

**Michigan State University**  
**MTH 330 – Spring 2018**  
A330 Wells Hall

**Instructor:** Michael Brown

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**Phone:** (517)884-6613

**Office Hours & Location:** Mondays and Thursdays 3-4pm, and by appointment; C140 Wells Hall

**Prerequisites:** Successful completion of MTH 301 or equivalent courses at another institution.

**Goals:** The primary goal of MTH 330 is to discuss geometry concepts for understanding connections between topics of advanced Euclidean geometry and the mathematics taught in middle school. Topics include transformations: isometries, similarities, inversion. Advanced Euclidean geometry: theorems of Menelaus, Ceva, and Desargues. Cross ratio, harmonic points, analytic, metric, and vector methods, and convexity.

**Materials:**

- *Foundations of Geometry, second edition*, by Venema
- *Exploring Advanced Euclidean Geometry w/ Geogebra*, by Venema
- *The Art of Mathematics: Ideas of Geometry*, by Fleron, Ecke, Hotchkiss, and Renesse

The Art of Mathematics is a digital text available for download at:

<https://www.artofmathematics.org/books/geometry>

**Assessments:** There will be 3 hourly exams, a cumulative final exam, and weekly quizzes

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|------------------------------------|------------|
| • 3 Hourly Exams @ 100 points each | 300 points |
| • Final Exam                       | 200 points |
| • Weekly Activities                | 100 points |

We will allocate 100 points of the course to weekly activities. We will have 12 activities worth 10 points each. The two lowest grades will be dropped.

In most cases, absence from an in-class quiz or exam will result in a grade of 0 points, and no make-up options will be available. However, if a student is ill (and has a written note from the attending nurse or physician) or on official university business (e.g. participating in a sanctioned club or sport), alternate arrangements may be possible. In case of any absence, please notify your instructor as soon as possible.

There will be no graded homework in MTH 330. However, there will be assigned *suggested* homework problems. Problems will come from the text resources. To ensure your success and understanding in the course material ***you must*** complete these suggested problems.

**Grading:** The grading scale is straightforward:

90% - 100%: 4.0	85% - 89%: 3.5	80% - 84%: 3.0	75% - 79%: 2.5
70% - 74%: 2.0	65% - 69%: 1.5	60% - 64%: 1.0	0% - 59%: 0.0

This grading scale will *not* be curved, even at the end of the semester. All grades are based on how well each student learns the material, so grades are not competitive. Grades in MTH 330 are based on understanding, not upon comparisons with other students.

**Course Expectations:** The mathematics content will be developed using a variety of approaches, including discussion, activities, lectures, and small group work. During class, you are expected to take notes as needed, participate in activities, and ask questions about what you do not understand. This is a 3-hour mathematics course. There is an expectation that students will work roughly 6 hours per week outside of class in order to master the course material. Following are some ways in which you might productively spend this time:

- Read the textbook, both before and after the material has been covered in class. Take notes from your reading on the important ideas, theorems and definitions.
- Complete ALL suggested homework assignments after the topics are covered in class.
- Write a paragraph in your notebook after every class in which you summarize the day's lecture.
- Meet with a study group to discuss the homework, solutions and solution paths.
- Go to office hours or the Math Help Room to go over answers to problems that are not graded.

You are encouraged to work with your instructor and other students to understand the course material. However, we expect that after conferring with others, you will write up **your own responses individually and independently of others. DO NOT copy answers to homework problems from others.** (See note on Academic Honesty later in this document.)

**Mathematics Learning Center (MLC):** The MLC is a free tutorial service operated by the Mathematics Department for students enrolled in introductory mathematics courses. Hours of operation will be announced by the end of the first week of classes. Students wanting help at the MLC should go to the C-wing of Wells Hall across from the elevators where a student monitor at the lobby window will direct them to the appropriate room.

**Policy on Academic Honesty:** As noted on the web site of the Office of the Ombudsman and in other MSU publications “The principles of truth and honesty are fundamental to the educational process and the academic integrity of the University; therefore, no student shall:

- claim or submit the academic work of another as one's own.
- procure, provide, accept or use any materials containing questions or answers to any examination or assignment without proper authorization.
- complete or attempt to complete any assignment or examination for another individual without proper authorization.
- allow any examination or assignment to be completed for oneself, in part or in total, by another without proper authorization.
- alter, tamper with, appropriate, destroy or otherwise interfere with the research, resources, or other academic work of another person.
- fabricate or falsify data or results.” ...

If any instance of academic dishonesty is discovered by an instructor, it is his or her responsibility to take appropriate action. Depending on his or her judgment of the particular case, *he or she may give a failing grade to the student on the assignment or for the course.*

#### **Important Dates:**

Exam 1: Friday February 2<sup>nd</sup>

Exam 2: Friday March 2<sup>nd</sup>

Exam 3: Friday April 6<sup>th</sup>

Final Exam: Thursday, May 3 2018 12:45pm - 2:45pm in A330 Wells Hall