

MATH 297: Current Knot Theory Research and 3D Printing

Policy and Syllabus

Instructor: Laura Taalman, Professor in the Department of Mathematics and Statistics
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Class site: www.geekhaus.com/3space
Meetings: Wednesdays 2:30pm-4:30pm in the JMU 3-SPACE classroom (Burruss 349)
Textbook: The internet!

Course Objectives

1. Study current accessible research in knot theory and attempt to come up with new results and/or generate and examine examples that support the current literature.
2. Use 3D printers to produce actual physical models of the knots and related objects that are in the papers you are reading. You may have to learn Mathematica, Maple, MATLAB, OpenSCAD, TopMod, or other programs to help you create the models.
3. Learn how communicate mathematics through written papers, blog posts, and presentations using LaTeX, Beamer, WordPress, Blogger, and other typesetting and presentation software.
4. Complete applications for REU programs and other future research projects.
5. Present your work as a talk and as a poster at the MD/DC/VA MAA spring that will be held at JMU this spring on April 25-26.
6. Create and print a final project that will be housed in the front foyer display case in the Department of Mathematics and Statistics in Roop Hall.

Grades

Grades in this one-credit course will be based on attendance, participation, and completion of the objectives above.

Schedule

Wednesday 1/15	Class	Wednesday 3/26	Class
Wednesday 1/22	Class	Wednesday 4/2	<< No Class >>
Wednesday 1/29	Class	Wednesday 4/9	Class
Wednesday 2/5	Class	Wednesday 4/16	Class
Wednesday 2/12	Class	Wednesday 4/23	Class
Wednesday 2/19	Class	*Friday* 4/25	MAA Workshop and Banquet
Wednesday 2/24	<< No Class >>	*Saturday* 4/26	MAA Meeting and Presentations
Wednesday 3/5	Class	Wednesday 4/30	Final presentations and prints
Wednesday 3/12	<< Spring break >>	*Monday* 5/5	Final presentations and prints