

Math 3351 overview, spring 2022

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Math 3351: Higher math for engineers and scientists, aka DE 2

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Instructor

- Prof. Katharine Long
 - Office: Math 102
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Topics

1 Preliminaries

- 1 Just enough linear algebra for DE systems
- 2 Intro to Mathematica

2 Meat

- 1 Systems of DEs: $u' = Au + f(t)$
- 2 Fourier series
- 3 Boundary-value and initial-boundary-value problems in 1, 2, and 3D
- 4 Fourier transforms & applications

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Materials

- My notes at <https://github.com/krlong014/DiffEq2>
- *Mathematica* student license
 - See my Mathematica notes & examples at <https://github.com/krlong014/MathematicaNotes>
 - If you have a Raspberry Pi running Raspberry Pi OS, you can get Mathematica for free (but it will be slower than on a Mac, Linux, or even Windows machine)
- TopHat app for quizzes: free at <https://www.depts.ttu.edu/itts/software/tophat.php>
- Textbook: Zill & Wright or whatever (which we won't use, so no harm in returning it if you bought it for this course, but no harm in using it as a reference)

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Grading breakdown

- Homework: **50%**
 - Written problems and Webwork
- Class participation & quizzes: **10%**
- 2 midterm exams: **20%** (10% each)
- Final exam: **20%**

If you don't keep up with homework, you won't pass

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Grading scale

- A: 85-100
- B: 70-84
- C: 55-69
- D: 40-54
- F: 00-39

Once again: if you don't keep up with homework, you won't pass

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Did I mention that if you don't keep up with homework, you won't pass?