

SYRACUSE UNIVERSITY
MAT 414-001, FALL 2013 - INTRODUCTION TO ORDINARY DIFFERENTIAL
EQUATIONS

Instructor: Associate Professor Steven P. Diaz, Room 317C Carnegie. **Phone:** 443-1583

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Location: Class meets in Room 119 Carnegie, 12:30pm – 1:50pm, Tuesday and Thursday

Office Hours: Tuesday 11:15am-12:00noon, Wednesday 2:15pm-3:10pm, Thursday 2:15pm-3:00pm

Textbook: *Elementary Differential Equations and Boundary*, 10th edition, William E. Boyce and Richard C. DiPrima.

Course Description: We will cover parts of Chapters 1-3 and 5-7, including: the analytic and qualitative aspects of first-order differential equations (linear and nonlinear), second-order linear equations, power series solutions, and Laplace transforms.

Mathematics Prerequisites: 12 Credits of Calculus or equivalent. Students are expected to be able to:

- take partial derivatives; set up and evaluate integrals; do integration by parts; and work with elementary linear algebra.

Important Note: Credit will not be given for both Mat 414 and Mat 485.

Grading: Your grade will be based on your scores on two midterm tests, a final exam and quizzes. Each midterm test will each count 25%, the final exam 30% and the quizzes 20% toward your grade. The dates for exams are listed on the day-by-day syllabus that follows. Notice that homework does not count toward your grade. It is not turned in. However, doing it is good practice for exams and quizzes.

Quizzes: Quizzes will be based on the most recent material and homework and will be given each Thursday except for October 3 and November 21. Homework is listed for each section below. It is important that you attempt all assigned problems. The best way to learn this material is to attend class, read the notes and do problems. Time will be allotted to answering questions on the homework at the beginning of the class period before the quiz.

Makeups: There will be no makeups for quizzes except as required by the University Religious Holliday policy. However, the lowest 4 quiz grades will be dropped. Makeups for exams will only be given as required by the University Religious Holliday policy and perhaps a few other very special circumstances. Do not assume you know what constitutes a very special circumstance without first discussing the matter with me. With a good reason I may agree to replace a missed test with grade with the final exam grade. Again, do not assume you know what constitutes a good reason without first discussing the matter with me. It is much better to contact me before the exam. Once an exam is handed in, it is very very rare that I will allow that grade to be dropped.

Students with Disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 303 of 804 University Avenue, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible coordinating

disability-related accommodations and will issue students with documented disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations.

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. Be aware that the presumptive penalty for a first offense is failure in the course. For more information and the complete policy, see <http://academicintegrity.syr.edu>

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 are 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.

Day-by-Day Syllabus: This lists what sections we intend to cover each class. We may sometimes get a little ahead or behind this schedule. However, the exams will be on exactly the days indicated.

Day	Date	Section	Homework
Tu	8/27	1.1	1, 2, 3, 7, 13, 15-20, 22, 29
		1.2	3, 5, 7, 9, 15, 19
Th	8/29	1.3	2, 4, 6, 10, 18, 20, 26
Tu	9/3	2.1	2, 4, 6, 20, 23, 35, 36
Th	9/5	2.2	13, 15, 18
Tu	9/10	2.4	2, 8, 15, 21, 28
Th	9/12	2.5	3, 9, 16
Tu	9/17	2.6	4, 8, 21, 27
Th	9/19	2.8	1, 5, 9, 14
Tu	9/24	3.1	2, 10, 15, 22, 28
		3.2	4, 5, 11, 14, 16, 18, 23, 24
Th	9/26	3.3	3, 7, 12, 15, 18, 21
Tu	10/1	Review	

Th	10/3	Exam 1	
Tu	10/8	3.4	2, 5, 7, 9, 11, 18
Th	10/10	3.5	2, 7, 11, 16, 27, 38
Tu	10/15	3.6	2, 3, 6, 8, 13, 15, 19
Th	10/17	5.1	1, 2, 4, 6, 8, 12, 14, 15, 16, 20, 24, 26
Tu	10/22	5.2	1, 4, 6, 7, 20, 22
Th	10/24	5.3	1, 4, 6, 8
		5.7	2, 4, 5, 6
Tu	10/29	6.1	3, 6, 7, 9, 18, 19, 22, 24, 26, 28
Th	10/31	6.2	2, 4, 8, 10, 15, 17, 20, 22, 26, 31, 35
Tu	11/5	6.3	3, 5, 6, 8, 12, 13, 15
Th	11/7	Review	
Tu	11/12	Exam 2	
Th	11/14	7.1	1, 3, 8, 10
Tu	11/19	7.2	2, 9, 11, 13, 16, 23, 24
Th	11/21	7.3	1, 2, 3, 6, 10, 17, 21, 24
Tu	12/3	7.4	3, 5
Th	12/5	7.5	2, 4, 6, 10, 12, 14, 18

Final Exam: Thursday, December 12, 2013 5:15pm-7:15 pm. Do not plan to leave town before the final exam.