

MATH 3800D-- Mathematical Modeling and Computational Methods – Winter 2020

Instructor	Dr. Eric Hua (5218 HP, 520-2600 ext. 8999)
E-mail	xhua@math.carleton.ca
Course Web	culearn
Office Hours	Mondays and Wednesdays 11:30am—12:30pm, or by appointment, or by email (email Subject: MATH 3800D).
Textbook	(i) A First Course in Mathematical Modeling (5th Ed) by Giordano, Fox and Horton (ii) Applied Numerical Methods (with Matlab) for Engineers and Scientists (4th Ed) by Chapra
Lectures	Jan 6-Apr 7, Mon and Wed, 10:05-11:25, AT 101
Labs (start from Jan 13)	D1: Tue., 10:35-11:25, Herzberg Labs for Physics Room: 3393 D2: Tue., 08:35-09:25, Herzberg Labs for Physics Room: 3393 D3: Mon, 16:35-17:25, Herzberg Labs for Physics Room: 3393 D4: Mon, 13:35-14:25, Herzberg Labs for Physics Room: 3393 D5: Mon, 14:35-15:25, Herzberg Labs for Physics Room: 3393 D6: Tue., 15:35-16:25, Herzberg Labs for Physics Room: 3393
Assignments	You will have 4 assignments. The due dates will be January 22nd, February 12th, March 11th and April 1st., due in class . You must indicate your Lab Section on the front page of your assignments (failure to do so may result in your assignment not being marked). Late assignments will not be accepted.
Tests	There will be two tests, held during the lecture sessions, in the lecture room, on the following dates: <ul style="list-style-type: none"> • Feb 5 (Test 1), Wednesday. • March 18 (Test 2), Wednesday. <p>There will be no early nor make up tests. If you miss a test, its weight will transfer to the final exam.</p>

Marking Scheme:

- **30% (two tests) + 20% (assignments) + 50% (Final Exam).**

Calculators: Non-programmable, non-graphing calculators are allowed.

Prerequisites: i) MATH 1107 or MATH 1104; ii) MATH 1005 or MATH 2007; and iii) knowledge of a computer language.

Course Contents: In this course, we will study Mathematical Modeling. What exactly that means will be one of the topics we discuss. We will look at discrete, continuous and random processes, difference equations and differential equations. We will also study the numerical methods that come up along the way.

Science Student Success Centre: <http://sssc.carleton.ca/>

Academic Accommodations

Religious obligation: Write me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. **Pregnancy obligation:** Write me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

For more details, see:

<http://carleton.ca/equity/accommodation/academic/students/>

Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC every term to have a Letter of Accommodation sent to the Instructor by their Coordinator. In addition, students are expected to confirm their need for accommodation with the Instructor no later than two weeks before the first assignment is due or the first in-class test/midterm. If you require accommodations only for formally scheduled exam(s) in this course, you must request accommodations by the official accommodation deadline published on the [PMC website](#).

February 17-21, 2020: Winter Break. Classes are suspended.