Math 353 – Elementary Differential Equations
Course Syllabus

Instructor  Donald R. Cole  129 Lyceum; Regular Office Hours: 8:30 a.m. – 10:30 a.m. M - Th plus After Class and by appointment; dcole@olemiss.edu; (915-1713) Class time: 11:00 p.m. – 12:55 p.m. Hume Hall – Oxford Campus


Course Description  This is a 3 semester-hour course comprising a comprehensive study of elementary ordinary Differential Equations (DE). Topics covered include Applications and solutions of first and second order DE, linear equations of higher order, DE with variable coefficients, Laplace Transforms and Systems of linear DE with constant coefficients, and solutions in series. Students are required to have earned a C or better in Calculus III as a prerequisite for taking this course and who have not fulfilled this requirement are asked to drop the class unless given special permission from the instructor.

Course Objective: This course is designed for the student to be able to appreciate the convergence of several scientific disciplinary fields to include Engineering, Physics, Economics and Chemistry. We will cover as many topics as possible, allowing for maximum learning of the subject and application of the material. The student will know the statement of the theorems in the chapters even when the proofs are omitted. Students will gain an appreciation of the their previous study of calculus, recognize this course as a natural transgression, acquire an appreciation for the for both the power and limitation of the theorems and obtain an introduction to the problems and considerations discussed in higher mathematical courses.

Teaching Method  This is a lecture course. While many of the theorems will be proved in class, some will be assigned to the students to examine their proper use and limitations. Problems sessions will be held weekly to supplement the lecture and students are expected to read the text and auxiliary handouts.

Tests, Quizzes, and Other Assessment Measures:
1. There will be three to four major in-class exams during the semester. Each test counts 100 points.
2. Quizzes (mostly on Thursdays –announced and unannounced) and Evening Problem Solving sessions both cumulatively counting for a total of 100 points will be given.
3. A Comprehensive Final Examination totaling 100 points will be given.

Final Grade Determination: An average of the exams and quizzes, will basically determine the final grade for the course. In cases of borderline averages, attendance in class and at problem sessions may be factored in to help the student. The following grading rubric will be applied in determining the course grade (No ± grades):
### Grade Percentage Necessary for Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Necessary for Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90% and above</td>
</tr>
<tr>
<td>B</td>
<td>80% - 89%</td>
</tr>
<tr>
<td>C</td>
<td>70% - 79%</td>
</tr>
<tr>
<td>D</td>
<td>60% - 69%</td>
</tr>
<tr>
<td>F</td>
<td>Below 60%</td>
</tr>
</tbody>
</table>

**Very Important Information:**

1. If a test is missed for any reason, a grade of 0 will be given. There will be **no make up tests** given for any reason other than official university functions. Any student who must miss an exam because of an official university function may reschedule the exam **before** the test is originally scheduled. This is the only rescheduling allowed.

2. No make up quizzes will be given.
3. No late homework will be accepted.
4. An “I” grade will not be given without the permission of the Department of Mathematics.
5. Students must show all work on Exams and Quizzes in order to receive credit.
6. A student who wishes to discuss the grading policy, testing policy, or wishes to have a conversation regarding the structure of the course should make an appointment with the course supervisor in the Department of Mathematics.
7. Each student is responsible for all work missed due to absences.
8. The student shall turn in 5 large 8 ½ by 11 inch blue examination books for use on the tests and final to Dr. Cole as soon as possible.
9. Special Note: All cellular phones, pagers, and other electronic equipment should be turned off during the class period.
10. Use of electronic calculators **will not** be allowed during exams; sufficient work is shown in obtaining the final results.

**Attendance Policy:** Starting Tuesday, Feb 2nd, absences will be counted. A student is allowed two absences without penalty. Starting with the third absence, 10 points is deducted from the students’ final point total for each absence. **Special Note:** Students are asked to neither come into the class late nor leave early without prior permission from the instructor.

**A Code of Ethics**

The greatness The University of Mississippi is completely determined by the members of its community. If each student and teacher regards his role with high esteem and honor, then The University of Mississippi will be among the greatest institutions in the nation. Creating a great institution is a cooperative venture. We must all perform at our level best. This means that teachers do their best in teaching and professing. Students prepare all assignments and tests with their greatest writing skills and thought. Students must attend class and participate in classroom discussions, showing respect for fellow classmates and teacher. Students must use the class to learn to become professional. Always be on time and leave only when class has been dismissed. Respect the buildings and campus by not littering, eating or drinking in classroom buildings. Maintain a positive and mature attitude.
Cheating: The following statement is the policy of Department of Mathematics regarding cheating:

Offenses: Cheating on any exam, quiz, class work, or homework, theft of exam questions or possession of exam questions prior to the time for the exam shall all be offenses subject to the appropriate penalties.

Penalties: The penalty for commission of any offense set out above is failure in the course, and subject to the approval of the Chancellor, dismissal or suspension from the University.

Withdrawal Deadline Date for the Semester: Friday March 4, 2016. After the course withdrawal deadline, courses will be recorded on University records and the “W” grade 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 student’s academic dean. Dropping the course after the deadline will not be permitted because of dissatisfaction over an expected grade or because the student is changing their major.

Special Dates:

- **Spring Break:** March 14th – 18th,
- **Last Day to Drop:** Friday, March 4th
- **Last Day of Class:** Friday, May 6th
- **Final Exam:** Noon. Tuesday May 10th

Learning Outcomes: The student successfully completing this course will be able to have an understanding of the basic mathematical vocabulary of the subject area covered, be able to iterate the definition of a linear and non-linear DE as well as an ordinary or partial DE, have an appreciation of the application of the material covered, coherently explain the Fundamental Theorem of Calculus and have an appreciation of how the material relates to other mathematics courses

Subject to Change Provision: The schedule and policies set forth in this syllabus are subject to revision at any time.