

Senior Seminar

Professor:

Dr. Joanna Bieri

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Class:

Spring 2024

Monday and Wednesday 2:40-3:55pm

Office Hours:

M,W 4-5:30pm and other times by appointment.

Welcome to Senior Seminar

My goal is to help each and every student achieve their personal learning goals for this class. I value a diversity of opinions, learning approaches, cultural backgrounds, abilities, and ideas in my class. Classes, lectures, and group interactions should be a safe learning space where each member of the community feels valued, listened to, and respected. It is the responsibility of each of us to ensure that we are lifting up our peers, breaking free from old biases, reaching across cultural, socioeconomic, and other boundaries, and supporting each other. If at any time in the class you feel that there is something that could be done to improve your learning or your experience please let me know. I am here to lift you up and help you learn!

Please take a minute and think about what you would like to achieve by enrolling in Senior Seminar.

About This Course

This course is the capstone celebration of your time as a mathematics major. My goal for this semester is for each of you to not only meet the course learning objectives but to truly have an experience that is meaningful to your future goals and career path. This means that much of the syllabus will be written and revised by you!

Course Learning Objectives

1. To improve your proficiency in communicating mathematics, primarily orally. (Math 459 satisfies the LAI Oral Communication (OC) requirement.)
2. To engage in increasingly independent study and exploration of mathematical ideas and applications.
3. To improve your mathematical research skills. (Math 459 satisfies the LAI Info/Media Literacy-Advanced (IMLA) requirement.)
4. To become better acquainted with the methods of mathematics, as they are practiced by mathematicians in your proposed career path.
5. To present synthesized ideas from your seminar experience to an audience of your fellow seminararians, the mathematics faculty, math majors, and invited members of the general public.
6. To reflect on your own mathematical experiences, ways to improve mathematical experiences for a diverse community, and fall even more in love with mathematics!
7. To learn appropriate software relevant to giving professional presentations (Latex, Overleaf) and making explorations as relevant to your project.
8. Fall even more in love with mathematics!

Technology

Homework and announcements will be posted on the class website so make sure you have access to a device that can connect to the internet and check daily for updates. You will also need to be able to hand in work on Canvas. Please let me know if this is a problem and I can help make sure you have access to a working computer or that accommodations are made for your situation.

Textbooks

Mathematics for Human Flourishing

Please ensure that you have full-time access to the required texts for the duration of the course.

Classwork

Most class sessions will feature presentations and conversations lead by you and your fellow seminararians. Part of your grade for the course will depend on how frequently you attend, pay attention to, and ask questions about the presentations of your colleagues, and on the quality of the feedback you provide. Attendance at all class sessions and the presentations of your fellow seniors is mandatory. More than four absences of either class meetings will result in a serious grade penalty including the likelihood of automatic failure for the course. Contact me immediately if there are any issues with this!

Evaluation Procedures

There are four elements of the course which contribute to your overall grade, as follows:

Presentations: You will give multiple presentations on your topic throughout the semester. Many of these presentations will be aimed at the audience of your fellow seminarians, but others will be aimed at a general audience. Slides are required for all talks except the Elevator Talk and Video and must be presented using the Beamer package and Overleaf. Presentations will generally occur during class meeting times. We will also experiment with a more free for presentation where you have the chance to exhibit your mathematical product.

Presentations will include:

- A five minute “The Elevator Talk”. (General audience.)
- A five minute math video demonstrating a fun math topic (General Audience.)
- A ten minute “Technical Talk” about some exciting mathematical details about your topic. (Seminar audience.)
- A general audience talk, 15-20 minutes [20-25 minutes for honors students]. (General mathematical audience.)
- Exhibition of your mathematical product. (General Audience.)

Written Assignments: You will work on a variety of written reflections and assignments. All written work should be written in Overleaf/Latex unless otherwise stated. Written work should be carefully prepared, organized and presented.

Written Assignments will include:

- Weekly reflections on each chapter of the text *Mathematics for Human Flourishing*.

- Your own personal mathematical autobiography.
- A professional career development document. You may choose to work on a resume, personal professional webpage, linked-in profile, or description of your career path goals. You should research ways to make this relevant for your (current) choice of career path.
- A proposal for your research topic.
- An annotated bibliography for your research topic.
- An abstract for your final presentation.
- Self-assessments of presentations and feedback on peer presentations.
- A final reflection on your experience in this course and your overall experience as a mathematics major at the University of Redlands. In final portfolio.

Final Portfolio Your final portfolio is due at the time of the final exam, Tuesday April 23rd, 12 noon. It should include:

- Reflection of your experience reading the book and your experience as a math major.
- A review of your research process. This should include your updated Annotated Bibliography, a discussion of what new mathematics you learned, and a reflection on the process.
- Final slides/videos for each of your talks along with a short reflection of your presentation experience.
- Your final LaTeX resume and/or links to websites or other professional development materials you have created.

