

Directed Reading Program - Mentor Guidelines

The following is meant to be a helpful guide for mentoring your students throughout your DRP experience. It is not necessary to follow these guidelines, but if you are stuck and need help, then we hope you'll check them out.

Contact

The DRP Committee currently consists of Beth Branman, Eleftherios Chatzitheodoridis, Miika Tuominen and Jiajun Yan. The program is being overseen by You Qi. If you have any questions, please feel free to email anyone on the committee, and if you feel it is necessary, then you may also reach out to one of the professors overseeing the program.

Selecting a project

- Most projects will focus on reading a text or a paper.
- Students often state very specific, but somewhat arbitrary, interests. You should bear in mind the direction of interest they expressed but do not be afraid to nudge a student towards a project for which you have good materials/experience.
- To select a project you can get inspired by our list of books in our DRP library: <https://docs.google.com/spreadsheets/d/1GGCrauUPZn10n01EyS-2OUWbd2t6qnWr> (Free to check out!). Or you could look at past projects: <https://math.virginia.edu/drp/projects/>
- The list of preferred books the students provide is just a starting point. Some of them may be too advanced for a given student. Those suggestions are there to make the students flip through some math books and to get them excited about topics in math. The introduction from each book may serve to help students think about what area of math they are interested in learning more about.
- You can either assign a book or a paper for the student to read and work through or you can curate a collection of sources. However, remember: the DRP is not a research project. It should be focused on providing students with the skills to read math independently.
- It is a good idea to have a plan for the project, but if the student becomes interested in a specific topic as they go, you can decide to be flexible and adapt the material throughout the semester. Take student interests into account, don't be afraid to change trajectories mid-term, if the student becomes interested in something tangential.
- If the mentee really seems a poor interest-match, contact us as soon as possible.

Meeting with your student

- You should schedule weekly 1 hour meetings with your student.
- The student is expected to do around 4 hours of study each week between the meetings.
- Here is a suggestion for structuring the meeting:
 - For the first part of the meeting (e.g. at least 10 minutes) the student should talk about what they read and their thoughts on the topic.
 - Discussions should place emphasis on learning to read math and to talk about math, both are hard!
 - Towards the end you may discuss a plan for the following week: what could be a good idea to read and understand. This can help the student develop the skill of skimming through material and understanding how the next part they will be studying fits into the bigger scheme of things.

Expectations from students / delinquency

- Students are expected to put 4 hours/week into the project outside of meetings.
- Sometimes students become overwhelmed and cannot make the time commitment.
 - If this happens once or twice ever, no big deal.
 - If this happens frequently or two weeks in a row, a bigger deal.
 - Please contact us every time it happens, we like to be up to date on how things are going.
- Students should not miss meetings without rescheduling in advance. If this happens, please let us know.
 - Reassure the student that you should still meet even if they did not manage to cover all the material you or they have planned out for the week. Rescheduling should be done in case of external commitments, not because the student does not feel “ready”.
- Reach out if you have any other doubt or cause of concern.

Final presentation

- The DRP program concludes with the student making a presentation about what they learned and their experience in the DRP.
- Giving a talk is not optional.
- Presentations will be given starting from the 1st or 2nd week of the following semester and will either be given in several days, back-to-back, or in the ark of a few weeks (depending on the total number of students, we prefer to limit it to 2 or 3 students a week).
- The presentation should be around 20 minutes long.

- The reading portion of the program stops at the end of the semester. Students and you are not expected to continue during the break. If the student is motivated and if you are willing, this can be done. However, this is a decision to be made at the end of the semester. Do not plan on this from the start.
- If there is a significant need for an exception e.g., the student needs to give the talk before the coming semester, please reach out.

Talk preparation

- 3 weeks before the end of the semester.
 - Discuss several possible talk topics with your student.
 - Your student will have learned much more material than can be fit into a 20 min presentation.
 - Ask your student to decide on the topic and write an outline for the next week.
- 2 weeks before the end of the semester
 - Review talk outline.
 - Clear up misunderstandings.
 - Adjust level of technicality.
 - Discuss how to structure the presentation (also technically: Powerpoint/Beamer/?).
 - Assign to your student to
 - write the presentation and the full talk.
 - practice the talk / be prepared to do a practice talk.
- 1 week before the end of the semester or before the talk
 - Make the student present their talk to you: watch the practice talk.
 - Time them
 - Give constructive feedback.
 - Assign them to rehearse 1-2 more times before talks.

TODO list

- [the week you get assigned a mentee] Reach out to your student, schedule the first meeting.
- [first meeting] Schedule weekly meeting time
- [first meeting] clarify doubts about structure of DRP.
- [before Add/Drop Deadline] remind students to reach to the organizers if they are taking the course for credit.
- [first meeting] Suggest a topic or several topics; ask the student to decide on the topic and start reading by the following week's meeting.
- [mid-semester] Fill out the mid-semester mentor form.
- [mid-semester] Instruct the student to fill out the mid-semester mentee form.
- [towards the end of the semester] fill in the DRP dinner RSVP form.
- [towards the end of the semester] remind students to fill out the final talk form.
- [end of semester / beginning of following semester] schedule and do the final talk.

- [during semester] have fun