Instructor: Jack Buttcane
Office: Math 306
Email: my last name at buffalo dot edu
Office hours: T 4:00-5:00pm, W 5:00-6:00pm, R 4:00-5:00pm, or by appointment.
My webpage: http://www.acsu.buffalo.edu/~buttcane

Lecture: TR 5:00-6:20pm in Center for the Arts 144

The 3rd custom UB edition consists of Chapters 1-8 of the standard 5th edition (which is titled Differential Equations and Boundary Value Problems: Computing and Modeling). Homework will be assigned from the 3rd custom UB/5th standard edition, no points will be given for problems from other editions.

Expanded Syllabus: https://www.buffalo.edu/content/dam/cas/math/Undergraduate/MathUG-MTH306_syllabus.pdf

Course Description
Analytic solutions, qualitative behavior of solutions to differential equations. First-order and higher-order ordinary differential equations, including nonlinear equations. Covers analytic, geometric, and numerical perspectives as well as an interplay between methods and model problems. Discusses necessary matrix theory and explores differential equation models of phenomena from various disciplines. Uses a mathematical software system designed to aid in the numerical and qualitative study of solutions, and in the geometric interpretation of solutions.

Prerequisites: Math 141,142

Grading: The MAXIMUM of
• 15% homework + 25% each midterm + 35% final, OR
• 15% homework + 25% best midterm + 60% final, OR
• 20% homework + 10% best midterm + 70% final.

Grades assigned by the usual 10% breaks with 2% for +/-; e.g. 92% guarantees an A, 90% an A-, 88% a B+, etc. Individual exams will be curved; the instructor will uniformly shift total grades upwards to reflect the difficulty of the course.
Late work: Homework will be assigned on Tuesday and collected Thursday of the following week (9 days) by the end of class. No late homework will be accepted, and no make-up tests will be given.

Tentative Schedule

Jan. 31, Feb. 2: 1.1-1.3; Feb. 7,9: 1.4-1.6; Feb. 14,16: 2.2-2.4;
Feb. 21: Midterm I; Feb. 23: 3.1-3.3; Feb. 28,Mar. 2: 3.4,3.5;
Mar. 7,9: 3.6,4.1,4.2; Mar. 14,16: 5.1; Mar. 28,30: 5.2,5.5;
Apr. 4: Midterm II; Apr. 6: 6.1,6.2; Apr. 11, 13: 6.4,8.1,8.2;
Apr. 18,20: 8.3,7.1,7.2; Apr. 25,27: 7.3,7.4;May. 2,4: 7.5,7.6;
May. 9: Review;
May. 11, 5:00-6:20pm: Final Exam in CFA 144.

We may or may not cover section 6.3.