IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Spring 2024**	Instructor Name:	**Leobardo Rosales Jr**
Course Title & #:	**Math 110: Number Systems in Elementary Mathematics**	Email:	**leobardo.rosales@imperial.edu**
CRN #:	**20049**	Webpage (optional):	**Canvas**
Classroom:	**2700-2722**	Office #:	**3900**
Class Dates:	**2/10-6/6/2025**	Office Hours:	**Thursdays 10-11am in 3900**
Class Days:	**TR**	Office Phone #:	
Class Times:	1:00pm-2:25pm	Emergency Contact:	**Silvia Murray: 760-355-6201**
Units:	4	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.

I will provide more information the first day of class.

Course Requirements and Instructional Methods

The course will consist of face-to-face lectures, weekly, quizzes, weekly assignments, three tests, and a cumulative final.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a 16-week class. For this class that means approximately 12 hours of class and out-of-class time per week.

Course Grading Based on Course Objectives

Your grade will be computed as follows:

- Assignments 30%
- Quizzes 10%
- 3 Tests 30%
- Final 30%

The following grading scale will be used:

- 90% and above is an A
- 80% and above is a B
- 70% and above is a C
- 60% and above is a D

Below 59% is an F.

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.

Accessibility Statement

Imperial Valley College is committed to providing an accessible learning experience for all students, regardless of course modality. Every effort has been made to ensure that this course complies with all state and federal accessibility regulations, including Section 508 of the Rehabilitation Act, the Americans with Disabilities Act (ADA), and Title 5 of the

California Code of Regulations. However, if you encounter any content that is not accessible, please contact your instructor or the area dean for assistance. If you have specific accommodations through *DSPS*, contact them for additional assistance.

We are here to support you and ensure that you have equal access to all course materials.

Course Policies

1. The definition of an excused absence is one which is out of your immediate control. This can include but is not limited to illness, accident, and appointments set by official agencies. It does not include sleeping-in or forgetting about class. Send me an email if you must or have missed class due to an excused absence.
2. If you do not attend the first class meeting without an excused absence, then you will be dropped from the class. Send me an email if you must or have missed the first class due to an excused absence.
3. Assignments and quizzes will be assigned and due through Canvas. No late homework will be accepted. If you cannot submit an assignment or quiz due to an excused absence, then that grade will be replaced by the grade on your next assignment or quiz corresponding, or in case of the last assignment or quiz by the average of your previous assignments or quizzes corresponding. Send me an email if you cannot or did not submit an assignment or quiz due to an excused absence.
4. If you miss a test due to an excused absence, then your score for that test will be replaced by your score for the next test, or in case of Test 3 by the score on your Final. Send me an email if you cannot or did not take a test due to an excused absence.
5. Attending the Final is absolutely mandatory. There is no make-up or replacement for the Final.
6. All general rules, including rules of etiquette, of Imperial Valley College apply.

Other Course Information

To be updated.

Financial Aid

Your Grades Matter! In order to continue to receive financial aid, you must meet the Satisfactory Academic Progress (SAP) requirement. Makings SAP means that you are maintaining a 2.0 GPA, you have successfully completed 67% of your coursework, and you will graduate on time. If you do not maintain SAP, you may lose your financial aid. If you have questions, please contact financial aid at finaid@imperial.edu.

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.

Anticipated Class Schedule/Calendar

Week	Lecture 1	Lecture 2
Week 1 Feb 11,13	Introduction	Chapter 2.1
Week 2 Feb 18,20	Chapter 2.2 Chapter 2.3	Chapter 2.3 Chapter 2.4
Week 3 Feb 25,27	Base 5 blocks Chapter 3.1	Chapter 3.2 Chapter 3.3
Week 4 Mar 4,6	Review	Test 1
Week 5 Mar 11,13	Chapter 3.4 Chapter 3.5	Chapter 3.5 Chapter 4.1
Week 6 Mar 18,20	Chapter 5.1 Chapter 5.2	Chapter 5.3 Chapter 5.4
Week 7 Mar 25,27	Chapter 6.1 Chapter 6.2	Chapter 6.2
Week 8 Apr 1,3	Review	Test 2
Week 9 Apr 8,10	Chapter 6.3	Chapter 6.4
Week 10 Apr 15,17	Chapter 7.1 Pattern Blocks	Chapter 7.2 Chapter 7.3
Week 11 Apr 29, May 1	Chapter 8.1 Chapter 8.2	Chapter 9.1 Chapter 9.2
Week 12 May 6,8	Chapter 9.3	Review
Week 13 May 13,15	Test 3	Chapter 11.1
Week 14 May 20,22	Chapter 11.2	Chapter 11.3
Week 15 May 27,29	Chapter 11.4	Review
Final June 3,5	Review	Final

Subject to change without prior notice