MATH 3550 – Programming for Actuaries ~ *Spring 2026*

Instructor

Stephen Camilli, FSA; Email: stephen.camilli@uconn.edu; Office Phone: (860) 486-3929; Cell Phone: (906) 235-7863 (Please restrict your cell phone calls to 9:00 to 5:00 ET on weekdays unless previously arranged)

Office Hours/Availability

Office hours (subject to change) are Tuesday 10:00–10:45, Wednesday 9–12 and Thursday 8:30–10:45. As the semester progresses, based on feedback, I may switch some in-person office hours to virtual office hours on Monday/Friday. In addition, with pre-arrangement, I can offer virtual support during in-person office hours, if that is more convenient. Whenever possible, please let me know ahead of time when you will be coming. I will also have ample availability for office hours by appointment outside normally scheduled times. I strongly encourage students to take advantage of office hours. I observe a high correlation between attendance at office hours and academic improvement.

I will generally reply to e-mails within 48 hours. Should you need a reply faster than that, please state this in the subject line, use Teams or call me on my cell phone.

Teaching Modality

This is an in-person course. However, I plan to record classes, as well as livestream classes so that you are able to follow along with the course virtually, if necessary.

Course Objectives

In order to provide effective insight to our business partners, actuaries need to be able to gather, organize, and analyze data. To do so efficiently, we need to have skills with certain software as well as know certain helpful languages. This course will provide an introductory view into designing, developing, testing, and implementation of programs to solve actuarial problems using Excel, VBA, R, and SQL.

Required Materials

- You should have Office 365, which is free for UConn students: http://software.uconn.edu/microsoft-products-students/

  Note that Macs can be used, but the course material is designed for the PC environment.

- R and RStudio will need to be downloaded onto your computer:
  R: https://mirror.las.iastate.edu/CRAN/
  RStudio: https://rstudio.com/products/rstudio/download/#download

Grading for the Course

Your grade for this class will be based on
the following weightings:

20%	Homework Assignments *(5)* – equal weights
15%	Unit Tests *(2)* – equal weights
12%	Group Project ~ Excel
9%	Group Project ~ VBA
12%	Group Project ~ R
12%	Group Project ~ SQL
20%	Comprehensive Final Exam

Note: Any late submissions for this course will have 20% of points deducted from grade up until 1 week after due date after which solutions will be released and you will receive no credit for the assignment. Any unexcused, missed exams, at the discretion of the instructor, may be made up with 30% of points deducted from grade.

Grading Scale:

Grade	Letter Grade	GPA
93-100	A	4.0
90-92	A-	3.7
87-89	B+	3.3
83-86	B	3.0
80-82	B-	2.7
77-79	C+	2.3
73-76	C	2.0
70-72	C-	1.7
67-69	D+	1.3
63-66	D	1.0
60-62	D-	0.7
<60	F	0.0

Note that there will be **no rounding** for grades in this course.

Additional References

The following textbooks and resources may also be helpful for those studying these topics:

The Infinite Actuary Technical Skills Course
R for Actuaries and Data Scientists, Fannin
Computational Actuarial Science with R, Charpentier
R for Everyone, Lander

Appeal Process

If you feel that an answer you provided deserved more points than it was awarded, simply send an e-mail within two class days of when the grades were released. Your appeal must include the following:

1. Note which item(s) you are concerned with and what you answered.
2. Justify why your answer warrants more points, using reference materials from the class, information from other classes or other reliable sources.
3. Tell me how many points you think your answer deserves.

Note: This process is similar to the process used for appeals on CAS examinations. Successful appeals typically have the following characteristics:

- Cite references in the Syllabus for an alternative answer
- Explain fully an alternative answer including alternative solution for a numerical question
- Point out an error in the answer key for the short-answer questions and the reasoning for an alternative correct answer.

I will consider each appeal that is sent and let you know what I think is fair. I will not consider an appeal without this information. We can talk in person if you are not satisfied with the outcome.

Code of Conduct

Most of you aspire to become actuaries. As actuaries—and even as candidates—you agree to live by a Code of Professional Conduct. This code governs your work as actuaries, but also outlines your responsibilities to the profession and to the public.

Precept 1 of the Code is entitled Professional Integrity. It states: "An actuary shall act honestly, with integrity and competence, and in a manner to fulfill the profession's responsibility to the public and to uphold the reputation of the actuarial profession."

Precept 13 of the Code is entitled Violations of the Code of Professional Conduct. It states: "An Actuary with knowledge of an apparent, unresolved, material violation of the Code by another Actuary should consider discussing the situation with the other Actuary and attempt to resolve the apparent violation. If such discussion is not attempted or is unsuccessful, the Actuary shall disclose such violation to the appropriate counseling and discipline body of the profession….".

The Code of Professional Conduct encompasses my expectations for how you will behave in this class. I will expect that each of you act honestly - and with integrity – in all facets of this class (including but not limited to exams and quizzes). As Precept 13 relates to this class, any student who suspects or observes cheating by another student (an apparent violation of the Code) is expected to disclose such apparent violation.

