MA 105: Math for Elementary Teachers I
School of Education & Behavioral Science

Chaminade University of Honolulu
3 Credits

Instructor	Dr. Carli Miyashiro	**Office Location**	Zoom
Email	carli.miyashiro@chaminade.edu	**Office/Zoom Hours**	By Appointment
Cell Phone	831-588-1397	**Class Meeting Day and Time**	Asynchronous, at your own pace

Term: Spring 2026

Required Learning Materials
- **Textbook (Required):** Boaler, J. (2019). *Limitless mind: Learn, lead, and live without barriers*. ISBN-10: 0062851748
- **Textbook (Recommended):** Beckmann, S. (2017). *Mathematics for Elementary Teachers with Activities*. 5th ed. Pearson. ISBN-10: 0134392795
- **Google Drive/3-Ring Binder:** This comprises problem-solving sets, discussion posts, and all other assignments.

Additional Resources
- The Math Learning Center – Virtual Math Manipulatives

Hardware Requirements: Canvas is accessible from both PC and Mac computers with a reliable internet connection. You will also need to be able to access audio and video files. Subsequently, you should have access to speakers or headphones to hear the audio.

Software Requirements: You will need to be able to listen to audio in an MP3 format, watch videos in MP4 format, stream online videos, and read PDF files. There are several free software programs online that can be downloaded for free. If you need assistance locating software, please contact the Chaminade Help Desk at helpdesk@chaminade.edu or (808) 735-4855.

University 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, and basic knowledge of 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 insight into different strategies to solve K-8 mathematics problems conceptually and procedurally.

Course Approach
There are only two due dates you have are 1) your introduction post, which is due by 11:59 pm 14 days after the class starts (Monday, January 26, 2026) and and 2) MAA (Chapter 1 - 4) is due by Monday, March 9, 2026, at 11:59 pm. Failure to make these deadlines may cause you to fail or be removed from the course. This model provides you with the convenience and ability to work at your own pace and complete assignments when convenient. You can work as fast as you want, meaning you can complete the course in as little as six weeks or up to four months.

Communication Guidelines
Email:

- Use the Chaminade email account provided. Or you can use the Canvas email.
- Always include a subject line.
- Remember, some comments may be misinterpreted without facial expressions. Be careful in wording your emails. Emoticons might be helpful in some cases.
- Use standard fonts.
- Special formatting, such as centering, audio messages, tables, HTML, etc., should be avoided when completing an assignment or other communication.

Discussion Guidelines:

- Do not make insulting or inflammatory statements to other discussion group members. Be respectful of others' ideas.
- Be patient and read the comments of others thoroughly before entering your remarks.
- Be positive and constructive when responding to others' posts.
- Respond in a thoughtful and timely manner.

Marianist Values
This class represents one component of your education at Chaminade University of Honolulu. Five principles mark an education in the Marianist Tradition, 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 ʻOlelo Noʼeau (Hawaiian proverbs) and Marianist core beliefs:

1. Educate for Formation in Faith (Mana) E ola au i ke akua (ʻŌlelo Noʻeau 364) May I live by God.
2. Provide an Integral, Quality Education (Naʼauao) Lawe i ka maʻalea a kūʻonoʻono (ʻŌlelo Noʻeau 1957) Acquire skill and make it deep.
3. Educate in Family Spirit (ʻOhana) ʻIke aku, ʻike mai, kōkua aku kōkua mai; pela iho la ka nohana ʻohana (ʻŌlelo Noʻeau 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 noʻeau (ʻŌlelo Noʻeau 1430) Education is the standing torch of wisdom.
5. Educate for Adaptation and Change (Aina) ʻAʻohe pau ka ʻike i ka hālau hoʻokahi (ʻŌlelo Noʻeau 203). All knowledge is not taught in the same school.l

Program Learning Outcomes (PLO)

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

Course Learning Outcomes (CLO)

1. Students will be able to demonstrate and justify inventive and standard algorithms for addition, subtraction, multiplication, and division of whole numbers, integers, fractions, and decimals.
2. Students will be able to use problem-solving skills to investigate real-life mathematical situations and communicate mathematical ideas with others verbally, numerically, symbolically, graphically, and/or geometrically.
3. Students will be able to explain the use of elementary classroom manipulatives to model sets, operations, and algorithms.
4. Students will read for personal growth as educators and write to inform others about informational texts.

