MATH 402 - Non-Euclidean Geometry Syllabus

Class website: https://learn.illinois.edu/course/view.php?id=53148

Instructor

Eric Samperton. You can call me Professor Samperton, Professor Eric, or just Eric. Whatever you're most comfortable with.
Pronouns: he/him, they/them, or other gender neutral options, whatever you prefer.
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The course has a grader, but you will never need to interact with them.

Meetings

There will be no regularly required meetings. However, there will be regularly scheduled office hours held via both **Campuswire** and a recurring **Zoom room**. See the course Moodle homepage for coordinates.
There will also be two coffee/tea hours every week. These are intended as an opportunity for us to discuss mathematics (perhaps directly related to the class, or not) but not homework. Think big and be curious! I expect everyone in the class to attend on at least two different weeks.
Here is the schedule I am proposing, all times local to Urbana (note homework will be due Mondays at noon):

MONDAYS	TUESDAYS	WEDNESDAYS	THURSDAYS	FRIDAYS
7:30-9:30AM Office hour (Z)	7:30-8:30AM Coffee hour (C)	none	7:30-9:30AM Office hour (C)	7:30-9:30AM Office hour (Z)

3:30-4:30PM Tea time (Z)			8:00-9:00PM Office hour (C)	3:30-4:30PM Office hour (Z)

(Z): meeting in our **Zoom room**. (C): meeting in **Campuswire** chatroom There will be a questionnaire on the Moodle homepage where, among other things, you can let me know if this schedule works for you or not.

Communication

While I have provided various means of contacting me above, my email and phone should only be used when other methods fail. The preferred way is via **Campuswire**. You can DM there if you have personal questions or concerns. All math questions should be asked in the class feed forum. You have the option to make those posts anonymous to your classmates (but not to me). If you want to contact me both privately and anonymously, there is an **anonymous feedback** form on Moodle. I will always try to respond within 24 hours, although on weekends I may wait until Sunday evening to catch up to messages. Don't try to message me through Moodle, I don't use the messenger here.

Course Calendar

The moodle course calendar will include all meeting times and assignment due dates. I encourage you to subscribe to it in your preferred calendar program.

Textbook

We will use Hvidsten's textbook **Exploring Geometry**. Please download it. I encourage you to read other things too, whatever stokes your curiosity (but read the ethics section below).

Geometry Explorer

Following the textbook, we will use **Geometry Explorer**, a software for visualizing constructions in both Euclidean and non-Euclidean plane geometries. It requires 128MB of RAM to run, and runs on Windows, Mac, and Linux. If you don't have a computer capable of running it, please let me know. See the **Geometry Explorer** page for more info.

Other resources

I will prepare written notes and video supplements for the required reading on a weekly basis. Videos will be hosted on a **Media Space channel**, but I will always link to them from Moodle. With the exception of the orientation video, I will do my best to keep the videos strictly about math, and not make any **announcements** in them that have not already been made via **Campuswire**. So you don't need to watch the videos for class updates, but you will be responsible for understanding any mathematical material I cover in the notes or videos, even if it's not in the textbook. I occasionally may also require reading from places other than the textbook.

Grading

Here's the breakdown:

Curiosity	2%
Community	2%+1%EC*
Creativity	12%
Homework	30%
Midterm exam 1	9%
Midterm exam 2	9%
Midterm exam 3	9%
Final exam	27%

Curiosity: Talk with me in one of the coffee or tea hours on at least two

different weeks (other than the first week of class) at some point during the semester. You get 1% for each visit. Of course, you really have to engage with me to earn the point, not just show up. If you don't know what to do, try asking me a mathy question that isn't directly related to the reading or homework, or show me something cool (e.g. math-related website or theorem or something). Think outside the box.

Community: I am gamifying your participation on **Campuswire** by enabling the class reputation feature. If you break out of Noob into Starter, you'll get 1%. If you achieve Intermediate or Advanced, you'll get 2%. The top two students with the highest reputation score at the end of the semester will get an additional 1% extra credit towards their final course grade. See details on **Campuswire**. Students who troll or use dishonest methods to boost their reputation (see Netiquette paragraph below) will have their community score set to 0%.

