Senior Project S26

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Math 497: Senior Projects

Instructor: Douglas Hundley (hundledr@whitman.edu) (mailto:hundledr@whitman.edu)

Office: Olin 222

Class Meetings: Tuesdays and Thursdays, 11:30 AM - 12:50 PM

Quick Links:

- **In-person Office Hours**: T Th 2-3PM, Friday by appointment (send me an email and we can get it set up)
- Zoom office on MW at 10 AM: **https://whitman.zoom.us/j/9681919071** ⤷ **(https://whitman.zoom.us/j/9681919071)**

Course Description:

Preparation of the senior project required of all graduating mathematics majors. Each student will be matched with a faculty member from the mathematics department who will help supervise the project. Course objectives include developing students' abilities to independently read, develop, organize, and communicate mathematical ideas, both orally and in writing. A final written and oral report on the project is completed.

Text

There is no required textbook for this course. We will be reading several articles that will be provided.

Software

We will be using the LaTeX word processing software. This is free software that can be installed on your home computer, laptop, or you can use a commercial website such as Overleaf (Overleaf is what many students prefer). You won't be required to use any of the paid features, so the free account is all you'll need.

Learning Goals

By the end of the semester, we hope

- To learn to communicate mathematics effectively in both oral and written forms.
- To engage a single mathematical topic for an extended period of time.
- To learn how to use technology to express mathematical ideas (e.g. LATEX, figures, interactives).

Grading:

This course is about the process of thinking, writing and speaking about mathematics and mathematics related topics. The process is what is very important, so the process is weighed more than the actual product at the end. Presumably, if the process is going well, then the final "deliverables" of a paper and an oral presentation will be natural extensions of what we've been doing during the semester.

1. **Written Final Project** (15% of the overall grade). A large part of this grade will include feedback that I get from your faculty advisor.   I'll be asking your advisor about the following: (a) Have you been on time for your meetings, (b) Are you generally prepared to discuss your topics with your advisor, (c) Have you taken "ownership" of your project (meaning that you don't rely on your advisor as your sole guide through the material), (d) Are you taking into account your advisor's feedback in your written and oral work.
2. **Final Oral Presentation** (15% of the overall grade)
3. **Written Process** (30% overall)
    1. Weekly Project Reports (16%, due each Thursday starting Week 2)
    2. Project proposal and initial bibliography (7% overall)
    3. Mid-term draft and/or lit review (7% overall)
4. **Readback** (10% overall) We will have readings about mathematical communication (oral and written). Accompanying each reading will be a brief google form, called a "Readback", that will collect ideas and questions from you. **To be effective, the Readback will be due at least 90 mins prior to class.**
    No late Readbacks will be accepted.
5. **Peer Review** (10% overall) This grade is for the quality and thoroughness of the feedback you provide.
6. **Oral Process** (20% overall) This is the overall grade for the short presentations you'll be giving during the semester.
7. **Percentages** 90-100: A, 80-89: B, 70-79: C, 60-69: D, and 59 or below is an F.

Attendance and the Course Grade

This course depends on your attendance and participation. Unlike many other courses (especially in math), we'll be having lots of discussions, writing in-class, and peer review. These things are very difficult to make up if you miss them, so your attendance is required. **Each unexcused absence will cost 5% of your overall grade. Being late three times will also cost 5% of your overall grade.**

Absences

- An **authorized absence** is one that involves missing class for College-sanctioned reasons, e.g. athletic competitions or field trips, or for religious accommodations. The authorization of all other absences is to be negotiated with me in advance of the absence.
- **When you are ill**, the decision to attend class should be balanced against your own well-being and the well-being of others in the class. If you can safely attend, then you should attend. Otherwise, have a conversation with me about authorizing the absence.

- A separate but related issue is that of **missed classwork**. If your absence or illness causes you to miss a deadline, **negotiate** an extension with me.
- If you miss several classes in a row or several assignments in a row, I'll reach out to you and possibly also submit an **Academic Concerns Report**.

Late Policy

If an assignment is "d" days late (except for Readbacks), then your grade for that assignment will be docked by

$$\frac{100d^2}{49}$$

points. Observe that when d=7, you will be docked 100%.