General Education Learning Outcomes

1. Students will apply basic mathematical principles to function effectively and develop mathematical reasoning and problem-solving skills.
2. Students will define, identify, locate, evaluate, synthesize, and demonstrate relevant information.

Alignment of Learning Outcomes

	CLO 1	CLO 2	CLO 3	CLO 4
Marianist Values	Provide an integral and quality education. Educate for adaptation and change.	Provide an integral and quality education. Educate for adaptation and change.	Provide an integral and quality education. Educate for adaptation and change.	Provide an integral and quality education. Educate for adaptation and change.
WASC Core Competencies	Written Communication Oral Communication Quantitative Reasoning Critical Thinking	Written Communication Oral Communication Quantitative Reasoning Critical Thinking	Oral Communication Quantitative Reasoning Critical Thinking	Written Communication
Program Outcomes	1, 2	1, 2	1, 2	1, 2, 4

Assessment
The assignments in this course are designed to contribute in a different and significant way to your knowledge and experience relative to the diagnosis and remediation of mathematics and teaching elementary mathematics. You are responsible for turning in all assignments on time before the due dates you choose in your Course Completion Schedule in Module 1 of this course. A scoring rubric is provided with every assignment to ensure you know what is required to receive the desired score. Feedback and grades on all assignments are provided within 7 days of submission.

1. Participation Assignments – 0% of Final Grade
Module 1: [1 point per assignment]

- One assignments described on Canvas contribute to your overall participation in this course: an introductory post and a course completion schedule. Although these are not a contributing factor to your final grade, they are required to complete. This is Milestone #1, due January 26, 2026.

2. Problem-Solving Sets (PSS) – 30% of Final Grade [CLO 1, 2, & 3]
Modules 1, 2, 3, 4, 6, 7, 8, 9: [10 points per set]

- You will complete five questions from each chapter's content. These questions require detailed explanations of thought processes and mathematical drawings to show solutions.

3. Open Middle Problems (OMP) – 30% of Final Grade [CLO 1, 2, & 3]
Module 5 & 10: [25 points each]

- The open middle problems focus on content demonstrated in the guided notes and strategies used in your problem-solving sets. These are meant to be thought-provoking and provide you with a resource for future classrooms.

4. Mathematical Approach Analyses – 25% of Final Grade [CLO 1]

Module 5 & 10: [25 points each]

- You will observe, analyze, and reflect on how five different people, not from this course, solve particular mathematics problems covered in selected chapters mentally and on paper with algorithms/diagrams.
- MAA due Monday, March 9, 2026

5. Limitless Mind Book Review – 15% of Final Grade [CLO 4]

Module 10: [25 points each]

- After reading this book by Jo Boaler, you will write a 3 - 5 page, double-spaced reflection in APA format responding to all of the questions stated in the assignment on Canvas.

Grading Scale

Letter grades are given in all courses except those conducted on a credit/no credit basis. Grades are calculated from the student's daily work, class participation, quizzes, tests, term papers, reports, and the final examination. They are interpreted as follows:

A	90 - 100 %	Outstanding scholarship and an unusual degree of intellectual initiative
B	80 - 89 %	Superior work done in a consistent and intellectual manner
C	70 - 79 %	Average grade indicating a competent grasp of subject matter
D	60 - 69 %	Inferior work of the lowest passing grade, not satisfactory for fulfillment of the prerequisite coursework
F	0 - 59 %	Failed to grasp the minimum subject matter; no credit given

Course Policies

Late Work Policy

There are only two due dates you have: 1) your introduction post, which is due by 11:59 pm by Monday, February 23, 2026, and 2) MAA (Chapters 1 - 4) is due by Monday, March 9, 2026, at 11:59 pm. Failure to make these deadlines may cause you to fail or be removed from the course.

