



**The University of Iowa  
The College of Liberal Arts and Sciences  
Spring 2023**

**Title of Course:** ACTS:3080 Mathematics of Finance  
**Course meeting time and place:** MWF 9:30am – 10:20am (10C PC)  
**Department of Actuarial Science and Statistics:** <https://stat.uiowa.edu>

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**Course ICON site:** To access the course site, log into [Iowa Courses Online \(ICON\)](https://icon.uiowa.edu/index.shtml) <https://icon.uiowa.edu/index.shtml> using your Hawk ID and password.

**Course Home**

For Undergraduate Courses: The College of Liberal Arts and Sciences (CLAS) is the home of this course, and CLAS governs the add and drop deadlines, the “second-grade only” option (SGO), academic misconduct policies, and other undergraduate policies and procedures. Other UI colleges may have different policies.

For Graduate Courses: The College of Liberal Arts and Sciences (CLAS) is the home of this course, and CLAS governs the policies and procedures for its courses. Graduate students, however, must adhere to the [academic deadlines set by the Graduate College](#).

**Instructor**

Office location: 356 SH  
Student drop-in hours: Tuesday 7pm – 8pm & Thursday 9am – 11am  
E-mail: [aidan-chaffin@uiowa.edu](mailto:aidan-chaffin@uiowa.edu)  
DEO: Dr. Kung-sik Chan ([kung-sik-chan@uiowa.edu](mailto:kung-sik-chan@uiowa.edu))

**Course Supervisor:** Dr. Zhiwei Tong

Office and hours: 374 SH, 3pm – 4pm MWF  
Phone and e-mail: 319(467)-0160, [zhiwei-tong@uiowa.edu](mailto:zhiwei-tong@uiowa.edu)

**Description of Course**

This course covers basic concepts of financial mathematics, and prepares students for the analysis of simple financial and insurance transactions. Topics covered in this course mainly include: time value of money; annuities; valuation of loans, bonds, and general cash flows. This course requires a good understanding of calculus and linear algebra.

### Learning Objectives

This course provides an introductory overview of interest theory as it relates to actuarial science and the Financial Mathematics exam under the Society of Actuaries. Students will gain proficiency in the material and have the opportunity to gain credit through the UEC program.

### Academic Honesty and Misconduct

All students in CLAS courses are expected to abide by the [CLAS Code of Academic Honesty](#). Undergraduate academic misconduct must be reported by instructors to CLAS according to [these procedures](#). Graduate academic misconduct must be reported to the Graduate College according to Section F of the [Graduate College Manual](#).

### Student Complaints

Students with a complaint about a grade or a related matter should first discuss the situation with the instructor and/or the course supervisor (if applicable), and finally with the Director or Chair of the school, department, or program offering the course.

Undergraduate students should contact [CLAS Undergraduate Programs](#) for support when the matter is not resolved at the previous level. Graduate students should contact the CLAS [Associate Dean for Graduate Education and Outreach and Engagement](#) when additional support is needed.

### Drop Deadline for this Course

You may drop an individual course before the deadline; after this deadline you will need collegiate approval. You can look up the [drop deadline for this course](#) here. When you drop a course, a “W” will appear on your transcript. The mark of “W” is a neutral mark that does not affect your GPA. Directions for adding or dropping a course and other registration changes can be found on the [Registrar's website](#). Undergraduate students can find policies on dropping and withdrawing [here](#). Graduate students should adhere to the [academic deadlines](#) and policies set by the Graduate College.

### Grading System

Final grades will be awarded based on the following ranges:

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>
A+ 98-100	B+ 87-89	C+ 77-79	D+ 67-69	F < 59
A 93-97	B 83-86	C 73-76	D 63-66	
A- 90-92	B- 80-82	C- 70-72	D- 60-62	

Item	Weight	Schedule
Attendance	5%	Attendance is mandatory

Quizzes	10%	Dates: Jan 27, Feb 10 (no class), Feb 24, Mar 10, Mar 24, Apr 7, Apr 21 (Even weeks)
Problem Sets	10%	Feb 3, Feb 17, Mar 3, Mar 17, Apr 14, Apr 28 (Odd weeks)
Midterms	20% (x2)	Feb 23 and Mar 30
Final	35%	TBD

### Attendance (5%)

Your attendance and engagement will affect your final grade.

### Problem Sets (10%)

There will be bi-weekly problem sets consisting of ~10 questions. Assignments will be assigned on odd weeks and will be due the follow Friday of the next even week at the beginning of class. Late submissions will be subject to a 25% penalty. Working with classmates is encouraged, plagiarism is forbidden.

### Quizzes (10%)

There will be bi-weekly quizzes on odd weeks that will take place at the end of class on Friday. Around 15 minutes will be given for each quiz. There is no make-up policy, however the lowest grade will be dropped when calculating the final grade in order to accommodate spontaneous sickness or emergency.

### Midterm Examinations (20% x2)

There will be two midterms on February 23<sup>rd</sup>, and March 30<sup>th</sup> which will take place at a time and location TBD. Both will be 90 minutes in length and be cumulative in content to the extent of the instructor's discretion. The format will be a mix of multiple-choice (SOA style) questions, short written answer, and longer written answer style questions.

### Final Examination (35%)

There will be one final (see final exam schedule announcements from the Registrar for location and date) which will cover the entire course syllabus. The exam will be two hours in length. The format will be all short, written answer questions.

### **Date and Time of the Final Exam**

The final examination date and time will be announced by the Registrar generally by the fifth week of classes and it will be announced on the course ICON site once it is known. **Do not plan your end of the semester travel plans until the final exam schedule is made public. It is**

**your responsibility to know the date, time, and place of the final exam.** According to Registrar's final exam policy, students **have a maximum of two weeks after the announced final exam schedule** to request a change if an exam conflict exists or if a student has more than two exams in one day (see the [policy](#) here).

## **College of Liberal Arts and Sciences (CLAS) Course Policies**

### **[Attendance and Absences](#)**

University regulations require that students be allowed to make up examinations which have been missed due to illness or other unavoidable circumstances. Students with mandatory religious obligations or UI authorized activities must discuss their absences with me as soon as possible. Religious obligations must be communicated within the first three weeks of classes.

### **[Exam Policies](#)**

#### **Communication: UI Email**

Students are responsible for all official correspondences sent to their UI email address (uiowa.edu) and must use this address for any communication with instructors or staff in the UI community.

#### **Where to Get Help**

Tutor Iowa: <https://tutor.uiowa.edu/>

#### **University Policies**

**[Accommodations for Students with Disabilities](#)**

**[Basic Needs and Support for Students](#)**

**[Classroom Expectations](#)**

**[Exam Make-up Owing to Absence](#)**

**[Free Speech and Expression](#)**

**[Mental Health](#)**

**[Military Service Obligations](#)**

**[Non-discrimination](#)**

**[Religious Holy Days](#)**

**[Sexual Harassment/Misconduct and Supportive Measures](#)**

**[Sharing of Class Recordings](#)**