MATH 3550 – Programming for Actuaries ~ *Fall 2023*

Three credits *9:30 to 10:45 AM ~ Tuesdays and Thursdays ~ JRB 204*

Instructor

Dan Watt, FCAS Email: *daniel.watt@uconn.edu*

Please utilize our **Teams** channel for questions. *A link to the Teams channel is located on HuskyCT.* Either myself and/or other students can answer, which will allow everyone to see and share questions, answers, and ideas across the semester.

If you would like to meet separately…
My office hours *(MONT 206)***:**

- In-person: Tuesdays and Thursdays from 1:00 – 3:50
- In-person: Tuesdays and Thursdays 5:20 – 6:00 by appointment, if 1-3:50 doesn't work
- Virtual: Mondays and Wednesdays by appointment, if Tues/Thurs doesn't work

In the event of a snow day: We will meet virtually via my WebEx.
The WebEx Link is located on HuskyCT.

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)*
20%	Unit Tests *(3) equally weighted*
11%	Group Project ~ Excel
7%	Group Project ~ VBA
11%	Group Project ~ R
11%	Group Project ~ SQL
20%	Comprehensive Final Exam

A	=	93.3 – 100
A-	=	90.0 – 93.2
B+	=	86.7 – 89.9
B	=	83.3 – 86.6
B-	=	80.0 – 83.2
C+	=	76.7 – 79.9
C	=	73.3 – 76.6
C-	=	70.0 – 73.2
D+	=	66.7 – 69.9
D	=	63.3 – 66.6
D-	=	60.0 – 63.2
F	=	< 60

Note: Any late submissions for the course will be deducted 25% of points from total.

Breakdown of the 20% for Homework Assignments:

Assignment:	*1*	*2*	*3*	*4*	*Codecademy*
Percent Weight:	*5%*	*19%*	*19%*	*19%*	*38%*

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; what you think is fair.

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. We can talk in person if you are not satisfied with the outcome.

Code of Conduct

All 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.