Grades of "Incomplete"

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

Writing Policy

For any writing assignments, please use APA format. Please refer to https://apastyle.apa.org for any specific style and grammar guidelines questions.

Instructor and Student Communication

Questions for this course can be emailed to the instructor at carli.miyashiro@chaminade.edu. Online and/or phone conferences can be arranged. Response time will take up to 48 hours.

Additional Services

Disability Access

If you need individual accommodations to meet course outcomes because of a documented disability, please speak with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work. Students with special needs who meet the criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from Kōkua ʻIke: Center for Student Learning by the end of week three of the class for instructors to plan accordingly. If a student would like to determine if they meet the criteria for accommodations, they should contact the Kōkua ʻIke Coordinator at (808) 739-8305 for further information (ada@chaminade.edu).

Technical Assistance for Canvas Users:

- Search for help on specific topics or get tips in Canvas Students
- Live chat with Canvas Support for students
- Canvas Support Hotline for students: +1-833-209-6111
- Watch this video to get you started
- Online tutorials: click on the "Students" role to access tutorials
- Contact the Chaminade IT Helpdesk for technical issues: helpdesk@chaminade.edu or call (808) 735-4855

Tutoring and Writing Services

Chaminade is proud to offer all students free, one-on-one tutoring and writing assistance. Tutoring and writing help is available on campus at Kōkua ʻIke: Center for Student Learning in a variety of subjects (including, but not limited to: biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check Kōkua ʻIke's website (https://chaminade.edu/advising/kokua-ike/) 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 Account – Notifications – TutorMe. For more information, please contact Kōkua ʻIke at tutoring@chaminade.edu or 808-739-8305.

Chaminade University Policies

Title IX Compliance

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical, and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. If you or someone you know has been harassed or assaulted, you can find the appropriate resources by visiting Campus Ministry, the Dean of Students Office, the Counseling Center, or the Office for Compliance and Personnel Services.

Attendance Policy

Students are expected to asynchronously attend and submit coursework in classes they are registered for. Student should notify their instructors when illness or other extenuating circumstances prevent them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor's Chaminade

email address, calling the instructor's campus extension, or leaving a message with the instructor's division office. It is the instructor's prerogative to modify deadlines and course requirements accordingly. Any student who stops attending a course without withdrawing may receive a failing grade.

Students with disabilities who have obtained accommodations from the Chaminade University of Honolulu Tutor Coordinator may be considered for an exception when the accommodation does not materially alter the attainment of the learning outcomes.

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.

Academic Conduct Policy
Any community must have a set of rules and standards of conduct by which it operates. At Chaminade, these standards are outlined to reflect the institution's Catholic, Marianist values and honor and respect students as responsible adults. All alleged violations of the community standards are handled through an established student conduct process, outlined in the Student Handbook, and operated within the guidelines set to honor both students' rights and campus values.

Students should conduct themselves in a manner that reflects the ideals of the University. This includes knowing and respecting the intent of rules, regulations, and/or policies presented in the Student Handbook, and realizing that students are subject to the University's jurisdiction from admission until their enrollment has been formally terminated. Please refer to the Student Handbook for more details. A copy of the Student Handbook is available on the Chaminade website.

For further information, please refer to the Student Handbook, which is linked annually on the following webpage: https://chaminade.edu/current-students/

Credit Hour Policy
The unit of semester credit is defined as university-level credit that is awarded for the completion of coursework. One credit hour reflects the amount of work represented in the intended learning outcomes and is verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in 45 hours of engagement. This equates to one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester, 10-week term, or an equivalent amount of work over a different amount of time. Direct instructor engagement and out-of-class work result in a total student engagement time of 45 hours for one credit.