Peer Feedback and Participation

Most class sessions will feature presentations by you and your fellow seminarians. Part of your grade for the course will depend on you engagement with and the feedback you provide to the presentations of your colleagues. This feedback should be thoughtful, generous and constructive. They will include in-class feedback and/or external written feedback depending on the presentation. Attendance at all class sessions and the presentations of your fellow seniors is mandatory. More than four absences of either class meetings or senior presentations outside of class (if outside of class option is chosen) will result in a serious grade penalty including the likelihood of automatic failure for the course. Please contact me immediately if there are any issues with this!

Presentations	50 %
Written Work	20 %
Final Portfolio	15 %
Peer Feedback and Participation	15 %

Grading Scales:

4.0	95-100%
3.7	90-94%
3.3	87-89%
3.0	83-86%
2.7	80-82%
2.3	77-79%
2.0	73-76%
1.7	70-72%
1.3	67-69%
1.0	63-66%
0.7	60-62%

Course Policies

Communication

- The most reliable way to reach me is by email. Please note that my normal working hours are
Monday 12-8pm
Tuesday 9-5pm
Wednesday 12-8pm
Thursday 12-8pm
Friday 9-5pm
I do not respond to emails outside of my working hours or on weekends, except in an emergency.
- I try to check my chat on teams multiple times a day during my work hours. This is a good place to have a quick chat or even set up a quick video meeting. I am happy to schedule virtual appointments during our outside of office hours.
- It is important that you communicate throughout the semester. Let me know if there are ways I can improve your learning in the class. If you are going to miss class or need an extension on the homework, the earlier you tell me the better!

COVID-19 Health Protocols

- In an effort to keep the classroom community safe and healthy, please follow the guidelines outlined here:
 - Wearing a mask is voluntary.
 - Do not come to class if you feel ill or have been exposed to someone who is ill.
- In any case of the above, e-mail me directly to reconcile any class work and/or attendance issues. Please contact me if you have any concerns as to your health needs and goals for the semester.

University Policies

Academic Honesty

The University of Redlands enforces strict standards as regards academic honesty, and students may be dismissed for breaches of these standards. To learn these standards, please look at the relevant section of the University Course Catalog, "Academic Honesty". See in particular Section III, Paragraph B, which states that it is an offense to offer "as one's own work the words, ideas, or arguments of another person without appropriate attribution by quotation, reference, or footnote."

In light of this, please note that:

- intentional plagiarism—i.e. piecemeal or wholesale appropriation of text from one or more printed or internet source—will result in a fail grade for the course.
- plagiarism by default—i.e. uncredited adoption of ideas from source texts due to carelessness in citation—will result in a fail grade for the project.

Artificial Intelligence: There is no tolerance for the use of generative artificial intelligence in place of individual work and thinking in this course. All work is to be considered a student's own. Any violation of that will result in a failing grade for the work.

If you are still in any doubt about what constitutes plagiarism, please ask me before you undertake any written work. If you do not ask, I shall not accept a plea of ignorance after the fact.

Office of Equity and Title IX

In order to provide a safe and equitable learning environment for all students, faculty, and staff, discrimination, harassment, retaliation, sexual misconduct, and sexual harassment (including sexual assault, dating or domestic violence, and stalking) are not tolerated at the University of Redlands. The University prohibits unlawful discrimination or harassment (as defined in the Policy Prohibiting Discrimination, Harassment, Sexual Misconduct, and Retaliation on the basis of age, color, race, ethnicity, national origin, ancestry, sex, marital status, pregnancy, status as a complaining party of domestic violence, sexual orientation, gender, gender identity or expression, physical or mental disability, genetic information, religion/creed, citizenship status (except to comply with legal requirements for employment), military/veteran status, or any other characteristic protected by law. If you or someone you know has experienced or experiences any of these behaviors, know that you are not alone. You can contact the Office of Equity and Title IX for reporting options, supportive measures, and resources to support you.

All faculty and staff at the University of Redlands are considered "Responsible Employees," which means that if you tell me about a situation involving any of the above, I must report the matter to the Office of Equity and Title IX. Although I make that report, you are in control of how you would like to proceed, including whether, or not, you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of reporting options available to you and have access to the support and resources you need. To report an incident, you can:

- Contact the Director of Equity & Title IX, Corinne Vorenkamp, at titleix@redlands.edu or 909-748-8916
- Report online.

You can also report to local law enforcement at

(909) 798-7681, ext. 1. If you are ever in immediate danger, please call 911 or email/text 911@redlandspolice.org if you cannot call.

