

Syllabus for
MATH 2233 – Differential Equations
Summer 2016

Instructor: Matthew Wilson

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Class Time: MTWR 9:00-10:15 AM

Office Hours: 10:15-10:45 MW, 8:30-8:55 TR

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Course Description

From the catalog: *Prerequisite(s): 2153 with grade of "C" or better. Methods of solution of ordinary differential equations with applications. First order equations, linear equations of higher order, series solutions and Laplace transforms.*

Calculus is the foundation for differential equations; naturally, this course relies heavily on concepts from Calculus I & II. In order to succeed in this course, it is important you are familiar with and understand the prerequisite material. This includes differentiation, integration, implicit differentiation, the Fundamental Theorem of Calculus, power series, and improper integrals. Also, we will be needing the concept of partial derivatives which is covered in Calculus III. If you haven't taken Calculus III, you should review this concept and ask me if you have any questions.

Textbook: *Elementary Differential Equations* by Boyce & DiPrima 10th edition. ISBN: 978-047-045-8327

Grades

Your final grade in this course will be based off of the following each worth 100 points: homework, exam I, exam II, and the final exam. The following point totals will ensure the corresponding grade. I reserve the right to possibly lower these totals and decide borderline cases at my discretion:

A	B	C	D	F
400-360	359-320	319-280	279-240	239-0

Homework: There will be approximately eight assignments of equal weight. Throughout the semester, we may also have periodic in-class exercises or activities. The point total from the eight assignments and the in-class exercises will be normalized to give the homework contribution to the final grade. I will post homework assignments to D2L. You must complete and turn the assignments in by the due date. Late assignments will not be accepted.

Exams: There will be two 75 minute in-class exams and a 75 minute final exam. The dates for the exams are given below. Aside from a university closure, *these dates will not change*. However, I reserve the right to change the content of each exam. Below is a general idea of what each exam will cover.

	Date	Chapters
Exam I	June 23 rd	1, 2
Exam II	July 12 th	3, 4
Final Exam	July 28 th	1, 2, 3, 4, 5, 6

Missed Work

If you must miss an exam or quiz for an unavoidable reason, you must notify me and provide valid documentation in a timely fashion. For conflicts known prior to the exam/quiz date, you must notify me

and provide valid documentation *before* the exam/quiz date. Early or make-up exams/quiz will only be given for unavoidable conflicts, i.e., activities associated with military service, illness, family emergencies, mandatory court appearances, or any other events of comparable gravity.

D2L

I will be using D2L to post announcements and other content relevant to this course. I will expect you to check both D2L and your email regularly. You are responsible for all content or announcements posted on D2L. You can set D2L up to email you if anything is posted on the news feed of a given course, which can be very helpful in staying up to-date. Excuses amounting to ignorance of the information in the document, on D2L, or from class will not be accepted. Any Changes to this syllabus will be announced in class or posted on D2L. See D2L for the OSU syllabus attachment.

Academic Integrity

I regard violations of academic integrity as an immensely serious situation. I will not tolerate cheating in this course. Copying homework from an online source violates the OSU academic integrity policy. This includes using the step-by-step solution feature on WolframAlpha and textbook solution websites. Using computer algebra systems (CAS) such as WolframAlpha can be a useful tool if used correctly; if used inappropriately these tools can not only hinder the learning process, but can result in academic misconduct which can have serious consequence. Moreover, you will not have access to a CAS or solutions on the exams. Other instances of cheating may include but are not limited too: copying another student's work, allowing a student to copy your work, improper use of an electronic devices, or failure to acknowledge sources of assistance. If you are concerned an action may violate the academic integrity policy, the safest approach is to ask me first! For information on the OSU academic integrity policy visit <http://academicintegrity.okstate.edu>.

Miscellaneous

In mathematics, the steps you use to obtain the answer is just as important if not more important than the answer itself. Therefore, I will looking at *how* you solved the problem instead of simply the answer you obtained. To receive full credit on the assignments, you must clearly write out and justify in detail each step using correct mathematical notation. Many times mathematical expressions and notation are inadequate for justifying the steps you have made, in these cases you should elect to write sentences or draw pictures. Simply giving the answer without justification or with incorrect justification will earn little if any credit; the answer to the problems is of little interest to me, as I already know the answer. What I am interesting in is seeing if you understand the problem and know how to solve it. This goes for homework and exams.

My goal is to help you learn differential equation. However, this will require a significant amount of time and effort on your part in order to succeed. The homework provides a way for you to practice and is essential for the learning process. However, finding solutions online and copying them will be of little benefit to you. Additionally, the assignments in this course may not be enough to master the material. If you need more practice, the textbook has many more exercises with answers to the odd numbered exercises. Keeping up with the homework as well as attending class regularly is pivotal to your success. If you find yourself struggling in the this course, I encourage you to seek help from myself or another source. One other source is the Mathematics Learning and Success Center (MLSC), which offers free tutoring to OSU students. More information about the MLSC can be found at <http://www.math.okstate.edu/mlsc>.