The minimum 45 hours of engagement per credit hour can be satisfied in fully online, internship, or other specialized courses through several means, including (a) regular online instruction or interaction with the faculty member and fellow students and (b) academic engagement through extensive reading, research, online discussion, online quizzes or exams; instruction, collaborative group work, internships, laboratory work, practica, studio work, and preparation of papers, presentations, or other forms of assessment. This policy is in accordance with federal regulations and regional accrediting agencies.

Suggested Course Schedule

Module #	Module Content	Assignments
Module 1	Chapter 1: Numbers and the Base-Ten System Section 1.1: The Counting Numbers Section 1.2: Decimals and Negative Numbers Section 1.3: Reasoning to Compare Numbers in Base Ten Section 1.4: Reasoning about Rounding	Course Completion Plan Introductory Post PSS (Chap 1)
Module 2	Chapter 2: Fractions and Problem-Solving Section 2.2: Defining and Reasoning About Fractions Section 2.3: Equivalent Fractions Section 2.4: Comparing Fractions Section 2.5: Percent	PSS (Chap 2)
Module 3	Chapter 3: Addition and Subtraction Section 3.1: Interpretations of Addition and Subtraction Section 3.2: The Commutative and Associative Properties of Addition, Mental Math, and Single Digit Facts Section 3.3: Why the Standard Algorithms for Adding and Subtracting Numbers in Base-Ten System Work Section 3.4: Adding and Subtracting Fractions Section 3.5: Adding and Subtracting with Negative Numbers	PSS (Chap 3)
Module 4	Chapter 4: Multiplication Section 4.1: Interpretations of Multiplication Section 4.2: Why Multiplying by 10 is Special in Base-Ten Section 4.3: The Commutative and Associative Properties of Multiplication, Area of Rectangles, and Volumes of Boxes Section 4.4: The Distributive Property Section 4.5: Properties of Arithmetic, Mental Math, and Single-Digit Multiplication Facts Section 4.6: Why Algorithms for Multiplying Whole Numbers Work	PSS (Chap 4)
Module 5	Work Week Open Middle Problems (Chap 1 - 4) Mathematical Approach Analysis (Chap. 1 - 4) **Milestone #2 due Mar 9 2026	OMP (Chap 1 - 4) MAA (Chap 1 - 4)
Module 6	Chapter 5: Multiplication of Fractions, Decimals, and Negative Numbers Section 5.1: Multiplying Fractions Section 5.2: Multiplying Decimals Section 5.3: Multiplying Negative Numbers Section 5.4: Powers and Scientific Notation	PSS (Chap 5) Communities of Practice
Module 7	Chapter 6: Division Section 6.1: Interpretations of Division Section 6.2: Division and Fractions and Division with Remainders Section 6.3: Why Division Algorithms Work Section 6.4: Fraction Division from the “How Many Groups?” Perspective Section 6.5: Fraction Division from the “How Many in One Group?” Perspective Section 6.6: Dividing Decimals	PSS (Chap 6)
Module 8	Chapter 7: Ratio and Proportional Relationships Section 7.1: Motivating and Defining Ratio and Proportional Relationships Section 7.2: Solving Proportion Problems by Reasoning with Multiplication and Division	PSS (Chap 7)

Module 9	Chapter 8: Number Theory Section 8.1: Factors and Multiples Section 8.2: Evens and Odds Section 8.3: Divisibility Tests Section 8.4: Prime Numbers Section 8.5: Greatest Common Factor and Least Common Multiple Section 8.6: Rational and Irrational Numbers	PSS (Chap 8)
Module 10	Work Week Open Middle Problems (Chap. 5 – 8) Mathematical Approach Analysis (Chap. 5 – 8) Limitless Mind Book Review	OMP (Chap 5 - 8) MAA (Chap 5 - 8) Limitless Mind Book Review