WeBWorK.
- You can use any class material during the exams.
- Do **not** work with others or use any external resources during the exam.

Check-Ins

There will be a mid-semester and end-of-semester check in.

- You will schedule a 5-10 minute 1-on-1 meeting with me.
- I will help answer any questions you have about course material.
- I may ask you about a specific class topic if you do not come prepared with any questions.
- These are participation points and are mostly free; however, you must display understanding during these meetings to obtain full credit.

Late Policy

- Late homework is generally frowned upon, but extensions will occasionally be made on a case-by-case basis.
- Ultimately, my goal is for you to learn this material, so there may be leniency on occasion, if you ask for an extension.
- Extensions may not always be possible, for example if homework solutions are needed to be posted quickly for midterm studying purposes
- Projects will not be given extensions except under extreme circumstances (i.e. doctor's note or similar required)

Academic Honesty Policies

- **First and foremost, any work found to be blatantly plagiarized will be immediately given a zero**, and repeated cases of this may result in more serious consequences.
- You are **not** allowed to post any the class materials online, in any form. In fact, all assignments will have this posted on them:
 - Intellectual Property Disclaimer: This document cannot be posted in partial or in full in any public manner, unless you discuss first with me. Any violation of this can result in legal action.
- This will be strictly enforced.
 - All questions are customized so that it is easy to identify who is the user posting the question, if it is posted on an external site.
- You are allowed to use any outside written materials on homeworks and exams, such as textbooks, notes, slides, lecture videos, etc.
- You may collaborate with others on homework, but under no circumstances may you work with others on the exams.
 - I highly encourage discussion in the discord channels for homework.
 - If you do work with others, make sure that your work is written in your own words.
- If I suspect that your work is copied and reworded from some other source (online, solutions manual, classmate, etc.), I reserve the right to discuss the answer with you in a zoom chat or similar, to test your understanding. If you do not agree, you will receive a zero.
 - On this note, I do not necessarily frown upon Googling or searching for answers, in fact this type of research is actually encouraged **as long as you are taking the time to actually understand the solution and write it in your own words.**
- Lack of knowledge of these academic honesty policies is not a reasonable explanation for a violation.

Letter Grade Cutoffs

A	93	C	75
A-	90	C-	72
B+	87	D+	69
B	84	D	66
B-	81	D-	63
C+	78	F	0

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