Senior Seminar I (MATH 4160)

Meeting Times: 12:20-1:15 am M in RBN 4024

Last day to withdraw: Monday, March 30, 2026.

Instructor: Nathan Smith

Office: RBN 4007

Contact: nsmith@uttyler.edu

Office Hours: Tentatively 11:15 - 12:10 MWF, other times by appointment.

Course Topics: You will learn how to typeset mathematics using LaTex, how to read and write mathematics for various audiences, and how to prepare and give a poster presentation.

Student Learning Outcomes: By the end of the course students should be able to:

1. perform a literature search based on a mathematical topic,
2. typeset a mathematical work usin LaTeX,
3. write mathematics in a clear, concise, and coherent way,
4. create and deliver a presentation of a given mathematical topic.

Grading: We will have, roughly, biweekly writing assignments. These are expected to be typeset using LaTeX and to be well written. The typical process will be week 1: write a rough draft and share it with your assigned reviewer(s) and review the rough draft given to you by your reviewee(s), then week 2: prepare a final draft. You will be graded on the quality of both your final draft and of your reviews of others' rough drafts. Toward the end of the semester you will be assigned a larger writing assignment and will prepare and present a poster based upon it.

The end of semester project will count for $\frac{3}{10}$ of your grade and the other $\frac{7}{10}$ will be determined by the weekly assignments.

See the note at the end of the Artificial Intelligence statement below. It is part of the grading section as well.

Student Academic Conduct: It is your responsibility to learn the material in this course for your own benefit. You should not let this discourage you from working together on your homework but in the end what you turn in should reflect your understanding, not just be copied from someone else. Students are also expected to help enforce this code. Students are encouraged to obtain a copy of *A Student Guide to Conduct and Discipline at UT Tyler*, available in the Office of Student Affairs.

Artificial Intelligence: UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing

AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course (see below) is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

Okay, that's the lawyer's part above. If you use AI to write your papers in this class, or, more precisely, if I think you've used AI to write any of your papers or assignments in this class, even once, I will just give you an F for the semester.

University Policies: For University policies concerning Students' Rights and Responsibilities, Grade Replacement/Forgiveness, State-Mandated Corse Drop Policy, Disability Services, Student Absence due to Religios Observance, Student Absence for University-Sponsored Events and Activities, and the Social Security and FERPA Statement please see the syllabus module in Canvas.

Course Outline

Jan 12	LaTeX and Overleaf intro
Jan 19	Feit Thompson assignment
Jan 26	ILL Assignment
Feb 2	Beneath you assignment (a)
Feb 9	Beneath you assignment (b)
Feb 16	Peer to peer assignment (a)
Feb 23	Peer to peer assignment (b)
Mar 2	Above you assignment (a)
Mar 9	Spring Break!
Mar 16	Above you assignment (a)
Mar 23	Project (a)
Mar 30	Project (b)
Apr 6	Project (c)
Apr 13	MATH 4016 project presentations
Apr 20	MATH 4161 project presentations