

## MAT 414, Introduction to Ordinary Differential Equations, Fall 2017

### All sections

**Textbook:** *Elementary Differential Equations, 10th ed.*, by William E. Boyce and Richard C. DiPrima. We will cover the following sections:

Chapter 1: 1.1-1.3

Chapter 2: 2.1-2.7

Chapter 3: 3.1-3.8

Chapter 7: 7.1-7.9

Chapter 6: 6.1-6.5

These include the analytic and qualitative theory of first-order differential equations (linear and nonlinear), second-order linear equations, systems of first-order linear equations, and the Laplace transform.

**Prerequisites:** 12 credit hours of Calculus or equivalent. *Credit will not be given for both MAT 485 and MAT 514.*

**Grading:** The course grade will be based on 2 semester exams (25% each), a final exam (30%), and homework and/or quizzes (20%). The final exam is comprehensive. The exam dates as well as the policy on homework and quizzes for your section will be announced in class by your instructor. *There will be no make-up exams or quizzes. To receive credit, you will have to show all details of your work on each exam or assignment!*

**Attendance:** Attendance is required. Missing class is among the most common reasons for poor performance in the course. Students are responsible for all the announcements made in class (about assignments, due dates, etc). If you miss a class, you are responsible for obtaining notes for that class from a student who attended.

**Course Supervisor:** Professor Dan Coman, 317 D Carnegie, 443-1496, [dcoman@syr.edu](mailto:dcoman@syr.edu)  
Please inform your instructor first of any problems you have. Problems not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor without delay.

**Students with Disabilities:** If you believe that you need academic adjustments (accommodations) for a disability, please contact the Office of Disability Services (ODS), visit the ODS website <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315)

443-4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting academic adjustments. ODS is responsible for coordinating disability-related academic adjustments and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since academic adjustments may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

**Academic Integrity:** Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see <http://class.syr.edu/academic-integrity/>.

**Religious Observances Policy:** SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services → Enrollment → My Religious Observances) from the first day of class until the end of the second week of class.

**Tips for Success:** Don't fall behind! The material builds upon itself rapidly, so try to keep up on a daily basis. It is absolutely essential that you understand how to solve all the assigned

problems. Once you understand how to solve a problem, write down your solution neatly and in full detail with explanations that make your reasoning clear. This will make your old homework assignments more useful to you when you are studying for an exam. Expect to work hard, be persistent and patient.