



MA 105-90-4: Math for Elementary Teachers I
School of Education & Behavioral Sciences
[Chaminade University Honolulu](https://www.chaminade.edu/)
Spring 2025 / 3 Credits

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Learning Materials

- **Textbook (Required):** Beckmann, Sybilla (2017). Mathematics for Elementary Teachers with Activities. 5th ed. Pearson. ISBN-10: 0134392795
- **Google Drive/3-Ring Binder:** Composed of self-created graphic organizers, and all other assignments.
- **The Math Learning Center Website:** [Virtual Math Manipulatives](https://www.mathlearningcenter.org/)

Course Catalog Description

This course provides a foundation for prospective early childhood and elementary education majors with pre-K to 8 mathematics. Guided by NCTM Standards and through the study of concepts and properties of number systems; the four fundamental operations of arithmetic; the basic knowledge in data, the student will be able to undertake further study in mathematics education. No prerequisites required.

Course Overview

This is the first of two elementary math courses to provide you insight on different strategies to solve K - 8 mathematics problems conceptually and procedurally.

Marianist Values

This class represents one component of your education at Chaminade University of Honolulu. An education in the Marianist Tradition is marked by five principles and you should take every opportunity possible to reflect upon the role of these characteristics in your education and development:

1. Education for formation in faith
2. Provide an integral, quality education
3. Educate in family spirit
4. Educate for service, justice and peace
5. Educate for adaptation and change

Native Hawaiian Values

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the 'Ōlelo No'eau (Hawaiian proverbs) and Marianist core beliefs:

1. Educate for Formation in Faith (Mana) E ola au i ke akua ('Ōlelo No'eau 364) May I live by God
2. Provide an Integral, Quality Education (Na'auao) Lawe i ka ma'alea a kū'ono'ono ('Ōlelo No'eau 1957) Acquire skill and make it deep
3. Educate in Family Spirit ('Ohana) 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Ōlelo No'eau 1200) Recognize others, be recognized, help others, be helped; such is a family relationship
4. Educate for Service, Justice and Peace (Aloha) Ka lama kū o ka no'eau ('Ōlelo No'eau 1430) Education is the standing torch of wisdom
5. Educate for Adaptation and Change (Aina) 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Ōlelo No'eau 203) All knowledge is not taught in the same school

Program Learning Outcomes [PLOs]

PLO 1	Apply knowledge of learner development, learner differences, diverse students and the learning environment to optimize learning for Elementary students.
PLO 2	Describe central concepts, tools of inquiry and structures of the subject matter disciplines for Elementary students.
PLO 3	Utilize formative and summative assessments, to determine, select, and implement effective instructional strategies for Elementary students.
PLO 4	Analyze the history, values, commitments, and ethics of the teaching profession within the school community.
PLO 5	Explain the Marianist tradition of providing an integral, quality education within diverse learning communities.

Course Learning Outcomes [CLOs]

CLO 1	Identify principles of the base-ten system.
CLO 2	Evaluate and justify fractions and percentages scenarios to solve practical problems.
CLO 3	Evaluate and justify addition and subtraction scenarios using inventive strategies and standard algorithms.
CLO 4	Evaluate and justify multiplication scenarios with whole numbers using inventive strategies and standard algorithms.
CLO 5	Evaluate and justify multiplication scenarios with fractions, decimals, and negative numbers to solve practical problems.
CLO 6	Evaluate and justify division scenarios using inventive strategies and standard algorithms.
CLO 7	Apply ratio and proportional concepts to solve practical problems.
CLO 8	Examine number theory scenarios and assemble conjectures.

Alignment of Learning Outcomes

	CLO 1	CLO 2	CLO 3	CLO 4	CLO 5	CLO 6	CLO 7	CLO 8	CLO 9	CLO 10
Marianist Values	2, 5	2, 5	2, 5	2, 5	2, 5	2, 5	2, 5	2, 5	2, 5	2, 5
PLOs	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	3	1, 2

What is the Point of Math Class?