If you wish to speak to someone confidentially (meaning not connecting with the Office of Equity and Title IX Office), you can contact the following resources:

- Campus: Counseling Service: 909-748-8108 or 24-Hour Crisis Line: 909-748-8960 or Chaplain's Office: 909-748-8368
- Community: Partners Against Violence, 24-hour sexual assault crisis line: 909-885-8884
- Option House. 24-hour dating/domestic violence crisis line: 909-381-3471
- Online chat: <https://www.loveisrespect.org/>

For more information, please visit:
www.redlands.edu/titleixandequity.

Disabilities and Accommodations

If you are a student with a disability that qualifies for academic accommodations under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, contact Academic Success and Accessibility (ASA). ASA is located on the ground floor of the Armacost Library, down the hall from the Jones Computer Center (past the restrooms). You can reach the office at 909-748-8069 or asa@redlands.edu.

Please let me know by the end of the second session at the latest if you have a learning or physical disability which will require accommodation.

Counseling Center

The Counseling Center provides free and confidential short-term mental health services, including individual therapy, group therapy, single session therapy, consultations, and urgent appointments to

all students with in-person or virtual options. Our Counseling Center is committed to inclusivity and to providing a supportive space for everyone. Please call 909-748-8108 to schedule an appointment. If a student is in crisis, please call 909-748-8960 for the 24/7 mental health crisis line. For more information, see:

<https://www.redlands.edu/student-affairs/health-and-psychological-services/counseling-center/>

Another option for individual therapy for all students is TimelyCare which provides virtual therapy immediately (Talk Now) or up to 12 scheduled virtual therapy sessions per year. Students can choose their therapist from a list of providers for the scheduled therapy option.

Conflict Resolution Center

Experiencing a conflict? Whether it's with a friend, roommate, another member of a student organization, or faculty or staff member, conflicts happen. Learning to navigate conflicts is important to success in virtually any field, and a vital step in being a part of a community and having healthy, meaningful relationships with others. See <https://sites.redlands.edu/conflict-resolution-center/student-resources/> for more information.

The Care Team

The University CARE Team exists to help provide support and resources to students that are overwhelmed, experiencing significant distress, or possibly present some risk to themselves or others. As a faculty member, I may reach out to students about whom I am concerned to talk individually, and/or refer them to the CARE Team. If you have concerns about a fellow student, consider sharing your concern with the CARE Team via their online form. This is part of who we are as a caring, proactive community where we all look out for one another. Additionally, if you feel that you or some-

one else needs immediate mental health support, the University has a 24/7 mental health crisis line at 909-748-8960, and the Timely Care app, which offers on-demand emotional care. Both services connect to a live, licensed counselor.

Additional Resources

If you are in need of additional resources, please refer to the available programs below.

Book Lending Program

The Book Lending Program is an initiative to ensure the academic success of First-Generation students (students who are the first to go to college in their families who meet a particular estimated family contribution [EFC] level). Funded through alumni donations, this program provides books and other classroom materials, when needed, for First-Generation students who could not otherwise afford to purchase them. Books are returned at the end of the course, to be used by other First-Generation students the next semester. The program works alongside the Library and faculty members to ensure the availability of books and classroom materials. For more information, click the link above or contact blp@redlands.edu.

Emergence Student Loans

Student Financial Services (SFS) administers a short-term, no-interest loan fund to assist students experiencing an emergency or cash-flow problem. Except in unusual circumstances, these loans do not exceed \$200 and are billed to the student's account. Evidence of repayment ability is a prerequisite for all short-term loans made to students. Students are not eligible for more than one emergency student loan per term. Contact: SFS@redlands.edu or x8047

ASUR Student Emergency Fund

The Student Emergency Fund was established by the Associated Students of the University of Redlands (ASUR), funds are available to students who are unable to meet immediate, essential expenses due to temporary hardship related to an unforeseen or emergency situation. Our goal is to provide flexible assistance in a timely manner to help students continue successfully in school. The distribution of funds is agreed upon by committee comprised of representation from Student Affairs, ASUR Cabinet, and Student Financial Services. Awards are not considered loans and do not require repayment. Some funds may be considered income and are therefore subject to federal taxes. The average award ranges between \$25 and \$400. Students may only be awarded assistance from the ASUR Student Emergency Fund once during their undergraduate career at the University of Redlands. Go to ASUR Emergency Fund App | Presence.

Student Affairs Discretionary Fund

These endowed funds in Student Affairs can be used to support student success and remove impediments that otherwise may cause the student to stop or leave school. To utilize this fund, divisional leadership should be made aware of the student in dire need of financial support. This support can be anything from personal expenses, such as utility bills, gas money, emergency trips home due to family tragedy, off-campus counseling, and other medical costs, and occasionally mental health assessment expenses. Students receive grants based on their financial need. Contact: student_affairs@redlands.edu.

