Prerequisite: C or better in Calculus II

Section 52: MWF 9:00-9:50 am, D225
Section 53: MWF 10:00-10:50 am, D225

Test 1 Blank | Test 1 Key
Test 2 Blank | Test 2 Key
Test 3 Blank | Test 3 Key

FINAL EXAM: Section 52: Friday, December 11, 2015, 10:30-12:30 pm
FINAL EXAM: Section 53: Monday, December 14, 2015, 10:30-12:30 pm

Classroom etiquette: Please respect the personal nature of learning in a small, interactive class by refraining from use of cell phones and other gadgets.

INSTRUCTOR: Dr. M. Dillon
OFFICE: D246
OFFICE HOURS: MWF 11:00 -11:30 am, 1:00-1:30 pm; also by appointment
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COURSE DESCRIPTION: An introduction to the theory of ordinary differential equations (ODEs), methods of solving first and higher order linear differential equations and linear systems, some applications in the sciences and engineering, the Laplace transform and its application in solving differential equations and linear systems, stability analysis and Euler's numerical algorithm.


The plan is to cover 1.1-1.3, 2.1-2.4, 2.6, 2.7, 3.1-3.7, 4.1-4.4, 5.1-5.3, 6.1-6.5 in the text.
TECHNOLOGY: Nothing specific is required for homework and no technology is permitted on quizzes and tests. You must be able to solve simple differential equations by hand and that includes anti-differentiation skills you learn in Calculus II. For more interesting problems, use whatever you have at hand. (Mathematica is now available to all KSU students and the text gives code for DE solving. Matlab is also available to students. This link takes you to a page with information about using Matlab for ODEs.)

GOALS: Upon completing this course students should be able to:

1. Use vocabulary correctly and categorize ODEs appropriately.
2. Find analytic and numerical solutions of certain types of ODEs by hand.
3. Identify and solve certain applications, including spring problems and circuit problems.
4. Understand when and how to use Laplace transforms to solve ODEs.
5. Understand basic ideas that apply to autonomous equations.

ATTENDANCE POLICY: Class attendance is required for this course. Students are solely responsible for managing their enrollment status in a class; nonattendance does not constitute a withdrawal.

GRADING: Your course grade will be calculated based on the following components.

1. Two out of three in-class tests count towards 40% of your final grade.
2. The final exam will count towards 40% of your final grade.
3. Ten out of approximately 13 quizzes will count towards 20% of your final grade.

TESTS: Tests are scheduled for Friday, September 18; Wednesday, October 21; Monday, November 30. The lowest test grade is dropped so there are NO MAKE-UP TESTS.

QUIZZES: Quizzes will be given with or without warning approximately once a week. Quizzes will be based on the assigned homework problems and you will have an opportunity at every class meeting to ask about the homework. Only the best 10 quizzes will count towards your grade, so approximately 3-5 quiz grades will be dropped, thus, there are NO MAKE-UP QUIZZES.

FINAL EXAM: The final is COMPREHENSIVE.

MAKE-UPS? NO, NONE, NEVER—There are NO MAKE-UPS in this class!

WITHDRAW DATE: Wednesday, October 7 is the last day to withdraw with a grade of “W.” (For current policy on the number of withdrawals permitted, see http://catalog.kennesaw.edu/content.php?catoid=24&navoid=2171#withdrawalfromclasses.)

RECORDING DEVICES: The use of any and all electronic recording devices during class meetings of this course is expressly forbidden. Electronic recording devices include, but are not limited to, cell phones, tape recorders, and video cameras. Under certain circumstances, students
with special needs may request permission of the instructor to record classes. Permission granted under these circumstances will be strictly limited and all details will be in writing.

**Accommodations:** Any student with a documented disability or medical condition needing academic accommodations of class-related activities or schedules must contact the instructor immediately. Written verification from the KSU Student Disability Services (http://www.kennesaw.edu/stu_dev/dssw/welcome.html) is required. No requirements exist that accommodations be made prior to completion of this approved University documentation. All discussions will remain confidential.

