LAB OF GEOMETRY AT MICHIGAN: EXPECTATIONS FOR UNDERGRADUATE RESEARCHERS

FALL 2018 – WINTER 2019

PROGRAM OVERVIEW

The Lab of Geometry at Michigan - LoG(M) - is a program for undergraduate research in mathematics, with an emphasis on visualization and computation. Project topics may be in any field of mathematics, not just geometry. The semester-long projects are designed and led by faculty advisors, with assistance from graduate student mentors. Undergraduate researchers of varied backgrounds will work in teams of 3-4 students.

Structure of the program. Applications are open and received in the first week of the semester. By the second week, teams are assigned. Faculty advisors will reach out to team members to arrange a first meeting. At this meeting, teams review the expectations of the program, as well as any additional expectations the faculty advisor has for their team.

Each team is expected to meet throughout the semester on a weekly basis with their graduate mentors. Some, but not all, of these meetings will be attended by the faculty advisor. Undergraduate researchers are also expected to meet informally outside of these scheduled meeting times to work collaboratively. As such, undergraduate researchers are expected to take LoG(M) for a minimum of 2 credits. Undergraduate researchers will also receive a final grade.

Community events. There are two required LoG(M) events where students share their progress:

- Midsemester presentation session (pizza lunch) on Tuesday, October 23, 2018 for Fall projects and Tuesday, February 26, 2019 for Winter projects.

- Final poster session will be on Monday, April 22, 2019 for all teams active in this academic year.

The midsemester meeting is only attended by active teams and their advisors and mentors. The poster session is open to the public. If you are an undergraduate researcher, you must make your best effort to attend these events. Missing these events without prior notice may have consequences for your final grade. Exact times of the events will be determined at a later date.

Date: August 29, 2018.
All undergraduate research teams are expected to:

- Prepare and present a **midsemester presentation** on team progress, using the provided beamer template. See [https://sites.lsa.umich.edu/logm/resources](https://sites.lsa.umich.edu/logm/resources). Beamer slides are due the day before the midsemester presentations. For Fall teams, the due date is **Monday, October 22, 2018 at 11:59pm**. For Winter teams, the due date is **Sunday, February 24, 2019 at 11:59pm**.

- Prepare and present a **final poster**, using the provided poster template. See [https://sites.lsa.umich.edu/logm/resources](https://sites.lsa.umich.edu/logm/resources). Posters are due the Thursday before the last week of the semester, to leave time for printing. The deadlines are **Thursday, December 6, 2018 at 11:59pm** for Fall teams and **Thursday, April 18, 2019 at 11:59pm** for Winter teams.

- Submit a minimum of **three images, with captions**, which the team feels capture their project experience. Images are due exactly one week after the deadline for poster submissions. For Fall teams, the deadline is **Thursday, December 13 at 11:59pm**. For Winter teams, the deadline is **Thursday, April 25 at 11:59pm**.

All submissions described above should be emailed to [logm-info@umich.edu](mailto:logm-info@umich.edu) with the faculty advisor and graduate mentor cc’d.

Some faculty advisors may have additional requirements. These may include, but are not limited to: written assignments due either throughout the semester or at the terminus, quizzes or other assessments of understanding, and peer review feedback. All such assignments should be submitted to the faculty advisor directly.

### Course credit and grades

Undergraduate researchers must enroll in the LoG(M) reading course to participate in the program. Students select their own credit hours. **Undergraduate researchers are expected to enroll for a minimum of 2 credit hours.** Credits ensure that each student has time in their schedule to commit to LoG(M), which is fair to their teammates and optimizes the benefits of the program for the student. We aspire for all members of the group to be enrolled for the same number of credit hours. Exceptions will be granted on a case-by-case basis. Team members should agree on the number of credits at the first meeting of the semester.

Each student will be assigned a final grade, agreed upon by the program director and faculty advisor. The grade will be reflective of the students contributions to the project. Undergraduate researchers are encouraged to discuss their progress with their faculty advisor after the midsemester presentations. It is the responsibility of the student to communicate with the faculty advisor regarding any concerns about their grade if they wish to increase their opportunities for success.
Undergraduate researchers have a unique opportunity with LoG(M). They will learn research-level mathematics which will resonate with certain course topics but may not be covered in any of the standard course offerings. They will work closely with the same small team throughout the semester, and with less structure and faculty oversight than a typical course. Most notably, undergraduate researchers have the opportunity to explore and experience mathematics as a creative process, at the frontiers of the body of mathematical knowledge.

Students should begin the program with an open mind. For instance, ability to work in teams is essential for everyone to have a positive and rewarding experience. Undergraduate researchers need to be receptive to new topics they may cover, techniques they should learn, and skills they need to develop. Much of this development will occur outside of meetings with advisors. Students should be aware of the unpredictable ebb and flow of the research process; this will mean “getting stuck” more often than they might during a course homework set.

Note that faculty advisors and graduate mentors are NOT receiving credit of any kind for their service to the program: as such, they are NOT expected to hold office hours or regular “course meetings,” aside from weekly or biweekly team meetings. They are providing this service because they like working with you! Please be respectful of their busy schedules.

We recommend undergraduate researchers keep their own hours, and report these regularly to their faculty advisors. These hours should average out to be consistent with the number of credit hours the students have committed when enrolling in the LoG(M) course.

**Consent**

I, ________________________________, understand and acknowledge the expectations outlined in this document. I will seek to fulfill these expectations, and I understand that failure to adequately meet expectations may have consequences for my final grade.

I will enroll in LoG(M) for ________ course credits, which corresponds to a weekly commitment of (circle one):

- 3-4 hours
- 6-8 hours
- 9-12 hours
- 12-16 hours

Uniqname: ________________________________

Signature: ________________________________ Date: _____________________