Classroom Community

 Learning in general, and learning mathematics specifically, is a highly collaborative enterprise. We learn better when we learn together. In order to achieve our goals, we must foster mutual respect, regardless of background or beliefs. Racism, sexism, or other forms of discrimination have no place in the classroom or at the college. All students are capable of success, and it is imperative that we work under that ethos. More details on the College's commitment to non-discrimination practices can be found in our Grievance Policy (**https://www.whitman.edu/human-resources/grievance-policy (https://www.whitman.edu/human-resources/grievance-policy)**)

Religious Observances

In accordance with the College's Religious Accommodations Policy (**https://www.whitman.edu/campus-life/diversity/religious-and-spiritual-life/religious-accommodations (https://www.whitman.edu/campus-life/diversity/religious-and-spiritual-life/religious-accommodations)**), I will provide reasonable accommodations for all students who, because of religious observances, may have conflicts with scheduled exams, assignments, or required attendance in class. Please review the course schedule at the beginning of the semester to determine any such potential conflicts and let me know by the end of the second week of class about your need for religious accommodations. Please see me if you have any questions or concerns.

Accessibility

If you are a student with a disability who will need accommodations in this course, please contact Disability Support Services at DSS@whitman.edu, or visit Olin Hall 334, for assistance in developing a plan to address your academic needs. All information about disabilities is considered private. If I receive notification from Disability Support Services that you are eligible to receive an accommodation due to a verified disability, I will provide it in as discreet a manner as possible.

Academic Dishonesty

Academic dishonesty and plagiarism will result in a failing grade on the assignment. Using someone else's ideas or phrasing and representing those ideas or phrasing as our own, either on purpose or through carelessness, is a serious offense known as plagiarism. "Ideas or phrasing" includes written

or spoken material, from whole papers and paragraphs to sentences, and, indeed, phrases but it also includes statistics, lab results, artwork, etc. Please see the student handbook.

Using an AI to generate text may be permitted in some cases, but assume it's not allowed unless explicitly permitted in the assignment description. If AI text is permitted, you should provide an additional note about how you used it and what percentage of the submitted work came from you, and what percentage came from the AI. In general, you should strive to generate your own writing, but there are times when AI-generated text is useful to help you get started or to illustrate a certain point.

Key Dates this semester:

- Saturday, Jan 24: Math Senior Oral Exam (for math majors only). For combined majors, these are typically organized through the second major.
- Thursdays (starting week 2): Weekly Reports are Due.
- Power and Privilege Symposia are on Thursday, Feb 19 (no classes)
- Undergraduate Conference is on Tuesday, Apr 14 (no classes)
- The 9th Annual PiMUC conference is on Saturday, May 2.

9th Annual PiMUC

The Pacific Inland Mathematics Undergraduate Conference (PiMUC) is being held at Whitman College this year! The important date for this class is Saturday, May 2nd. **Our final oral presentations will be done during the conference this year, so keep this date marked on your calendars!**

Course Summary:

Date	Details	Due
Fri Jan 23, 2026	📝 [Week 1 (https://whitman.instructure.com/courses/5373/assignments/111642)](https://whitman.instructure.com/courses/5373/assignments/111642)	due by 11:59pm
Thu Jan 29, 2026	📝 [Weekly Report 2 (https://whitman.instructure.com/courses/5373/assignments/111639)](https://whitman.instructure.com/courses/5373/assignments/111639)	due by 11:59pm
Fri Feb 6, 2026	📝 [Project Proposal and Bibliography (https://whitman.instructure.com/courses/5373/assignments/111640)](https://whitman.instructure.com/courses/5373/assignments/111640)	due by 11:59pm
Fri Feb 13, 2026	📝 [Week 4 (https://whitman.instructure.com/courses/5373/assignments/111643)](https://whitman.instructure.com/courses/5373/assignments/111643)	due by 11:59pm
Sun Mar 8, 2026	📝 [Mid-term Draft (https://whitman.instructure.com/courses/5373/assignments/111641)](https://whitman.instructure.com/courses/5373/assignments/111641)	due by 11:59pm

Date	Details	Due
Fri Mar 13, 2026	📝 **Week 8 (https://whitman.instructure.com/courses/5373/assignments/111644)**	due by 11:59pm
Fri Apr 10, 2026	📝 **Week 11 (https://whitman.instructure.com/courses/5373/assignments/111645)**	due by 11:59pm
	📝 **Final Written Paper (https://whitman.instructure.com/courses/5373/assignments/111646)**	