Collaboration

Communicate Thoughts & Ideas

Creativity

Critical Thinking

Assessment

This course is designed to contribute in a different and significant way to your knowledge and experience relative to diagnosis and remediation of mathematics. Always be prepared to effectively participate in class discussions, analyze the thinking of others in class, and clearly explain your thinking. A mastery rubric is provided with every assessment. Feedback on all assessments is provided within 7 days of submission.

1. Participation Assignments

Assessed: Week 1

- There is one assignment, described on Canvas, which contributes to your overall participation in this course: introducing yourself on a discussion board

2. Written Assessments

[CLO 1, 2, 3, 4, 5, 6, 7, 8]

Assessed: Week 3, 6, 10, 14

- These assessments focus on Course Learning Outcomes (CLOs) demonstrated in the building thinking classroom activities and strategies used in your Check for Understanding. A full class period is provided to master multiple CLOs in a written communication format.

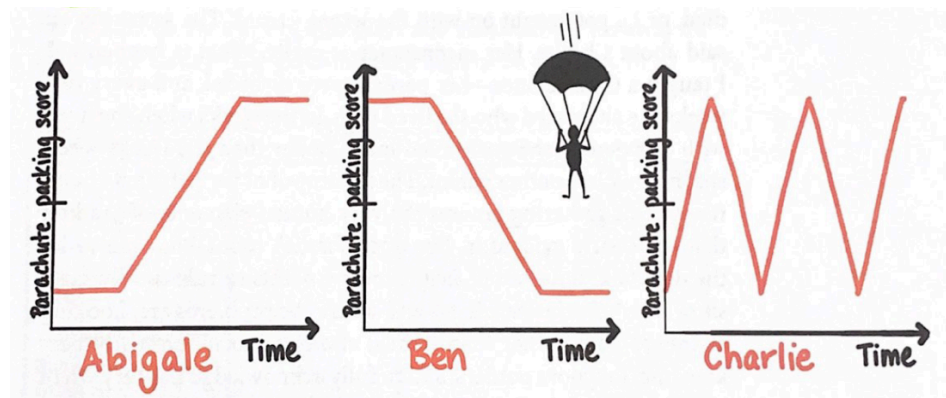
3. Optional Written Assessments

[CLO 1, 2, 3, 4, 5, 6, 7, 8]

Assessed: Week 7 & 15

- These assessments focus on Course Learning Outcomes (CLOs) demonstrated in the building thinking classroom activities and strategies used in your Check for Understanding. A full class period is provided to master multiple CLOs in a written communication format.

How Many CLOs Demonstrate Mastery ?								
8	7	6	5	4	3	2	1	0
A	A	B	C	D	F	F	F	F



* The Model Code of Ethics for Educators is intertwined throughout various activities within this course, as well as the other courses you will take within the program. The responsibility to profession, of professional competence, to our students, to the school, and with the use of technology are integral to all aspects of this course. *

Kōkua 'Ike: Tutoring & Learning Services

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua 'Ike: Center for Student Learning in a variety of subjects (including, but are not limited to biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check [Kōkua 'Ike's](#) website for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via TutorMe. Tutor Me can be accessed 24/7 from your Canvas account. Simply click on Account > TutorMe. For more information, please contact Kōkua 'Ike at tutoring@chaminade.edu or 808-739-8305.

Course Policies

Attendance Policy

Students are expected to attend regularly all courses for which they are registered. Students should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assessments. Notification may be done by contacting the instructor via a direct message on GroupMe. It is the instructor's prerogative to modify deadlines of course requirements accordingly.

- Any student who stops attending a course without officially withdrawing may receive a failing grade.
- Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course.
- Any unexcused absence of two consecutive weeks or more for any reason will result in being withdrawn from the course by the instructor.
- Repeated, non-consecutive absences for any reason put students at risk of a failing grade.

