MATH/STAT 2300: Mathematical modelling

Teacher: Theodore Kolokolnikov, tkolokol@gmail.com

Virtual Office hours see homepage "quick links" for hours and link.

Format: The course will be delivered online through a series of video lectures and associated notes in PDF format, as well as sample code notebooks. Delivery will be mostly asynchronous so you can watch at your own pace. However about once a week, we will have an on-line class to give all of us more opportunity for interaction. This class will be recorded and posted for those who cannot attend (however attendance is encouraged). The first online class is Wed, Jan 6, at 8:30am. We may change time/dates afterwards.

Class Textbook: "A Course in Mathematical Modeling" by Mooney and Swift, available from amazon or bookstore. Some of the material will be outside the textbook in which case notes will be provided.

Coding in python: Learning to code in Python and how to use it for simple math models is an essential part of this course. We will be using <u>Google colab</u> environment. No prior knowledge of python is assumed. Learning will be mostly done through examples. **Assessment:** Homeworks (50%) and two tests (50%). There will be no final exam. The worst homework grade will be dropped.

Submitting homework: The homework will require a combination of coding and written answers. For any coding questions, please print out both code as well as output (simply print the google colab workbook). All submissions must be in the form of a PDF file submitted via brightspace.

Schedule: Approximate schedule is below. Note this is subject to change.

Jan 16: hw1 due Jan 22: hw2 due Feb 1: hw3 due Feb 12: Test1 Feb 15-19: winter break Feb 24: hw4 due Mar 5: hw5 due Mar 15: hw6 due Mar 26: hw7 due Apr 7: last day of classes

Apr TBA: test2: scheduled in lieu of final exam.

Discussion board and getting help. We will be using <u>Piazza</u> discussion forum. You can ask questions there, and either myself, one of the TA's, or other students will answer them. You can even ask questions anonymously. You can also write math equations in it. You will get an answer faster by posting your questions to Piazza than by emailing me directly.

Cheating: JUST DON'T!! You are allowed to collaborate on homework questions, but you must write your own solutions in the end. You are NOT allowed to collaborate on tests (of course)!! If you are caught, there are grave consequences up to and including expulsion for serious cases. Any cheating will be automatically referred to the academic integrity board.

University Policies and Statements: Please familiarize yourself with standard Faculty of Science policies <u>found here.</u>