**Academic Dishonesty:** There is a zero tolerance policy on cheating in this course. The use of any electronic devices, including phones, is expressly forbidden during tests and quizzes. Every KSU student is responsible for upholding the provisions of the Student code of Conduct, as published in the Undergraduate and Graduate catalogs. The Student Code of Conduct addresses the University’s policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic malicious/intentional misuses of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the Student Conduct and Academic Integrity department, which includes either an “Informal” resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct’s minimum one semester suspension requirement.

**Course Schedule with Homework Problems**

Subject to change!

Due dates are noted to the left of each assignment. Please note that we have 45 meetings and every single one counts. We do not have time to waste. **Please come to class every day with your work prepared.**

There may be more than you can do here. Try to finish, but don’t become overwhelmed. You should spend 1-2 hrs per day on homework. If you work problems every day, your endurance will improve. It is most important to keep working.

1) 8/17: FIRST DAY OF CLASS
2) 8/19: Section 1.1, p. 5: 1-21 odd
3) 8/21: Section 1.2, p. 10: 1-11 odd, 4, 12
4) 8/24: Section 1.3, p. 16: physics, mathematics, engineering, ecology
5) 8/26: Section 2.1, p. 26: 1-25 odd
6) 8/28: Section 2.2, p. 34: 1-11 odd
7) 8/31: Section 2.3, p. 44: 1-15 odd
8) 9/2: Section 2.4, p. 49: 1-5 odd
9) 9/4: Section 2.6, p. 67: 1
   **9/7: LABOR DAY, NO CLASS**
10) 9/9 Section 2.7, p. 75: 1-11 odd
11) 9/11: Get caught up.
12) 9/14: Get caught up.
13) 9/16: REVIEW DAY; have questions ready
14) 9/18 TEST 1 on 1.1-1.3, 2.1-2.4, 2.6, 2.7
15) 9/21 Have questions ready about the test. Read 3.1.
16) 9/23 Section 3.1, p. 84: 1-17 odd
17) 9/25 Section 3.2, p. 92: 1-15 odd
18)  9/28 Section 3.3, p. 99: 1-9 odd
19)  9/30 Section 3.4, p. 111: 1-27 odd
20)  10/2 Section 3.5, p. 122: 1-5 odd
21)  10/5 Section 3.7, p. 139: 1-7 odd
22)  10/7 Get caught up
23)  10/9 Section 4.1, p. 145: 1-11 odd
24)  10/12 Section 4.2, p. 154: 1-17 odd
25)  10/14 Section 4.3, p. 159: 1-7 odd
26)  10/16 Section 4.4, p. 170: 1-11 odd
27)  10/19 REVIEW DAY; have questions ready
28)  **10/21 TEST 2 on 3.1-3.5, 4.1**
29)  10/23 4.3
30)  10/26 4.3, p. 159: 1-7 odd
31)  10/28 4.4, p. 170: 1-11 odd
32)  10/30 Finish Chapter 4 through 4.4
33)  11/2 6.1, p. 221: 1-15 odd
35)  11/6 6.3, p. 234: 1-23 odd
36)  11/9 6.4, p. 246: 1-19 odd
37)  11/11 6.5, p. 256: 1-9 odd
38)  11/13 Catch up Chapter 6
39)  11/16 Catch up Chapter 6
40)  11/18 Breathe
41)  11/20 Review
42)  **11/23-11/27 Thanksgiving Break**
43)  **11/30 TEST 3 on 4.2-4.4, 6.1-6.4**
44)  12/4 Review: have questions ready about the course.
45)  12/7 LAST DAY OF CLASS; Review: have questions ready about the course.

FINAL EXAM:  Chapter 1, Chapter 2 (in 2.6, ONLY 2.6.1), 3.1-3.5, 4.1-4.4, 6.1-6.4

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