Federal regulations require continued attendance for continuing payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the instructor to review the options. Anyone who stops attending a course without official withdrawal may receive a failing grade or be withdrawn by the instructor at the instructor's discretion.

Late Work Policy

Always accepted, but feedback may be delayed.

Grades of Incomplete

This policy on incomplete grades aligns with the same University policies.

Instructor and Student Communication

Questions for this course can be sent through a direct message on the GroupMe app. Online and/or in-person meetings can be arranged. Response time will take place up to 24 hours.

Important Information

Academic Honesty

Academic honesty is an essential aspect of all learning, scholarship, and research. It is one of the values regarded most highly by academic communities throughout the world. Violations of the principle of academic honesty are extremely serious and will not be tolerated.

Students are responsible for promoting academic honesty at Chaminade by not participating in any act of dishonesty and by reporting any incidence of academic dishonesty to an instructor or to a University official. Academic dishonesty may include theft of records or examinations, alteration of grades, and plagiarism, in addition to more obvious dishonesty.

Questions of academic dishonesty in a particular class are first reviewed by the instructor, who must make a report with recommendations to the Dean of the Academic Division. Punishment for academic dishonesty will be determined by the instructor and the Dean of Academic Division and may include an "F" grade for the work in question, an "F" grade for the course, suspension, or dismissal from the University.

For the most up to date information, please refer to the [Academic Honesty Policy](#) on the Chaminade University Catalog website.

Title IX and Nondiscrimination Statement

Chaminade University of Honolulu is committed to providing a learning, working and living environment that promotes the dignity of all people, inclusivity and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence,

dating violence, and stalking. As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator.

Nondiscrimination Policy & Notice of Nondiscrimination

Chaminade University of Honolulu does not discriminate on the basis of sex and prohibits sex discrimination in any education program or activity that it operates, as required by Title IX and its regulations, including in admission and employment. Inquiries about Title IX may be referred to the University's Title IX Coordinator, the U.S. Department of Education's Office for Civil Rights, or both and contact information may be found at the [Chaminade University Title IX Office Contact Information and Confidential Resources website](#). On-campus Confidential Resources may also be found here at [CAMPUS CONFIDENTIAL RESOURCES](#).

The University's Nondiscrimination Policy and Grievance Procedures can be located on the University webpage at: <https://chaminade.edu/compliance/title-ix-nondiscrimination-policies-procedures/>.

To report information about conduct that may constitute sex discrimination or make a complaint of sex discrimination under Title IX, please refer to the [Campus Incident Report form](#). Chaminade University of Honolulu prohibits sex discrimination in any education program or activity that it operates. The NOTICE of NONDISCRIMINATION can be found here: [Notice of Nondiscrimination](#).

CUH Alert Emergency Notification

To get the latest emergency communication from Chaminade University, students' cell numbers will be connected to Chaminade's emergency notification text system. When you log in to the Chaminade portal, you will be asked to provide some emergency contact information. If you provide a cell phone number, you will receive a text from our emergency notification system asking you to confirm your number. You must respond to that message to complete your registration and get emergency notifications on your phone.

Assessment for Student Work

With the goal of continuing to improve the quality of educational services offered to students, Chaminade University conducts assessments of student achievement of course, program, and institutional learning outcomes. Student work is used anonymously as the basis of these assessments, and the work you do in this course may be used in these assessment efforts.

Student with Disabilities Statement

Chaminade University of Honolulu offers accommodations for all actively enrolled students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (2008).

Students are responsible for contacting Kokua Ike: Center for Student Learning to schedule an appointment. Verification of their disability will be requested through appropriate documentation and once received it will take up to approximately 2–3 weeks to review them. Appropriate paperwork will be completed by the student before notification will be sent out to their instructors. Accommodation paperwork will not be automatically sent out to instructors each semester, as the student is responsible to notify Kokua Ike via email at ada@chaminade.edu each semester if changes or notifications are needed.

