MAP 4303-1 Fall 2014
Ordinary Differential Equations II

Prof. **Zhe Liu**

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Office : MSB 420

Office Hours : M W 10:30 am $\sim$ 12:00 pm, or by appointment

Lectures : M W 12:00 pm $\sim$ 1:20 pm (Credit hours : 3), MSB 0109

Prerequisite : MAP 2302 and MAS 3105

Textbook :

Differential Equations, Dynamical Systems, and an Introduction to Chaos by M. Hirsch, S. Smale and R. Devaney, 3rd Edition, ISBN 978-0-12-382010-5 (hardback)

Course Description:

Systems of linear differential equations (planar systems, higher-dimensional systems), nonlinear systems, numerical solutions, stability theory, phase plane analysis, bifurcations and chaos

Course Objectives:

To provide students with an introduction to systems of linear and nonlinear differential equations through methods of solution, applications, and numerical approximations.

Course Website

- `http://math.cos.ucf.edu/~zheliu/teachingmap4303fall2014/`

  Most course material (homework assignments, course calendar, announcements, etc.) will be posted on our course website.

- Your (quiz and exam) grades will be posted on Webcourses@UCF.

Evaluation

- Homework

  Homework will be assigned weekly. Homework will not be graded. Extra credits (2 pts) will be given for each turned in and completed homework.

- Quizzes (15 pts $\times$ $(7-1)$ = **90** pts)

  Weekly quizzes will be given in class on Mondays (see course calendar). Each quiz consists of problems selected from the homework of the previous week. The lowest grade will be dropped. There will be NO make-up for missed quizzes.

- Exams (70 pts $\times$ 3 = **210** pts)

  There will be three in-class exams (see course calendar). There will be NO make-up for missed exams. All three exam grades will count toward your final course grade. However, if you missed an exam, your final exam "grade" (percentage) may be used (only once) to count as an exam grade.

- Final Exam (**100** pts)

  The final exam is scheduled on Wednesday, December 3, 10:00 am $\sim$ 12:00 pm. The final exam will be cumulative.

- The **TOTAL** possible points of this course will be **400**.

  Course grades will be determined according to the following scale.

A	[360, 400]	[90%, 100%]
B+	[348, 360)	[87%, 90%)
B	[320, 348)	[80%, 87%)
C+	[308, 320)	[77%, 80%)
C	[280, 308)	[70%, 77%)
D+	[268, 280)	[67%, 70%)
D	[240, 268)	[60%, 67%)
F	[0, 240)	[0%, 60%)

Calculators

You are allowed to use a basic scientific calculator (no programming, graphing, or symbolic manipulation capabilities) but NOT a graphing calculator. We recommend the "TI-30X IIS" or "TI-30XIIB" made by Texas Instruments. If you choose to use your own calculator, please ask for approval. If you fail to bring your calculator for a quiz/exam, then you must take the quiz/exam without one. Sharing of calculators will not be allowed. Use of technology other than an approved calculator is not allowed during quizzes and exams.

Academic Integrity

UCF faculty members have a responsibility for your education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to infringements of academic integrity. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see `http://z.ucf.edu`. For more information about UCF's Rules of Conduct, see `http://www.osc.sdes.ucf.edu`.

Disability Services at UCF

The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. Students who need accommodations must be registered with Student Disability Services, Ferrell Commons Room 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.

Religious Policy

It is the practice of the University of Central Florida to reasonably accommodate the religious observances, practices, and beliefs of individuals in regard to admissions, class attendance, and the scheduling of examinations and work assignments. A student who desires to observe a religious holy day of his or her religious faith must notify all of his/her instructor in writing at the beginning of the term (prior to the end of the add/drop period) to be excused from classes to observe the religious holy day. (Please note that documentation may be requested.)

Financial Aid Requirement

As of Fall 2014, all faculty members are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the following academic activity by the end of the first week of classes, or as soon as possible after adding the course, but no later than August 27. Failure to do so will result in a delay in the disbursement of your financial aid.

- Class attendance on Aug 18, 20; Quiz 1 on Aug 25.