**Math 214-002 Elementary Differential Equations, Fall 2017**

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**Lectures:** MW: 9am - 10:15 am, Robinson Hall B104.

**Lecturer:** Dr. E. Sander, Exploratory Hall, Rm 4408, *esander at gmu.edu* (where the at is replaced with the @ sign).
**Office Hours:** MW: 10:30-11:30

**Teaching Assistant:** Heath Camphire *Email will be posted on Blackboard*
**Office Hours:** will be posted on Blackboard

**Prerequisite:** Grade of C or better in MATH 213. Prerequisite(s) enforced by registration system.

**Course Text:** *Elementary Differential Equations*, 10th Edition, by William E. Boyce and Richard C. DiPrima, Wiley, 2012. We will be covering textbook Chapters 1-6.

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**Course goals:** This course covers first-order ODEs, higher-order ODEs, Laplace transforms, linear systems, nonlinear systems, numerical approximations, and modeling.

**Ungraded Homework:** Problem sets from the sections in the textbook will be assigned regularly. Although these will not be collected, success in this class depends strongly on completing and understanding these problems. Working together on ungraded homework is encouraged but each student is ultimately responsible for understanding the material.

**Quizzes:** There are weekly quizzes and two exams given on the dates mentioned. Quizzes occur during the recitations. Exams occur during lecture. They both cover the sections given below. The list is tentative, and all changes will be announced on Blackboard.

**Schedule:** *The following list is tentative, and all changes will be announced on Blackboard. The weekly quiz covers the material from the previous week.* Examples: Quiz 1 covers 1.1-3, Quiz 2 covers 2.1,2.2, Quiz 3 covers 2.3,2.4, and so on.

- 8/28-9/3, 1.1,1.2,1.3
- 9/4-9/10, 2.1,2.2, **Labor Day**, Quiz 1
- 9/11-9/17, 2.3,2.4, Quiz 2
- 9/18-9/24, 2.6,3.1, Quiz 3
- 9/25-10/1, 3.2,3.3, Quiz 4
- 10/2-10/8, 3.4, **Exam 1: Wednesday October 4**
- 10/9-10/15, 3.5,3.6, **Columbus Day: Class Tuesday, Wednesday,** Quiz 5
- 10/16-10/22, 4.1,4.2, Quiz 6
- 10/23-10/29, 4.3,4.4, Quiz 7

- 10/30-11/5, 5.1, 5.2, 5.3, Quiz 8
- 11/6-11/12, 5.4, **Exam 2: Wednesday November 8**
- 11/13-11/19, 5.5, 5.7, Quiz 9
- 11/20-11/26, 6.1, **Thanksgiving**
- 11/27-12/3, 6.2, 6.3, Quiz 10
- 12/4-12/10, 6.4, Review
- **Final Exam December 18: 7:30am-10:15am** (per official university schedule). It is a cumulative exam.

**Grading:** Your grade will be based on quizzes, *where two quizzes are dropped* (100 points scaled score), two exams (100 points each), a final exam (200 points). In general, 90%-100% = A, 80%-89% = B, 70%-79% = C, 60%-69% = D, below 60% = F. Plus and minus grades will be approximately 2 or 3 percentage points above or below these boundaries (e.g. 88% would correspond to a B+). I reserve the right to lower the curve, but will not raise the curve.

**Blackboard:** This class will be using Blackboard. Other than this syllabus, all handouts or information will be on Blackboard.

**Calculators:** Calculators will be treated as devices to assist in learning and understanding calculus but not as a replacement for knowing and remembering calculus. Therefore, no calculators will be allowed for use on either quizzes or exams.

**Recitations:** Each student must be registered in one of the three recitations associated with this class. The recitations are at the following times. **The number of students in each recitation is the maximum allowed by fire code. Therefore you must attend the recitation that you are registered for.**

- Section 304: Thursday 9:30 am - 10:20 am Krug Hall 19
- Section 305: Thursday 10:30 am - 11:20 am Krug Hall 19
- Section 306: Thursday 11:30 am - 12:20 pm Krug Hall 19

**Tutoring Center:** Help is available (free of charge) in the Math Tutoring Center, http://math.gmu.edu/tutor-center.php, located in the Johnson Center room 344. Hours are posted on the Tutoring Center website. Help is available on a walk-in basis. **I cannot emphasize enough how useful students find this resource.**

**Missed work:** Makeup exams and quizzes will not be given. In the event that one exam is missed and (1) a valid, documented excuse is given in writing to the instructor at the time of the absence and (2) the student provides sufficient evidence to the instructor that he/she is keeping up with the topics in the course, the final exam score will count in place of the missed exam. The instructor will determine whether an excuse is valid (for example, a medical emergency would constitute a valid excuse but leaving early for vacation is not a valid excuse). Without a valid documented excuse given at the time of the exam, a missed exam will count as a zero. If more than one midterm exam is missed, that situation will be dealt with on an individual basis.

**Honor Code:** THIS IS IMPORTANT. PAY ATTENTION TO THIS. It is expected that each student in this class will conduct himself or herself within the guidelines of the Honor Code. All academic work should be done with the level of honesty and integrity that this University demands. **Sharing information of any kind about exams or quizzes is prohibited. Use of electronic devices during exams and quizzes is prohibited.** Any violations will be sent to the Honor Committee and will result in a grade of zero.

**Office of Disability Services** If you will need to have me coordinate with the Office of Disability Services, please inform me and bring me all paperwork well over a week before the first test or quiz for which this is relevant.

**General Remarks:** Please be considerate of other students in the class. Turn your cell phones off before entering the classroom. Please get to class on time. If you must arrive late or leave early sit near the door to minimize the distraction.

My job as instructor is to facilitate learning by presenting material and answering questions. The lectures and recitations are a supplement to rather than a replacement for reading covered sections in the book. Your job as a student is to learn the material. This involves coming to class and recitation, paying attention, reading the textbook, doing homework, and resolving questions about the material. My expectation is that you are spending approximately **10 hours a week outside of class** on course materials.

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**A Set of Provost Required Remarks:**

- In order to comply with student privacy laws, faculty and students need to use their GMU email accounts when corresponding with each other.
- For information on academic and non-academic policies, please see the following sources.
    - University Catalog: http://catalog.gmu.edu/
    - University Policies: http://universitypolicy.gmu.edu/
- George Mason University is committed to diversity. For more information, http://diversity.gmu.edu.
- Student Support Resources: George Mason University has a number of academic support and other resources to facilitate student success. I have included the most relevant one: The Math Tutoring Center. There may be others that apply to you. (e.g., Counseling and Psychological Services, Learning Services, University Career Services, the Writing Center, etc.). Let me know if you are having trouble locating these resources.

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**Course Web Page:** *http://math.gmu.edu/~sander/courses/m214f17/*

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