Student Food Support Pantry

The Student Food Support Pantry is a resource available to all established full and part-time University of Redlands students facing food insecurities. The Pantry is located on the north side of North Hall. This space is an open, no-questions-asked space with dried and canned goods, and non-perishable items, as well as seasonal fresh produce from our sustainable farm and limited refrigerated goods. Food for this distribution is provided in partnership with Feeding America Riverside and San Bernardino. It is also funded through private donations, ASUR, and the Office of Community Service Learning. For more information, please contact SURF@redlands.edu.

Course Schedule

Schedule is subject to change as we progress through the semester. You will be notified of any changes in class.

Senior Seminar - CLASS SCHEDULE				
DATE	DAY	TOPIC	DUE	ASSIGNED
01/10/24	Wednesday	Welcome to Senior Sem What do we want to focus on?		Career Paths Research. Get a copy of the book. What might your project be?
01/17/24	Wednesday	Career Paths and Research Ideas		Read Chapter 1. Reflect on the chapter. Start investigating your chosen career path. Can you link a research project to your future interests.
01/22/24	Monday	Intro to LaTeX Resume Reboot	Reflection on Chapter 1	Reach Chapter 2. Reflect on the chapter. Start working on your Resume.
01/24/24	Wednesday	Intro to LaTeX- Beamer What makes a good general presentation? Mathematical presentation?	Bring your outline of career research to class to share with your peers. Have some ideas for projects related to your mathematical interests.	Start gathering sources for your mathematical research interests. Create a 2-3 page Beamer presentation.
01/29/24	Monday	Finding Appropriate Research and Learning Materials	Reflection on Chapter 2 Rough draft of your LaTeX Resume (Due) Beamer Presentation (Due)	Reach Chapter 3. Reflect on the chapter. Come to class next time with and Elevator talk (5min) about your mathematical interests.
01/31/24	Wednesday	Mathematical Interests Elevator Talk		Choose one Biography from the list of sources and reflect on what you learned from that persons story.
02/05/24	Monday	Start your research	Reflection on Chapter 3 + reflection on the Biography	Reach Chapter 4. Reflect on the chapter. Write your own mathematics story.
02/07/24	Wednesday	Research time	Proposal for your Research Project (Due) Reflection on Chapter 4	
02/12/24	Monday	Research time	Your own mathematics story (Due)	Reach Chapter 5. Reflect on the chapter.
02/14/24	Wednesday	Research time		
02/19/24	Monday	Presentation Techniques	Reflection on Chapter 5. Annotated Bibliography (Due)	Reach Chapter 6. Reflect on the chapter.
02/21/24	Wednesday	Presentation Techniques - Technical Talks		Prepare your Technical Talk.
02/26/24	Monday	Technical Audience Talks	Reflection on Chapter 6	Reach Chapter 7. Reflect on the chapter.
02/28/24	Wednesday	Technical Audience Talks		Prepare your "Cool Math Video"
03/04/24	Monday	SPRING BREAK		
03/06/24	Wednesday	SPRING BREAK		
03/11/24	Monday	Presentation Techniques - videos.	Come to class with an idea for your Cool math Video.	Reach Chapter 8. Reflect on the chapter.

03/13/24	Wednesday	Watch "My cool math video"	Reflection on Chapter 7 + Reflect on your Technical Talk My cool math video (Due)	
03/18/24	Monday	Advertising your talk/event/etc. Writing an abstract.	Reflection on Chapter 8	Reach Chapter 9. Reflect on the chapter.
03/20/24	Wednesday	Presentation Techniques - general audience	Advertisements and Abstract (Due)	
03/25/24	Monday	General Audience Talks	Reflection on Chapter 9	Reach Chapter 10. Reflect on the chapter.
03/27/24	Wednesday	General Audience Talks		
04/01/24	Monday	Propose your final Product	Reflection on Chapter 10	Reach Chapter 11. Reflect on the chapter.
04/03/24	Wednesday	Work on final Products		
04/08/24	Monday	Work on Final Products	Reflection on Chapter 11	Reach Chapter 12. Reflect on the chapter.
04/10/24	Wednesday	Public Exhibition of Final Products.		
04/15/24	Monday	Public Exhibition of Final Products.	Reflection on Chapter 12	Reach Chapter 13. Reflect on the chapter.
04/17/24	Wednesday	NO CLASS	NO CLASS	NO CLASS
04/23/24	Finals Week	Final Portfolio Due	Portfolio Contains: 1. Reflection of your experience reading the book and your experience as a math major. 2. A review of your research process. This should include your updated Annotated Bibliography, a discussion of what new mathematics you learned, and a reflection on the process. 3. Final slides/videos for each of your talks along with a short reflection of your presentation experience. 4. Your final LaTeX resume and/or links to websites or other professional development materials you have created.	