

Dave Goulet (goulet@)

Office: D-221

Course Web Page: http://www.davegoulet.com/classes/bmth311/2016_Winter

Textbook: *Mathematical Modeling in Systems Biology* by Brian P. Ingalls.

Office hours: See table below.

Table 1: Office Hours.

	M	T	W	Th	F
4	✓			✓	✓
8	✓			✓	✓
10		✓		✓	

Overview This course requires no previous knowledge of biology.

We'll extend and adapt techniques from differential equations to study models of biological systems. Some new mathematical topics will be introduced. Possible topics include partial differential equations, discrete dynamical systems, stochastic methods, and numerical methods. The goal of this course is to use familiar mathematical tools to model complex biological systems.

Homework We'll have roughly one assignment per week. These assignments will consist of homework type problems or the reading and presentation of research papers. Work will usually be due on Tuesday.

Readings Instead of a final exam, we'll read and present research papers. Grading will be based on presentation and discussion of those papers as well as brief written summaries.

Quizzes We'll have several quizzes. Quizzes will be comprised entirely of problems taken from the homework assignments. Quizzes will usually occur on Tuesday.

Other Details

- You're encouraged to cooperate and work together on homework.
- Grading will be weighted as follows: 20% homework, 20% quizzes, 20% class participation, 40% for the paper presentations and discussions.

Grading When grading quizzes, I and the grader will check that you have shown your work, used a valid method, and explained your ideas well using clearly written short sentences and equations. The majority of the points will be assigned based on how well you've explained things. Plugging into formulae without explaining your reasoning will result in a poor score. From a holistic point of view, we want to see that you understand the big ideas. I'm not looking for lengthy explanations, just a few concise and insightful words and sentences to accompany your mathematical work.