Math 3331 – 18135 (Fall 2016)
Differential Equations *

Instructor:	Dr. Blerina Xhabli
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Course Webpage:	www.math.uh.edu/∼blerina/
Lecture Time/Room:	MW 1:00pm – 2:30pm / SEC 202
Office:	609 PGH
Office Hours:	TBA and/or by appointment

Prerequisites

Math 2331 (Linear Algebra) and Math 2433 (Calculus III).

Texts

Differential Equations, Second Edition, by J. Polking, A. Boggess and D. Arnold. Prentice Hall, 2006.

Course Content

This class serves as an introduction to Ordinary Differential Equations (ODEs) and systems of ODEs. Topics include: Existence, uniqueness and stability of solutions; first and second order ODEs; applications; the Laplace transform; numerical methods; systems of ODEs; solutions of linear equations with constant coefficients; qualitative results. This course may be more abstract than courses you have had in the past.

Course Homepage

The course webpage is located at *www.math.uh.edu/ ∼ blerina/*. On the course webpage you will find the lecture notes for each section, the homework as it is assigned, a copy of this syllabus, exam dates, and announcements as they are made.

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*This course syllabus provides a general plan for the course; deviations may be necessary.

Grading

The final grade for this class will be determined as follows:

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\begin{array}{rl}
\text{Homework Assignments:} & 15\% \\
\text{Exam(s) I, II, III:} & 20\% \text{ each} \\
\text{Final Exam:} & 25\%
\end{array}
$$

Homework

A list of homework problems (for each section) will be given every week on the course homepage. Homework will be due on Wednesdays and returned on the following Monday. **Late homework is not permitted for any reason.** Your lowest homework score throughout the term will be dropped to allow for missed assignments. There is a graduate student grader for the course. If you have any issues with the way the homework or a particular problem is graded, please contact me. Your turned-in homework grade will be based on the following guidelines:

- Homework without a name will not be accepted and/or graded.

- Homework will not be accepted by email.

- Write legibly, and use only one side of the paper.
  Leave enough room for the grader to make comments.

- Your homework should be stapled in the upper-left-hand corner.

- Homework should be written on standard-sized paper (8.5" × 11").

- Solutions to homework problems should be written in sequential order.

- Homework is due at the beginning of the class on Wednesdays.
  Late homework will not be accepted.

- Homework that is not picked up within two weeks of the date it is handed back will be discarded.

Exam Dates

There will be three in-class exams and a cumulative final on the following dates:

Exam I (§2.1–§4.7)	Wednesday, September 28
Exam II (§5.1–§8.3)	Wednesday, October 26
Exam III (§8.4–§9.7)	Monday, November 21
Final (Cumulative)	Friday, December 9, 2pm – 5pm

Books and notes will not be allowed on all exams. Please bring your Student ID to exams. You may be asked to show it to prove that you are the student whose name is on the exam you turn in.

Note: The final exam grade will replace one of your lowest exam grades if doing so will improve your grade significantly. This rule is valid if you score at least +65% in your final exam.

Makeup Policy

In general, not turning in homework when it is due or not being present for an exam results in a score of zero, and you will not be allowed to make up the work. Exceptions may be made in the case of extreme circumstances, such as a documented, serious illness. In the event that you cannot be present to turn in homework or take an exam on the day it is held you need to speak to me *in advance*, and make every attempt to do the work before (and not after) the rest of the class. Absence from the final exam will result in a grade of F for the course unless arrangements are made prior to its administration.

Reading Assignments

Reading assignments will be given weekly on the course homepage. Completing the reading assignments is just as critical as doing the written homework. You should read the assigned sections *before* we cover them in classes, so you are prepared to answer questions or ask about material you do not understand.

Attendance

A student is considered present only if he/she has arrived on time and remains until the class is dismissed. Coming to class late or leaving early is disruptive and thus discouraged. The instructor may drop a student for excessive absences (see Catalog/Student Handbook). Those who have excellent attendance but are on a grade borderline will get extra consideration at the end of the class.

Withdrawal

- *Wed. 9/7/2016*: the last day to drop/withdraw a course without a grade.

- *Fri. 10/28/2016*: the last day to drop/withdraw a course with a 'W' grade.

Policy on Incompletes

Incompletes are given only in very unusual circumstances, and never just to prevent a bad grade or provide the student with more time to prepare for an exam.

Academic Honesty

Plagiarism and cheating are serious offences. The University policies on scholastic dishonesty will be strictly enforced (see Catalog/Student Handbook). In this course this shall mean the following: Homework and Written Proofs can and should be worked on and discussed with others. However, the write-up should be independent and in your own words, without the help of other people or outside sources. In addition, exams shall be worked on independently and without the use of your textbook, homework, or class notes. Moreover, if you are aware of anyone who is cheating or receiving unfair, outside assistance, you are honor bound to inform the instructor of what is occurring.

Anyone caught cheating will receive a failing grade in the course and be turned over to the department chair and dean for further disciplinary action.

Cell Phones and Electronic Devices

During class and exam periods, all cell phones and other electronic devices must be turned off and kept in a secure location away from the student's immediate view. The use of laptop computers is only permitted if students are using the computers to take notes or for purposes related to the class.

Special Needs

Any student with a disability or chronic health problem for whom special accommodations would be helpful is encouraged to discuss with the instructor the types of assistance that might be offered. If you have forms from CSD that need to be filled out, you should come to my office to discuss the accommodations being made, and to fill out the required forms.

Schedule

The following is a tentative schedule which might be updated throughout the semester. Lecture notes will be posted on the course webpage.

Table 1: Tentative Calendar for Math.3331 – Fall 2016		
	Monday	**Wednesday**
Week 1	Introduction	§2.1
8/22-8/26	§1.1 – §1.3	§2.2
Week 2	§2.2	§2.4
8/29-9/2	§2.3	§2.5
Week 3	Labor Day	§2.7
9/5-9/9	No class	§2.8
Week 4	§2.9	§4.1
9/12-9/16	Chapter 3	§4.2
Week 5	§4.3, §4.4	§4.5
9/19-9/23	§4.5	§4.6, §4.7
Week 6	Review	Exam I
9/26-9/30	Session I	(§2.1 – §4.7)
Week 7	§5.1	§5.2
10/3-10/7	§5.2	§5.3
Week 8	§5.4	§6.1
10/10-10/14	§5.5	§6.2
Week 9	§6.3	§8.2
10/17-10/21	§8.1	§8.3
Week 10	Review	Exam II
10/24-10/28	Session II	(§5.1 – §8.3)
Week 11	§8.4	§9.1
10/31-11/4	§8.5	§9.2
Week 12	§9.2	§9.4
11/7-11/11	§9.3	§9.5
Week 13	§9.6	Review
11/14-11/18	§9.7	Session II
Week 14	Exam III	ThanksGiving
11/21-11/25	(§8.4 – §9.7)	Holiday
Week 15	§9.8	Final
11/28-12/2	§9.9	Review
Week of Finals 12/5-12/16	**Final Exam →**	**Friday, Dec.9** **2–5pm**