**Course Content and Objectives:** A differential equation is an equation that relates the derivatives of an unknown function. They are the core of many areas not only of mathematics but also of other sciences and engineering. The goal of this course is to learn various techniques for solving differential equations of certain types, i.e., finding such unknown functions. In particular, we will study first-order differential equations, linear differential equations of higher-order, and Laplace transform methods.

**Blackboard:** [https://blackboard.olemiss.edu](https://blackboard.olemiss.edu)
All course-related materials will be posted on Blackboard. Please check the website for updates throughout the term.


**Software:** Mathematica (do not purchase it!) is available on the computers in the Weir Hall Computer Lab or you can install it on your computer using the university site license. Installation instructions can be found at [http://www.mcsr.olemiss.edu/appssubpage.php?pagename=mathematica.inc](http://www.mcsr.olemiss.edu/appssubpage.php?pagename=mathematica.inc)

**Evaluation:** Three tests will be worth 50% of your grade, participation (including quizzes) will be worth 15% and the final exam will be worth 35% of your grade. The following scale will be used to determine your final grade. Your course grade will be based on your percentage score ($S$) and determined according to the following scale.

- **A:** $93 \leq S \leq 100$
- **A-:** $90 \leq S < 93$
- **B+:** $87 \leq S < 90$
- **B:** $83 \leq S < 87$
- **B-:** $80 \leq S < 83$
- **C+:** $77 \leq S < 80$
- **C:** $70 \leq S < 77$
- **D:** $60 \leq S < 70$
- **F:** $S < 60$

**Homework:** Homework will be assigned, but it will not be collected or graded. Working on homework problems will be beneficial to you however since the test problems may be similar. If you have any questions about the homework, do not hesitate to stop by my office!

**Midterm Tests:** All tests will count equally. The lowest test grade will be replaced by the final exam percentage grade if that improves a student’s overall grade. There will be no make-up midterm tests (except for excused absences authorized by the University, see below). If a student has a valid reason for missing a test, documentation must be provided (e.g., a doctor’s note) and the final exam grade will be rescaled accordingly.

**Final Exam:** Tuesday, May 5, at noon.
Additional Policies: Makeup exams will not be given. Any student who must miss a scheduled exam because of an official university function must reschedule with the instructor to take the exam at a time before the exam is scheduled to be given. No other rescheduling is allowed. Official documentation must be provided. Students must show all work for each test question and arrive at a correct answer in order to receive full credit. An I grade will not be given without the permission of the Department of Mathematics. Every student must take the final exam at the time scheduled.

Attendance and Participation: Attendance is mandatory! Students may have at most two undocumented absences. Any additional absences not documented by a doctor’s note or an official letter from the University will result in the decrease of the student’s participation grade. Quizzes may be given and will be part of your participation grade.

Calculators: Graphing calculators, cell phones, and other electronic devices are not allowed during the tests and the final exam.

Withdrawal Deadline: The course withdrawal deadline for Spring 2020 is Monday, March 2. After the deadline, courses dropped will be recorded on University records and a grade of W will be recorded, if the student is not failing the course at the time of withdrawal; otherwise, the grade recorded will be an F. After the course withdrawal deadline, a student may drop a course only in cases of extreme and unavoidable emergency as determined by the academic dean; dropping a course after the deadline will not be permitted because of dissatisfaction over an expected grade or because the student is changing his/her major.

Important Dates (tentative):

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Classes begin</td>
<td>Monday, January 20</td>
</tr>
<tr>
<td>Test 1</td>
<td>Thursday, February 20</td>
</tr>
<tr>
<td>Spring break</td>
<td>Monday, March 9 - Friday, March 13</td>
</tr>
<tr>
<td>Test 2</td>
<td>Thursday, March 26</td>
</tr>
<tr>
<td>Test 3</td>
<td>Thursday, April 23</td>
</tr>
<tr>
<td>Classes End</td>
<td>Friday, May 1</td>
</tr>
<tr>
<td>Final Exams</td>
<td>Monday, May 4 - Friday, May 8</td>
</tr>
</tbody>
</table>

Academic Needs: It is the responsibility of any student with a disability who requests a reasonable accommodation for tests to contact the Office of Student Disability Services (915-7128). Any requests must be made through this office prior to the date of the test.