Class Information
Math 2410, Fall, 2020

Instructor: Dmitriy Leykekhman,

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Office Hours: Wednesday 10-11 am. and on demand

Text: *A First Course in Differential Equations with Modeling Applications* by Zill, 11th edition.

Course website:
https://lms.uconn.edu/ultra/courses/_77887_1/cl/outline

Class Time: Tu-Th 8:00 - 9:15 am., online.

Attendance: The pace of this course is rapid and it is essential that you attend every class. There will be class notes and videos available in the case you miss or need to review some material.

Homework: The homework for Math 2410 is assigned online using the WebAssign online homework system. You may (even encouraged) work and discuss homework problems in groups, but do the WebAssing homework yourself. The total score from the homework will be worth 150 points.

Exams: There will be two Midterm Exams in class, each worth 100 points. The final exam will be comprehensive and worth 150 points. The total score of all exams and homework is 500 points. Closed book exams. No calculators will be allowed on the exams.

Syllabus

week #	Date	Sections	Topics
	Sep. 1	1.1, 1.2	Definitions and Terminology, Initial-Value Problems
week 1	Sep. 3	1.3	Differential Equations as Mathematical Models
	Sep. 8	2.1	Solution Curves without a Solution
week 2	Sep. 10	2.2	Separable Equations
	Sep. 15	2.3	Linear Equations
week 3	Sep. 17	2.4	Exact Equations
	Sep. 22	2.5	Solutions by Substitutions
week 4	Sep. 24	2.6	A Numerical Method (Eulers Method)
	Sep. 29		Review. Practice Exam 1.
week 5	Oct. 1		**Exam 1**
	Oct. 6	3.1, 3.2	Linear and Nonlinear Models
week 6	Oct. 8	3.3	Modeling with Systems of First-Order Equations
	Oct. 13	4.1	Preliminary Theory-Linear Equations
week 7	Oct. 15	4.3	Homogeneous Linear Equations with Constant Coef.
	Oct. 20	4.4	Undetermined Coefficients- Superposition Approach
week 8	Oct. 22	4.6	Variation of Parameters
	Oct. 27	5.1	Linear Models. Review. Practice Exam 2.
week 9	Oct. 29		**Exam 2**
	Nov. 3	7.1	Definition of the Laplace Transform
week 10	Nov. 5	7.2	Inverse Transforms and Transforms of Derivatives
	Nov. 10	7.3	Operational Properties I
week 11	Nov. 12	7.4	Operational Properties II
	Nov. 17	Appx. B.	Basic Matrix Theory
week 12	Nov. 19	8.1	Preliminary Theory-Linear Systems
	Nov. 24		**Thanksgiving Recess**
week 13	Nov. 19		**Thanksgiving Recess**
	Dec. 1	8.2	Homogeneous Linear Systems
week 14	Dec. 3		Review. Practice Final Exam.
	Dec. 8		Reading Week
week 15	Dec. 10		Reading Week
	Dec. 15	**Time:**	
week 16	Tuesday	**10:30-12:30**	**Final Exam**