

## MATH 4233 - Intermediate Differential Equations- Fall 2012

INSTRUCTOR: Dr. Roger Zierau  
OFFICE: MS502A  
OFFICE HOURS: MWF 9:30-10:20 and by appointment  
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TIME and PLACE: MWF 2:30-3:20 in HSCI 004A

**TEXT:** *Elementary Differential Equations and Boundary Value Problems*, ninth edition, by Boyce and DiPrima is the textbook. (The eighth edition will work fine, but you will need to keep up with some small differences in the numbering of sections and exercises.)

**PREREQUISITES:** MATH 2233 (Differential Equations) and MATH 3013 (Linear Algebra).

**COURSE CONTENT:** This is a second course on differential equations. We will cover most of Chapters 7-11, and part of Chapter 5. Students will be expected to learn and use some MAPLE (a computer algebra program).

**GRADUATE CREDIT:** Students enrolled in MATH 4233 01G (for graduate credit) are required by the university to complete some work beyond that required of those enrolled in MATH 4233 001 (for undergraduate credit). For this course that additional work is a fifth homework 'project'.

**HOMEWORK and EXAMS:** There are two types of homework. Routine exercises from the book will be assigned as we cover the material. Students will keep a notebook with complete solutions to these routine homework problems. This notebook will be collected and graded two times during the semester. There will also be four (five for graduate credit) homework 'projects', which will go into more depth. These are to be done completely on your own (no collaboration whatsoever) and will be handed in and carefully graded. There will be a midterm and a final exam. The midterm exam will cover Chapters 7 and 9 and will occur during the first week of October.

**GRADES:** The midterm is 100 points and the final is 100 points. The homework will be 120 points (140 for graduate credit), giving a total of 320 possible points (340 for graduate credit). Letter grades will be assigned as follows:

at least 288 points: guaranteed A  
256-287 points: at least a B  
208-255 points: at least a C  
192-207 points: at least a D  
0-191 points: probable F.

(for graduate credit:  
at least 306 points: guaranteed A  
272-305 points: at least a B  
222-271 points: at least a C  
204-221 points: at least a D  
0-203 points: probable F.)

**MAPLE:** MAPLE is powerful software that allows one to do computations such as finding derivatives and antiderivatives, and to create various plots. It is available in the university computer labs and at <https://virtuallabs.okstate.edu/> Time will be spent in class on getting started with MAPLE and more information will be provided.

**MISSED WORK:** Students shall be offered reasonable accommodation in the event that he or she misses an exam or is unable to turn in a homework assignment on time for a valid and documented reason. Valid reasons include official University activities, activities associated with military service, illness and family emergencies. Appropriate documentation shall be provided by the student in a timely fashion, preferably in advance, to support his or her request for accommodation.

**D2L:** Students are required to use and regularly check D2L since announcements and assignments will be posted on there. Students should be sure to set their email on D2L to an address that they regularly use; certain announcements and reminders will be emailed to students using this address.

**ATTACHMENT:** See the attached university 'syllabus attachment' for additional information, policies and dates.