Math 214-003 Elementary Differential Equations, Spring 2019

Lectures: MW: 3:00am - 4:15 pm, Robinson Hall B104.

Lecturer: Dr. E. Sander, Exploratory Hall, Rm 4408, *esander@gmu.edu*
Office Hours: MW: 1:30-2:30pm

Teaching Assistants: Haseebullah Baha
Office Hours: Will be posted on Blackboard

Learning Assistants: Chloe Ham and Colin Chung
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*, 11th Edition, by William E. Boyce and Richard C. DiPrima, Wiley. We will be covering textbook Chapters 1-7.

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, and exams occur during lecture.

Schedule: *The following list is tentative, and all changes will be announced on Blackboard.* **Each quiz covers the material from the previous week.**

- 1/22-1/27, 1.1,1.2
- 1/28-2/3, 1.3,2.1,2.2, Quiz 1, which covers the material from the previous week.
- 2/4-2/10, 2.3,2.4, Quiz 2, which covers the material from the previous week.
- 2/11-2/17, 2.6,3.1,3.2, Quiz 3: And so on.
- 2/18-2/24, 3.3,3.4, Quiz 4
- 2/25-3/3, 3.5, **Exam 1: Wednesday February 27**
- 3/4-3/10, 3.6, 3.8, Quiz 5
- 3/11-3/17, Spring Break
- 3/18-3/24, 4.1, 4.2, Quiz 6
- 3/25-3/30, 4.3, 5.4, Quiz 7
- 4/1-4/7, 6.1, **Exam 2: Wednesday April 3**
- 4/8-4/14, 6.2, 6.3, Quiz 8
- 4/15-4/21, 6.4,7.1, Quiz 9
- 4/22-4/28, 7.2, 7.3, Quiz 10
- 4/29-5/4, 7.4, 7.5, 7.6 Quiz 11
- 5/6, Final Review
- **Final Exam Monday May 13, 1:30-4:15** (per official university schedule). It is a cumulative exam.

Recitations and TAs: Each student must be registered in one of the three recitations associated with this class. The recitations are taught by a TA. 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 307: Wednesday 12:30 pm - 1:20 pm Robinson Hall B120
- Section 308: Wednesday 10:30 am - 11:20 am Robinson Hall B120
- Section 309: Wednesday 11:30 am - 12:20 pm Robinson Hall B120

Learning Assistants: The role of a learning assistant is to (free of charge) provide extra help and review above and beyond what the lecturer and the teaching assistants can provide. The learning assistant is assigned to this lecture only. **This special resource is essentially making a tutor available to you who specializes in Math 214 material. Please make sure to take advantage of it!**

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 the Tutoring Center.

Tips for success in this class:

- Attend class, be on time, and pay attention. This is also a courtesy to other students!
- Read the book, and do all assigned homework. This should take **10 hours a week outside of class.**
- Ask for help:
    1. Instructor office hours
    2. TA office hours
    3. LA office hours
    4. Tutoring Center

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 (170 points), attendance/participation (30 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.

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.

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 or other electronic devices are allowed during either quizzes or exams.

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

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

Office of Disability Services If you are working with ODS, make sure to inform me and bring me all paperwork well over a week before the first test or quiz for which this is relevant.
