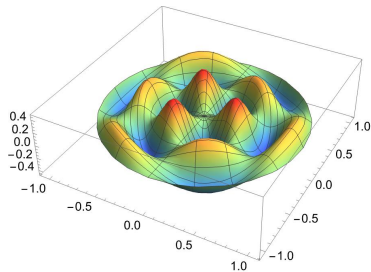
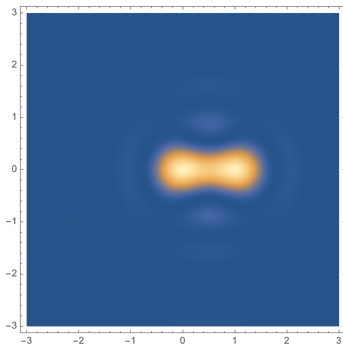


Math Methods II (4326)

$$I(\boldsymbol{\alpha}) = \frac{1}{2\pi} \left| \int_{\mathbb{R}^2} S(\mathbf{r}) e^{-i\boldsymbol{\alpha} \cdot \mathbf{r}} d^2\mathbf{r} \right|^2$$



$$\frac{\partial^2 u}{\partial t^2} = \nabla \cdot \nabla u$$

Math Methods II (Math 4354)

Contact information

Instructor: Prof. Katharine Long

Email: katharine.long@ttu.edu

Github: <https://github.com/krlong014/CourseNotes>

Office: Math 102

When to find me: My scheduled office hours are MW 2-4, and I'm usually around TThF after 2.

Math Methods II

Required materials

- **Software:** (links here and at my github course page)
 - *Mathematica*: You can get this in several ways:
 - Buy a student license from **Wolfram** (current cost, \$75 per year or \$50 per semester)
 - If you like playing with Linux on single-board computers, *Mathematica* is freely available on Raspberry Pi computers running PiOS.
 - *TopHat*: free to TTU students through **TTU site license**
- **Textbook:**
 - Hassani, *Mathematical Methods for Students in Physics and Related Fields*
 - Freely available in PDF form to TTU students through **SpringerLink**

Math Methods II

To do in the next few days

- Get TopHat: quizzes start Monday, 26 Aug.
- First webwork problem set due the night of Wednesday, 28 Aug (actually, 3:00 AM 29th Aug)
 - Refresher questions from calculus III
 - If you find these problems difficult, please get help from me in office hours or by Piazza message
- Get Mathematica & textbook
- Accept invitation to Piazza page for this course

Coming soon

- First written homework will be posted late next week
 - It will require Mathematica for some problems

Assessment and feedback

Type	Weight
Homework: includes written problems (often involving <i>Mathematica</i> calculations) 35%, and Webwork (15%). Lowest one dropped for each.	50%
Quizzes (roughly 1-2 per lecture, on <i>TopHat</i> starting 2nd lecture). Lowest 2 dropped.	12%
2 midterm exams (in class, closed book, no notes, no formula sheets)	10% each
Final exam (comprehensive , in class, closed book, no notes, no formula sheets)	18%

- Letter grades are based on a 15 point scale
- Grades are not curved.

Advice

How to survive and thrive in Math Methods

- Keep up. The quizzes and webwork help you gauge how well you're understanding the material.
- If you don't understand something, speak up sooner rather than later, either in class, in office hours, or on Piazza
- Homework is essential: It's 50% of your grade (35% written, 15% webwork). More importantly, working problems is how you learn.
- Find a good study group, and work with people whose skills complement yours.
- Learn to use *Mathematica* for the grunt work.
- Come to office hours. I don't bite!