Classroom: 133 TMCB.
Class Time: 9:00–9:50 MWF.
Instructor: Chris Grant, 283 TMCB, 378-4105, grant@math.byu.edu. A webpage for this class is located at:

http://www.math.byu.edu/~grant/courses/m635/w00/index.html

Office Hours: Tentatively, 10:00–10:50 MTuWF. Other times by appointment.

Text: Introduction to the Modern Theory of Dynamical Systems, by Katok and Hasselblatt. I’d like to cover most of Chapters 0, 1, 2, 3, and 4, which make up the core of the book. After those, I’m probably most interested in looking at Chapters 6, 10, 11, and 15. I’m willing to adapt the course to cover the parts of the book that you’re most interested in, so please let me know where your interests lie. There is a flowchart in the preface that we’ll need to take into consideration.

Prerequisites: Math 315, 334 (and, unofficially, 634).

Grading: Approximately 70% of your grade will be based on your performance on homework problems, and 30% will be based on the final exam. The final exam will be a 40 minute oral report on a topic from ordinary differential equations or dynamical systems. The report will be centered around a peer-reviewed research article you have read (or, if you choose, your own research). All topics and articles must be approved by the instructor. A list of suggestions will be distributed early in the semester.

Two of the reports will be given during the last week of class, and the rest will take place during our final exam period on Saturday, April 15, from 7 a.m. to 10 a.m. Those who decide earliest will get first choice of topics and first choice of times to present their report. All students are expected to be present (and attentive) during other students’ reports.

Homework: Homework will be assigned periodically. Homework that is assigned on a Monday is due 18 days later at 12 p.m. Homework that is assigned on a Wednesday is due 16 days later at 12 p.m. Homework that is assigned on a Friday is due 14 days later at 12 p.m. Homework can be turned in to me at the start of class, left in my mail slot, or slid under my office door.

Homework that is turned in late, but less than one week late, will be eligible for 50% credit. Homework that is turned in one to two weeks late will be eligible for 25% credit. Homework that is turned in two to three weeks late will be eligible for 12.5% credit, etc. In case of an emergency (such as serious illness) or absence because of official university business, these deadlines may be extended by mutual agreement with the instructor. The length of the extension should be negotiated with the instructor as early as possible. In particular, extensions for foreseeable absences must be negotiated before the absences occur. Indeterminate extensions will not
be given. Under no circumstances will homework be accepted (for any credit) after midnight, April 12.

You are allowed (and encouraged) to get together with classmates to discuss homework problems, but you should not copy someone else’s answers nor should you let someone else copy your answers. If you have any questions at all about the difference between permissible collaboration and impermissible copying, consult BYU’s Academic Honesty Policy or ask your instructor.

Your homework will be graded carefully and should, therefore, be written carefully. You will be expected to communicate your answers clearly and give a logically coherent justification for them.

Computers: There is a variety of mathematical software that may be of assistance to you when working with differential equations and dynamical systems. If you don’t already have an account on the Math Department network, one will be assigned to you.

Time: If you find that you are spending much more than 9 hours per week exclusively on this class, please let me know as soon as possible, and we will see what adjustments can be made.

Feedback: Please let me know what I can do to help you learn the material better.