

Course Syllabus and Information
MTH 341: College Geometry
Spring 2020

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Office Hours: TT 12:30 – 1:30
or by appointment
Virtual office hours (Wimba)
by appointment

Text Book & materials to be furnished by the student:

- (1) GeoGebra and GeoGebra 3D. (Excellent free software that you might want to install on/ access from your home computer.)
- (2) Compass, ruler and a sharp pencil. Plain paper notebook is recommended.

Course Content:

Content:

- History of geometry, Axiomatic systems, Finite geometries, Absolute Geometries
- Euclidean Geometry
- Non-Euclidean Geometries

Course Methodology:

Although the primary audience of this course is secondary education mathematics majors and minors, it provides an advanced perspective on geometry also to non-teaching majors/minors. The course is based on the philosophy that mathematical ideas are learned only through active involvement. Therefore, in this course, a lecturing is reduced to a minimum and teaching methodology includes small group activities and presentations and whole class discussions – the methodology you will be using to present mathematical topics to your students.

Course Requirements and Assignments:

Attendance. It is an activity-based class. Therefore, it is important to attend every day for entire class period with your homework completed so that you can take active part in group work activities. Attendance will be taken every day. If for some reason you must be absent, it is your responsibility to contact me before the day you miss the class (in emergency situations as soon as possible). If you contact me by e-mail, I will send you back copies of handouts and homework assignments. You are allowed *three* excused absences. Each *unexcused* absence will lower your grade by five percent points.

Group work. You will be working in groups of 3-4 students. As a group, try to answer all the questions on worksheets or asked by the instructor and discuss how to present your answers to the rest of the class. Make sure that all group members understand it completely and that *any* group member is able to lead the presentation as the instructor will randomly select the presentation leader. If any group member has a question, try to resolve it within your group first. If nobody is able to answer and/or explain it to other group members, then ask the instructor. Please keep in mind that the instructor will be answering group questions, not questions of individual students.

Homework. It is your responsibility to complete homework and take active part in class discussions. Insufficient home preparation causes slow class progress and will result in unannounced quizzes. Occasionally, homework will include constructing a proof of a theorem with the help of self-paced applets. In such case, you are required to submit a homework reflection form at the beginning of the class (put it in your group folder). The form can be downloaded from my website. The goal of the form is to collect honest ideas and questions and forms will be graded only as Submitted/Not submitted (no points attached). You should submit your form even if you are unable to finish the proof or activity.

Computer Lab Policy: In the lab, you will be tempted to use the browser for activities unrelated to our class (social networks, news and other websites). Please resist the temptation – it is a considerable distraction that prevents the instructor to see who is still working and who is done. Using computer for unrelated tasks will result in deductions in “On Task” points. If done repeatedly, the student who breaks the rule will get 0 points every day the computer is used for unrelated tasks.

It is the responsibility of each group to get all members on task and participate. Activity of all members counts towards your group grade, which will be explained in the class.

Presentations. Each group must have at least 14 satisfactory presentations during the semester. These presentations are typically explanations of the work done by the group and can take various forms. They usually take 3-10 minutes, depending on the task and discussion in the class. The rest of the class will evaluate presentations. Please observe these simple rules when presenting:

1. Do not start your presentation until you have the attention of the whole class.
2. Act as if the instructor were not in the class. Maintain the eye contact with the class not the instructor for important signs and immediate assessment of your presentation.
3. If using the visualizer, do not stand at the visualizer. Instead, go to the screen and point to the image as displayed on the screen.

Exams/Quizzes. You will complete two 50 min exams. Some of them will take place in the computer lab and you will submit a ggb (GeoGebra) file as your final product. Unannounced quizzes will be given if the class is progressing slowly due to deficient home preparation.

Reading. You will submit one reading assignment essay and one project. Topics of projects and guidelines are posted to my website <http://cmich.marcinek.sk> .

Other rules.

- Academic dishonesty (cheating) is a serious offence with serious consequences. If I see evidence that you are cheating, you will receive a grade of zero on that quiz or exam, and I will contact the Dean of Students and the Director of Teacher Education (if applicable).
- Late coming, cell phone and other class disruptions will result in decreasing your group grade. To prevent it, make sure you turn OFF your cell phone before entering the classroom. Make sure that you notify me of any unavoidable late arrivals in advance.
- Electronic Devices: In order to protect the intellectual property interests of the instructor, the privacy interests of student members of the class, and to encourage an open and fair exposition of all student views in the classroom without fear that student views expressed will be recorded and possibly posted in another forum, recording of classroom lectures and conversations is not permissible without the express, prior

written consent of the instructor. Unauthorized recording of classroom activity shall be considered a violation of the CMU Student Code of Rights, Responsibilities, and Disciplinary Procedures as disruptive of a student's right to learn under 3.2.3 Disruption of Learning.

What you will be graded on

Reading and Project		10%
Exam(s)	2x22	44 %
Group Work		8%
Homework		3%
Presentations		10 %
Final Exam		25 %

Attendance: You are allowed three excused absences. Each unexcused absence will lower your grade by 5 percent points.

Total	<hr/> 100 %
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Point value of each item is set so that they add up to 100 points. This way it is easy to keep track of your grade:

A: 94 and up	A-: 92-93	B+: 90-91	B: 83-89	B-: 80-82
C+: 77-79	C: 72-76	C-: 69-71	D: 60-68	Failing: below 60

NOTICE: CMU provides students with disabilities reasonable accommodation to participate in educational programs, activities, or services. Students with disabilities requiring accommodations to participate in class activities or meet course requirements should first register with the Office of Student Disabilities Services (250 Foust Hall, telephone #517-774-3018, TDD #2568), and then contact me as soon as possible.