



Basic Course Information

Semester:	Fall 2024	Instructor Name:	Jill Nelipovich
Course Title & #:	Math 112: Number Systems in Elementary Mathematics	Email:	Jill.nelipovich@imperial.edu
CRN #:	10048	Webpage (optional):	Canvas
Classroom:	2723	Office #:	2760
Class Dates:	08/12/24 – 12/07/24	Student Hours:	MW: 10:15 – 11:15 a.m. W: 5:45 – 6:15 p.m. T: 12:30 – 1:30 p.m. R: 3:00 – 3:30 p.m.
Class Days:	TR	Office Phone #:	760-355-6297
Class Times:	8:00 - 9:25	Emergency Contact:	760-355-6201
Units:	3	Class Format/Modality:	Face-to-Face

Course Description

Math 110 and focuses on the conceptual understanding needed to teach elementary school mathematics. Topics include the geometry, including the development of geometric formulas, transformational geometry, similarity, relationships between shapes, English and metric measurements, Pythagorean Theorem and problem solving. (CSU, UC credit limited. See a counselor.)

Course Prerequisite(s) and/or Corequisite(s)

Successful completion of Intermediate Algebra or appropriate placement as defined by AB705.

Textbooks & Other Resources or Links

Sowder L., Sowder J., Nickerson. S., Whitacre I. 2023. *Reconceptualizing Mathematics*. 4th W.H. Freeman & Company. ISBN: Printed Text: 9781319303730; E-Text: 9781319483135.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Demonstrate an understanding of the difference between area and perimeter.
2. Determine the relationship between similar figures.
3. Develop geometric formula for area or volume



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Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Solve word problems using the basic concepts of geometry and will identify various geometric patterns.
2. Topics from probability and statistics
3. Demonstrate the basic idea of congruence and similarity and actively develop a number of geometric constructions.
4. Identify and apply a variety of transformations, including translation, rotations, reflections and size change
5. Develop the relationship between two and three dimensional shapes.
6. Recognize a variety of geometric figures, and be able to use and apply the formulas in relation to area, perimeter, surface area, and volume.
7. Conversions using non-standard and standard units, including English (U.S. Standard) and Metric units.

Course Requirements and Instructional Methods

1. Class participation: Be present in mind, body and spirit! You need to participate to succeed. Calculus is not easy. Your algebra must be strong! Your trig – yep! You need that knowledge too (especially in Calc
2. Do not spend time on your cell phone. Time on your cell phone is time away from calculus.
3. Love to learn! Embrace the productive struggle. Take joy in not knowing how to do a problem and working it out with your peers. Learn a little every day and refrain from learning a lot in one day. You need time to digest the material.
4. Exams – Three exams! Study a little bit every day.
5. Final Exam – you get to share with me what you learned!
6. No Make-up tests. If you miss an exam and can produce an excused absence as defined by the catalog, I will adopt the policy of some departments of the University of Southern California: your test score will be the average of your other three exam scores AND the average of the final exam of the class.

Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

Course Grading Based on Course Objectives

Quizzes: In class and on Canvas.....10%

Exams: (Three).....60%

Projects.....5%

Final Exam.....25%

A: 90% - 100% B 80% - 89.9%

C: 70% - 79.9% D: 60% - 69.9%

F: Less than 60%

Updated 6/2023



Course Policies

1. Form study groups.
2. Become a family.
3. Apply to be a part of our new MESA (Mathematics, Engineering and Science Achievement) center.
4. If you are not admitted to MESA (for not meeting the state defined qualifications), our MESA director provides a different acronym for you: (ASEM – Achievement in Science, Engineering and Mathematics) for you and you are all part of the same extended family.
5. Don't cheat.
6. Cell phones are only allowed for taking pictures of the work on the board. We will have a productive couple of hours with our math family.

Other Course Information

1. During exams there are no restroom breaks.
2. There are no make-up tests. Every person in the class is provided the opportunity to show me what they didn't learn on a challenging end of the year test the week before finals.

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.



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Date or Week	Activity, Assignment, and/or Topic	
August 13 August 15	Introduction, 16.1 Chapter 16.2	
August 20 August 22	Chapter 16.3 Chapter 16.4	
August 27 August 28	Chapter 17.1, 17.3 Chapter 17.2	
Sept 3 Sept 5	Chapter 17.4, 17.5 Chapter 18.1, 18.2	
Sept 10 Sept 12	Chapter 19.1, 19.2 Chapter 20.1/Project	
Sept 17 Sept 19	Review Exam 1	
Sept 24 Sept 26	Chapter 20.1 Chapter 20.1	
October 1 October 3	Chapter 20.2, 20.3 Chapter 21.1, 21.2	
October 8 October 10	Chapter 22.1, Compass & Straightedge Chapter 22.2, 22.3, 22.4	
October 15 October 17	Chapter 23.1, 23.2 Review	
October 22 October 24	Exam 2 Chapter 24.1	
October 29 October 31	Chapter 24.2 Chapter 25.1	
November 5 November 7	Chapter 25.2 Chapter 25.2	
November 12 November 14	Holiday Chapter 26.1, 26.2	
November 19 November 21	Review Exam 3	
Thanksgiving Recess		
December 3 December 5	Review Final Exam	

Subject to Change without prior notice

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