

## MATH 461 section 001

College Geometry I

### COURSE INFORMATION

#### College Geometry I

MATH 461 001 ( 3 Credits )

2022 Spring [1224]

#### Description

An introduction to Euclidean or non-Euclidean geometry. Enroll Info: None

#### Prerequisite(s)

MATH 234 or (MATH 222 and MATH/COMP SCI 240) or MATH 375 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program

#### Breadths

N - Natural Science

#### Instruction Mode

Classroom Instruction

#### Section Level Com B

False

**Department:** Mathematics

**College:** Letters and Science



**2022 Spring [1224]**

**Term Start Date:** Tuesday, 23-Nov-2021 **Term End Date:** Wednesday, 15-Jun-2022

 [ADD TO CALENDAR](#)

**Location and Schedule:** Van Vleck Hall B119 TR 1:00 PM-2:15 PM

**CRN:** 861411224

How Credit Hours are Met :

#### How Credit Hours are Met

This class meets for two 75-minute class periods each week over the semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc.) for about 3 hours out of classroom for every class period. The syllabus includes more information about meeting times and expectations for student work.

## Regular and Substantive Student-Instructor Interaction :

Participation in regularly scheduled learning sessions (where there is an opportunity for direct instruction, providing feedback on student work, providing information about course content, facilitating discussion of course content)

## INSTRUCTORS AND TEACHING ASSISTANTS (TAs)

### Instructor



**Mikhail IVANOV**

✉ [MIVANOV@WISC.EDU](mailto:MIVANOV@WISC.EDU)

### Instructor Availability and Preferred Contact :

Mikhail Ivanov (office: Van Vleck B127; email: [mivanov@wisc.edu](mailto:mivanov@wisc.edu))




Office hours: TBA (TBA, check course page), or by appointment (online, Zoom).

### TA Availability and Preferred Contact :


Grader: TBA


## COURSE OUTCOMES, GRADING, and OTHER COURSE MATERIALS


### Course Learning Outcomes (CLOs) :

-  Verify the premises of standard theorems in order to apply their conclusions in the context of longer arguments (e.g., arguing congruence by verifying angle sums, etc.).
-  Recall and state the formal definitions of mathematical objects and their properties used in axiomatic and coordinate geometry with a special emphasis on triangles and circles (e.g., pedal triangles, Simson line, perpendicular bisector, etc.).
-  Prove or disprove statements related to the definitions, properties, and theorems of axiomatic geometry using the techniques of mathematical argument. In particular, the student will employ construction and computational techniques as necessary.



 Use the above definitions to argue if a mathematical construct does or does not have the condition of having a particular property (e.g., that two triangles are congruent, three points are collinear, etc.).

 Recall and state standard theorems used in axiomatic geometry including their proofs (e.g., opposite angles are congruent, Ceva's Theorem, nine-point circle theorem, etc.).

 Convey formal mathematical arguments in written and/or verbal English using appropriate mathematical terminology and notation.

## Grading :

The course grade is based on two midterms and final exam, as well as regular homeworks. Final grades are curved. Each midterm is worth 25%, and the final exam is worth 30%. The graded homeworks are worth 20%.

## Course Website, Learning Management System and Digital Instructional Tools :

Canvas: <https://canvas.wisc.edu/courses/284880>

Piazza: [piazza.com/wisc/spring2022/sp22math461001](https://piazza.com/wisc/spring2022/sp22math461001)

Zoom: will be provided, if needed.

## Homework & Other Assignments :

Homeworks will be marked by a graduate student assigned to me.

Your work on these exercises should be well presented, in good English. A clear explanation is just as important as the correct answer. Collaborating with other students on the homework is encouraged, but you must write up all reasoning and solutions on your own (in other words, no copying). Failure to abide by this guideline could be construed as a form of academic dishonesty (see the section on Academic Integrity below). Late homework will generally not be accepted, though I will drop the lowest homework grade at the end of the course.

## EXAMS, QUIZZES, PAPERS & OTHER MAJOR GRADED WORK

### Exams, Quizzes, Papers & Other Major Graded Work :

Midterm Exam I: Thursday, February 24th, 1:00pm--2:15pm, in-class.

Midterm Exam II: Thursday, April 7th, 1:00pm--2:15pm, in class.

Final exam: Sunday, May 8th, 10:05am--12:05pm, cumulative, in-class.





## Teaching & Learning Data Transparency Statement

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully reviews and vets all campus-supported digital tools used to support teaching and learning, to help support success through [learning analytics](#), and to enable proctoring capabilities. View the university's full [teaching and learning data transparency statement](#).



## Privacy of Student Records & the Use of Audio Recorded Lectures Statement

View [more information about FERPA](#).

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability who has an approved accommodation that includes recording. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities, with the exception of sharing copies of your personal notes as a notetaker through the McBurney Disability Resource Center. Students are otherwise prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.



## How to Succeed in This Course

Resource links to other campus services:

- [University Health Services](#)
- [Undergraduate Academic Advising and Career Services](#)
- [Office of the Registrar](#)
- [Office of Student Financial Aid](#)
- [Dean of Students Office](#)
- [Graduate Student Services](#)





## Course Evaluations

Students will be provided with an opportunity to evaluate this course and your learning experience. Student participation is an integral component of this course, and your confidential feedback is important to me. I strongly encourage you to participate in the course evaluation.

### Digital Course Evaluation (AEFIS)

UW-Madison uses a digital course evaluation survey tool called [AEFIS](#). In most instances, you will receive an official email two weeks prior to the end of the semester, notifying you that your course evaluation is available. In the email you will receive a link to log into the course evaluation with your NetID. Evaluations are anonymous. Your participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.



## Students' Rules, Rights & Responsibilities

### Rights & Responsibilities

For spring 2022, instructors and students should consult the following website for current campus health and safety guidance: [covidresponse.wisc.edu](https://covidresponse.wisc.edu).



## Diversity & Inclusion Statement

**Diversity** is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.



## Academic Integrity Statement

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.





## Accommodations for Students with Disabilities

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy ([UW-855](#)) require the university to provide reasonable accommodations to students with disabilities to access and participate in its academic programs and educational services. Faculty and students share responsibility in the accommodation process. Students are expected to inform faculty of their need for instructional accommodations during the beginning of the semester, or as soon as possible after being approved for accommodations. Faculty, will work either directly with the student or in coordination with the McBurney Center to provide reasonable instructional and course-related accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: [McBurney Disability Resource Center](#))



## Academic Calendar & Religious Observances

[Academic Calendar & Religious Observances](#)