Academic misconduct includes, but is not limited to, providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for academic evaluation (e.g. papers, projects, and examinations); any attempt to influence improperly (e.g. bribery, threats) any member of the faculty, staff, or administration of the University in any matter pertaining to academics or research; presenting, as one's own, the ideas or words of another for academic evaluation; doing unauthorized academic work for which another person will receive credit or be evaluated; and presenting the same or substantially the same papers or projects in two or more courses without the explicit permission of the instructors involved.

A student who knowingly assists another student in committing an act of academic misconduct shall be equally accountable for the violation, and shall be subject to the sanctions and other remedies described in *The Student Code*. **My standard consequence for academic misconduct will be a failing grade in the course**.

Cell Phone Usage

Please turn off and place your phone inside your bag unless needed for emergencies or classroom use. Many studies have found a cell phone to be an impediment to learning in class. Cell phone use is a distraction to all members of the class—especially yourself. In addition, cognitive and behavioral scientists have found that electronic devices can erode ability to concentrate. Notably, the ability to focus is highly correlated with educational and occupational success. In addition, many college students report feeling addicted to their cell phones. Consider this class to be an oasis from your device. Please read the following article to understand one reason I have instituted this policy: https://psmag.com/social-justice/presence-smart-phone-lowers-quality-person-conversations-85805. This article states that the mere presence of a cell phone in the line of sight, lowers the quality of conversations.

Technical Help with Access to Online Aspects of Course

Technical and Academic Help provides a guide to technical and academic assistance.
This course uses the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Student Technology Training

Student technology training is now available in a new HuskyCT short course created by students for students. It will prepare you to use the IT systems and services that you will use throughout your time at UConn, whether learning online or on-campus. It is available at https://lms.uconn.edu/ultra/courses/_80016_1/cl/outline .

Classroom Expectations

As an upper-level course, this is designed to help prepare you for the workplace and a professional career. It is expected that in all electronic communications, through e-mail, in discussion forums and in the classroom itself, that communication will be professional and courteous.

Husky Study Groups

In the past, some students have gained a lot from study groups. Should you be interested in forming one, you can go here for more information: https://nexus.uconn.edu/secure_per/studygroups/index.php

Use of AI

You may not use AI during any in-class exam. You may use AI tools as support on your assignments, but not as the main author. Whenever you do use AI tools, you must include an acknowledgement statement that briefly shares that and how you used them. For example, “I used ChatGPT when I was stuck at the start and retained substantial parts of what it produced, including X and Y ideas and most of the wording in paragraphs 3 and 4”. On many assignments, there will be an explicit AI component or reflection that must be completed. Please also note that all large language models still tend to make up incorrect facts and fake citations. You will be responsible for any inaccurate, biased, offensive, or otherwise unethical content you submit, regardless of whether it originally comes from you or an AI tool (these last 2 sentences adapted from the course policies of Ryan S. Baker, University of Pennsylvania). See note below regarding further details on your work in this class.

Responsibility for Work

Note that you are responsible for the content and understanding of your work, and I reserve the right to invite a student to a meeting and ask questions regarding any submitted assignment. Should a conversation reveal that the student does not understand their work or they are unable to answer appropriate questions regarding their submission, I will adjust their grade or request an additional assignment accordingly.

If you engage in intentional academic dishonesty–whether plagiarizing or submitting the work of others or copying from others on a test or failing to acknowledge use of AI or other tools–you will fail not only that assignment but the overall course.

Policy Against Discrimination, Harassment and Related Interpersonal Violence

The University is committed to maintaining an environment free of discrimination or discriminatory harassment directed toward any person or group within its community – students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate amorous relationships can undermine the University's mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate amorous relationships, and such behavior will be met with appropriate disciplinary action, up to and including dismissal from the University. Additionally, to protect the campus community, all non-confidential University employees (including faculty) are required to report sexual assaults, intimate partner violence, and/or stalking involving a student that they witness or are told about to the Office of Institutional Equity. The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with University officials who can help.

Statement on Absences from Class Due to Religious Observances and Extra-Curricular Activities

Faculty and instructors are strongly encouraged to make reasonable accommodations in response to student requests to complete work missed by absence resulting from religious observances or participation in extra-curricular activities that enrich their experience, support their scholarly development, and benefit the university community. Examples include participation in scholarly presentations, performing arts, and intercollegiate sports, when the participation is at the request of, or coordinated by, a University official. Such accommodations should be made in ways that do not dilute or preclude the requirements or learning outcomes for the course. Students anticipating such a conflict should inform their instructor in writing within the first three weeks of the semester, and prior to the anticipated absence, and should take the initiative to work out with the instructor a schedule for making up missed work. For conflicts with final examinations, students should contact the Office of the Dean of Students. Faculty and instructors are also encouraged to respond when the Counseling Program for Intercollegiate Athletes (CPIA) requests student progress reports. This will enable the counselors to give our students appropriate advice.

Academic Dishonesty

Detailed policies on academic dishonesty can be found at the following link: https://policy.uconn.edu/2023/07/11/academic-scholarly-and-professional-integrity-and-misconduct-aspim-policy-on/