University of Tennessee

Math 231 Differential Equations I

Section: 011; CRN: 43118; Meets: TR 9:40 AM - 10:55 AM

Syllabus Fall 2019

Welcome to Our Differential Equations Class

Course Description: First course in differential equation emphasizing solution techniques.

Prerequisites: Math 142, 148 or Calculus II.

Instructor: Dr. Wenbo Li

Office Hours and Location: Monday 9:40am-11:00am, Tuesday 2:10pm-3:40pm, Thursday 3:50pm-5:00pm in Ayres Hall 207 & by appointment.

Ways to contact: wli50@utk.edu, or messages on canvas.

Course Communications: I will post course materials, grades, and class announcements on Canvas. You are always welcome to contact me through email or canvas, but if you have a question about math, I think a better way is to come to my office hours or make an appointment so we can discuss it face to face.

Student Learning Outcomes: Upon completion of Math 231, students will be able to

- Identify and classify a variety of differential equations

- Solve and interpret solutions to differential equations

- Apply Laplace transform to solve differential equations

- Find power series solutions to linear differential equations

- Use differential equations to model a variety of applied problems

Textbook: *Fundamentals of Differential Equations, 9th Edition*, Nagle, Saff and Snider, Pearson. We will be covering selected sections from Chapters 1-5, 7, 8.

Assessment and Evaluations Methods:

Worksheets (2%) + Homework (8%) + Quizzes (10%) + Midterm exams (50%) + Final (30%)

Worksheets: sometimes there will be in-class group work problems, you need to turn in your own individual worksheet at the end of the class.

Homework: although students are required to do all suggested homework problems (see class schedule at the end), I will only collect and grade part of the homework. I will post which problem and when to collect on canvas. I encourage group participation in the solution of exercises, but you have to write down the solution on your own in the end.

Quizzes: there will be six 15 minutes quizzes in total, only your five best quiz scores count.

Midterms: there will be three midterm exams, the lowest midterm grade in percent may be replaced by your final exam grade in percent if the latter is higher.

Final: a comprehensive exam covering all the materials we learn this semester.

Letter grades will be based on the following scale:

Grade	A	B+	B	C+	C	D+	D	F
%-Score	90+	87-89	80-86	77-79	70-76	67-69	60-66	0-59

I reserve the right to change this scale, provided the change benefits all students. All grades will be made available online.

Calculators: The use of a calculator as an auxiliary tool is allowed in this class. Devices with Internet capability such as cellphone calculators are prohibited during the quizzes and exams. To obtain credit, all the steps leading to the solution of a problem must be clearly written.

Learning Environment and Classroom Expectations/Etiquette:

Everyone is expected to maintain an atmosphere that fosters a positive learning environment.

- Attendance to every class is mandatory.
- Questions are welcomed
- Reading ahead textbook materials in preparation for each class is highly encouraged
- No cellphones, tablets and laptops are allowed except the time for playing games on quizizz.com
- Eating food in the classroom is not allowed.

Make Up Policies: There will be NO make up for the quizzes. Late homework submission is not acceptable unless for a valid reason. Make ups for the in-class exams and final will be given

only if a student can present evidence that an absence was caused by serious illness, a death in the immediate family, religious observance, or participation in University activities at the request of University authorities. For an illness, you must present a signed statement from a doctor that your illness was sufficiently serious to make you miss class. A note saying only that you visited the doctor or the Health Center will not Suffice.

Math Tutorial Center

Free tutoring is provided for all 100 level and most 200 level math courses including this course. I highly recommend you take advantages of this resources provided by the university.

Campus Syllabus:

STUDENTS WITH DISABILITIES -- http://sds.utk.edu

"Any student who feels he or she may need an accommodation based on the impact of a disability should contact the Student Disability Services (SDS) at 865-974-6087 in 100 Dunford Hall to document their eligibility for services. Student Disability Services will work with students and faculty to coordinate reasonable accommodations for students with documented disabilities."

ACADEMIC INTEGRITY

Each student is responsible for his/her personal integrity in academic life and for adhering to UT's Honor Statement. The Honor Statement reads: "An essential feature of the University of Tennessee, Knoxville is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity."

How to be Successful in this Course:
- Show up in class and be on time.
- Listen carefully, take notes, and ask questions during the lecture.
- Think, work smarter and discuss with classmates after class.
- Review and rework problems that you got wrong.
- Start preparing for exams early.

If the instructor finds it necessary to make informational changes (e.g. office hours, schedule adjustments) due to students' needs or unforeseen circumstances, students will be notified in writing/email of any such changes.

Key Dates - Fall 2019: UT Calendar

Math 231 Projected Schedule Fall 2019

	Section	Homework Problems and Other Information (Keep updating)
8/22	1.1	1.1: 1-16
	1.2	1.2: 1-6,9-12,
8/27	1.2	1.2: 18,19,20,22,23,25,26,27,29
	1.3	1.3: 1,3,5,7,9
8/29	2.1	Appendix A: 1,3,6,9,11,15,21,24,25,27,29,31,34
	2.2	2.2: 1,3,5,7,9,11,17-21
9/3	2.3	Quiz 1, first quiz, don't panic and be prepared.
		2.3: 1,3,5,7,10,11,15,17,18,19,25,28,29
9/5	2.4	2.4: 1,3,5,9,11,15,17,21
	2.5	2.5: 7,9,12,13
9/10	2.5	Quiz 2
	2.6	2.6: 9,12
9/12	3.2	3.2: 1,2,3,4,19
	3.4	3.4: None
9/17	Exam 1	Covers chapters 1, 2, 3
9/19	4.1	4.1: 1,2,3,7,9
	4.2	4.2: 3,5,7,13,19,20
9/24	4.3	4.3: 1,3,5,21,22,27,31(a)(c)
9/26	4.4	Quiz 3
		4.4: 1,3,5,11,13,17,19,21
10/1	4.5	4.5: 1,3,7,9,11,19,20,21,23,24,25,27,29,31,33,35
10/3	4.6	4.6: 1,3,5,6,9,18
10/8	5.2	Quiz 4
		5.2: 1,3,7,12,19,20
10/10	Review	Review for the Exam 2
10/15	Exam 2	Covers chapter 4 and section 5.2
10/17	No class	Fall Break! Hope you enjoy the break after exam!
10/22	5.4	5.4: 3-6; and additional homework in pdf file on canvas
10/24	7.1	7.2: 1-5,9,11,13,15,17,19
	7.2	
10/29	7.3	7.3: 1-10,13,14,22
10/31	7.4	7.4: 1-9,11-13,15,22,23,25
11/5	7.5	Quiz 5
		7.5: 1,3,5,7,15,17,25,29,30

11/7	**7.6**	**7.6: 1,3,5,7,9,11,12,13,15,21,23,27,29**
11/12	**8.1**	**8.1: 1,3,5,6**
11/14	**8.2**	**8.2: 9,11,13,17,23,25,26**
11/19	**8.3**	**Quiz 6** **8.3: 11,13,15,16,17,19,21,25,26**
11/21	**Review**	**Review for the Exam 3**
11/26	**Exam 3**	**Covers chapters 7, 8 and section 5.4**
11/28	**No class**	**Thanksgiving**
12/3	**Review**	**Review for Final**
12/10	**Final Exam**	**Comprehensive Exam: Tuesday, December 10,** **10:15 AM - 12:15 PM. GOOD LUCK!!!**