Creativity: In order to help me generate content for the class and to encourage you to think creatively, every student will be required to submit 3 mini-projects that I am calling *bounties*. Each bounty will be worth 4% (but shoddy work will not earn all 4%). Many bounty opportunities I announce will be group work. Examples may include: creating a video walk-through of a **Geometry Explorer** project, creating a study guide for a midterm exam, or creating a video solution to a particularly interesting math problem. Your submission will be shared with the class. On an average week, I will try to announce bounties for about 11 students. *I strongly encourage you to propose to me your own ideas for bounties.*

Homework: Homework will be submitted by upload on Moodle, and grades and feedback will be returned via Moodle. It will typically be due on Mondays at noon Urbana time, with a free buffer window until 11:59PM the same day. (Effectively, this means it's due at 11:59, but I will refuse to help you with it after noon.) Homework can be submitted late up until noon on the Friday after it is due, with a penalty of 20% of the total possible points subtracted for each day it is late (80% Tuesday, 60% Wednesday,..., 0% Saturday). I will drop your two lowest scores.

Exams: There will be three midterms and one final.
For now, the plan is for them all to be untimed, open book, open notes,

open class resources, but closed everything else. I won't be using proctoring services or anything creepy like that. But this means you, by taking this class, agree not to cheat. Midterms will replace homework for their weeks. Here are the due dates:

- Midterm 1: Monday, September 21
- Midterm 2: Monday, October 19
- Midterm 3: Monday, November 16
- Final exam: due date TBA. It will be take-home, just like the midterms.

Letter grades: Your final course letter grade will be determined by applying a curve to the raw scores computed via the above grading breakdown. The curve will be at least as generous as the usual 10 point scale.

Ethics

Privacy: I'm a strong believer in student privacy. Please don't share details of health or personal issues with me that you are uncomfortable sharing. Also, you do not have to show your face on Zoom if you don't want. Some of the bounty mini-projects may involve creating videos, and will be shared with the entire class (but no one else). But it's up to you to decide how much of yourself you want to show. **Campuswire** and Moodle are both FERPA compliant, and the private chats on **Campuswire** you may have with your fellow classmates are completely inaccessible to me. Of course, as a general warning, you must trust the other person you're chatting with not to share your messages, so be vigilant and assume that anything you say could be made public.

Cheating: DO NOT CHEAT. Generally speaking, this class will be very generous with allowable resources. When completing the homework or mini-projects, you may use any book or generally and freely available reading material from the internet you please, so long as you avoid plagiarizing by properly attributing your sources. By "generally and freely available" I mean easily found on the internet or in a library for free. However, homework help services (e.g. Chegg, CourseHero, your "tutor" down the hall who just does your homework for you, etc) are completely off

limits for all homework assignments, bounty projects, and exams. If anyone is found to have cheated (especially via one of the corporate cheating companies), I will work to ensure that I can find a fair reason to give that person an F for as many assignments as possible, and, hopefully, failing them for the class. Please see **Article 1 Part 4 of the student code.**

Copyright: Any course materials (notes, problem sets, videos, etc) I prepare belong to me, and likewise for things prepared by your classmates (unless they say otherwise). Do not share them with people or companies outside our class. In particular, if someone uploads my homework sets or exams to a homework help service, not only will they have violated the student conduct policy regarding cheating, but they will also be violating my copyright, which is both a separate conduct violation and illegal. In such a scenario, I will pursue sanctions for both cheating and copyright violations.

Netiquette: Be kind. Don't troll. We're all still adapting to new ways. Please don't hog my attention in office hours, and please actively try to engage with your fellow classmates. If you absolutely must say mean things to me, I recommend using the **anonymous feedback** form.

Reasonable Accommodations and Equity of Access

The sooner you submit any requests for reasonable accommodations through DRES, the sooner I can ensure you have what you need to succeed.

This class will be highly visual, and largely happen on computers. Some of you may have reasonable requests related to things that aren't normally handled via DRES (e.g. colorblindness, an unstable internet connection, a complicated home life). Please let me know about such things.

Get out clause

If you were unaware, there's a worldwide pandemic going. Things might have to change. I promise not to be capricious about it.