Department of Mathematics & Statistics
Concordia University

MAST 331
Mathematical Modelling
Winter 2018

Instructor: Dr. A. Boyarsky, Office: LB 901-11 (SGW), Phone: (514) 848-2424, Ext. 3240
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Office Hours: Tuesdays, 12:00-13:00.

Textbook: Elementary Differential Equations, Boyce and Diprima, 10th Edition.

Assignments: There will be assignments given throughout the course. Solutions will be posted on the course website.

Calculators: Only calculators approved by the Department (with a sticker attached as proof of approval) are permitted in the class test and final examination. The preferred calculators are the **Sharp EL 531** and the **Casio FX 300MS,** available at the Concordia Bookstore.

Grading: The final grade will be based on the higher of (a) or (b) below:
(a) 10% assignments + 30% midterm + 60% final exam
or
(b) 100% final exam.

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

Course Content: Systems of First Order Linear Differential Equations. Basic Theory. Nonlinear Differential Equations. Phase Plane. Autonomous Systems and Stability. Predator-Prey Equations. Liapunov's Second method. Limit cycles. Chaos.

Academic Integrity and the Academic Code of Conduct
This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." *[Undergraduate Calendar, Sec 17.10.2]*