IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Fall 2024**	Instructor Name:	**Jill Nelipovich**
Course Title & #:	**Math 010: Number Systems in Elementary Mathematics Support**	Email:	**Jill.nelipovich@imperial.edu**
CRN #:		Webpage (optional):	**Canvas**
Classroom:	**2725**	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:	12:30 - 1:5	Emergency Contact:	**760-355-6201**
Units:	1	Class Format/Modality:	Face-to-Face

Course Description

This course focuses on the development of quantitative reasoning skills through in-depth, integrated explorations of topics in mathematics, including real number systems and subsystems. Emphasis is on comprehension and analysis of mathematical concepts and applications of logical reasoning. (C-ID: MATH 120) (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.

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 knowledge of operations and properties by creating story problems.
2. Demonstrate knowledge of operations by modeling the solutions.
3. Demonstrate an understanding of place value by counting in bases other than ten.

Course Objectives

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

1. Perform calculations with place-value systems
2. Evaluate the equivalence of numeric algorithms and explain the advantages and disadvantages of equivalent algorithms in different circumstances.
3. Apply algorithms from number theory to determine divisibility in a variety of settings.
4. Analyze least common multiples and greatest common divisors and their role in standard algorithms.
5. Explain the concept of rational numbers, using both ratio and decimal representations; analyze the arithmetic algorithms for these two representations and justify their equivalence.
6. Analyze the structure and properties of whole, rational, and real number systems; define the concept of rational and irrational numbers, including their decimal representation; and illustrate the use of a number line representation.
7. Develop and reinforce conceptual understanding of mathematical topics through the use of patterns, problem solving, and communication, connections, modeling, reasoning and representation
8. Develop activities implementing curriculum standards

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.

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.

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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%

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 12 August 14	Introduction Chapter 11.1, 11.2	
August 19 August 21	Chapter 11.3, 11.4 (Zoom) Chapter 11.4 (Zoom)	
August 26 August 28	No Class – outside assignment Chapter 2.1/Base 10 Blocks	
Sept 2 Sept 4	Holiday: September 2 Chapter 2.2, 2.3	
Sept 9 Sept 11	Chapter 2.4/Base 5 blocks Chapter 3.1/Review	
Sept 16 Sept 18	Exam 1 Chapter 3.2, 3.3	
Sept 23 Sept 25	Chapter 3.4, 3.5 Chapter 3.5, 4.1	
Sept 30 October 2	Chapter 5.1, 5.2 Chapter 5.3, 5.4	
October 7 October 9	Review Exam 2	
October 14 October 16	Chapter 6.1,6.2 Chapter 6.2	
October 21 October 23	Chapter 6.3 Chapter 6.4	
October 28 October 30	Chapter 7.1/Pattern Blocks Chapter 7.2, 7.3	
November 4 November 6	Chapter 8.1, 8.2 Chapter 9.1, 9.2	
November 11 November 13	Holiday Chapter 9.3	
November 18 November 20	Review Exam 3	
Thanksgiving Recess		
December 4 December 6	Review Final Exam	

Subject to Change without prior notice

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