Credit Hour Policy

This is a three-credit hour course requiring 135 clock hours of student engagement, per the CUH Credit Hour Policy.

Clock Hour Category	Total Time (hours)
Seat Time	37.5
Remaining Hours <ul style="list-style-type: none">• Video Lectures• Check for Understanding	97.5
<i>Remaining Hours / 15 Weeks</i>	<i>6.5 hours/week</i>

Course Schedule

CLO # Dates	Content	Assessments
Course Introduction January 6 - 12	Course Introduction	<ul style="list-style-type: none"> Introductory Post
CLO 1 January 13 - 19	The Base-Ten System <ul style="list-style-type: none"> The Counting Numbers Decimals and Negative Numbers Reasoning to Compare Numbers in Base Ten Reasoning about Rounding 	<ul style="list-style-type: none"> ✓ for Understanding
CLO 2 January 20 - 26	Fractions and Percentages <ul style="list-style-type: none"> Defining and Reasoning about Fractions Equivalent Fractions Comparing Fractions Percentages 	<ul style="list-style-type: none"> ✓ for Understanding CLO 1 & 2 Written Assessment
CLO 3 Jan 27 - Feb 2	Addition & Subtraction Strategies <ul style="list-style-type: none"> Interpretations of Addition and Subtraction The Commutative and Associative Properties of Addition, Mental Math, and Single-Digit Facts Why the Standard Algorithms for Adding and Subtracting Numbers in Base-Ten System Work Adding and Subtracting Fractions Adding and Subtracting with Negative Numbers 	<ul style="list-style-type: none"> ✓ for Understanding
CLO 4 February 3 - 16	Multiplication Strategies with Whole Numbers <ul style="list-style-type: none"> Interpretations of Multiplication The Commutative and Associative Properties of Multiplication, Area of Rectangles, and Volumes of Boxes The Distributive Property Properties of Arithmetic, Mental Math, and Single-Digit Multiplication Facts Why Algorithms for Multiplying Whole Numbers Work 	<ul style="list-style-type: none"> ✓ for Understanding CLO 3 & 4 Written Assessment
Assessment Week February 17 - 23	✏ CLO 1, 2, 3 & 4 Optional Written Assessment	
CLO 5 Feb 24 - Mar 2	Multiplication Strategies with Fractions, Decimals, & Negatives <ul style="list-style-type: none"> Multiplying Fractions Multiplying Decimals Multiplying Negative Numbers 	<ul style="list-style-type: none"> ✓ for Understanding
CLO 6 March 3 - 16	Division Strategies <ul style="list-style-type: none"> Interpretations of Division Division and Fractions and Division with Remainders Why Division Algorithms Work Fraction Division from the "How Many Groups?" Perspective Fraction Division from the "How Many in One Group?" Perspective Dividing Decimals 	<ul style="list-style-type: none"> ✓ for Understanding CLO 5 & 6 Written Assessment
CLO 7 Mar 17 - 30	Ratios & Proportions <ul style="list-style-type: none"> Motivating and Defining Ratio and Proportional Relationships Solving Proportion Problems 	<ul style="list-style-type: none"> ✓ for Understanding
CLO 8 Mar 31 - Apr 13	Number Theory <ul style="list-style-type: none"> Factors and Multiples Evens and Odds Divisibility Tests Prime Numbers Greatest Common Factor and Least Common Multiple Rational and Irrational Numbers 	<ul style="list-style-type: none"> ✓ for Understanding CLO 7 & 8 Written Assessment
Easter Break April 14 - 20	CCPI CLOSED	
Assessment Week April 21 - 27	✏ CLO 5, 6, 7, & 8 Optional Written Assessment	
Finals Week Apr 28 - May 2	✏ CLO 1, 2, 3, 4, 5, 6, 7, & 8 Optional Written Assessment	