



ED 322: Elementary Math Methods I
School of Education & Behavioral Science
[Chaminade University of Honolulu](https://www.chaminade.edu/)
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: Fall 2025

Required Learning Materials

- **Textbook (Required):** J.A. Van DeWalle, K. Kary, J.M. Bay-Williams (2022). Elementary and middle school mathematics: Teaching developmentally. 11th ed. Pearson. ISBN-10: 013681803X
- **Textbook (Required):** Parrish, Sherry (2014). Number talks: Whole number computation, grades K-5. Math Solutions. ISBN-10: 1935099655
- **Google Drive/3-Ring Binder:** This contains problem-solving sets, discussion posts, and all other assignments.

Additional Resources

- Common Core State Standards (CCSS) for Mathematics
- The Math Learning Center – Virtual Math Manipulatives
- Mathematical Research Articles [provided in some modules and should be saved for future reference]

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 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 an overview of and applications of best practice mathematics instructional approaches, strategies, techniques, and assessment methods. Math concepts for kindergarten through grade 3 students are explored using hands-on and problem-solving approaches.

Prerequisite: Pass Praxis I or 9 hours of math credit, ED 220, ED 221

Course Overview

This is the first of two elementary math methods courses to provide insight into teaching different strategies to solve K—3 mathematics problems conceptually and procedurally.

Course Approach

The only due dates you have are 1) your course completion Schedule, which is due by 11:59 pm seven days after the start of class (May 12, 2025), and 2) the Three-Act Task Submission 2, due by Week 12 (July 14, 2025). You have the convenience and ability to work at your own pace and complete assignments when convenient, except for these two deadlines. Failure to complete the deadlines could cause you to fail and/or be removed from the course. 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 '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 (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 design real-world mathematics lessons that reflect appropriate consideration of student needs, objectives to be achieved, and content to be taught while allowing exploration, conjectures, and logical reasoning.
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 analyze and implement various approaches, strategies, and materials for teaching mathematics to lower and upper elementary students.

Alignment of Learning Outcomes

	CLO 1	CLO 2	CLO 3
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.
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
Program Outcomes	1, 2	1, 2	1, 2

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]

- Two 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

2. Van De Walle (VDWR) & Number Talks Reflections (NTR) – 30% of Final Grade [CLO 2 & 3]

Modules 1, 2, 3, 4, 5, 7, 8, 9: [5 points each]

- After reading the first 5 chapters of the Van De Walle textbook, specific Number Talks pages in the Parrish textbook & watching the corresponding classroom videos, you will submit reflections about what you saw by responding to the provided questions.

3. Problem-Solving Sets (PSS) – 40% of Final Grade [CLO 2, & 3]

Modules 4, 5, 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.

4. Three-Act Task – 30% of Final Grade [CLO 1]

Module 2, 3, 6, 10: [45 points]

- You will create your real-world math lesson called a Three-Act Task, which must focus on one of the content areas covered in this course. You will submit parts of the task during specific modules for feedback before you submit the full, completed task in the final module.

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 is a firm deadline for the Course Completion Schedule assignment/Milestone #1, due by 11:59 pm on the 7th day of the month you started the course (May 12, 2025). If this assignment is late, you may be dropped from the class. The other Milestone assignment is due by July 12, 2025. All other assignments—except any assignments your instructor notes as having a firm deadline—can be turned in at your convenience. Please refer to Self-Service to confirm when your course section ends, as all assignments are due before then.

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 questions about specific style and grammar guidelines.

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 due to a documented disability, please speak with me as soon as possible to discuss your needs, so we can ensure your full participation in class and a 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 'Ike: Center for Student Learning by the end of the third week of the class, in order for instructors to plan accordingly. If a student wants to determine if they meet the criteria for accommodations, they should contact the Kōkua 'Ike Coordinator at (808) 739-8305 for more 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 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 (<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 'Ike 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 in. 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 by leaving a

message with the instructor's division office. It is the instructor's prerogative to modify deadlines of 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 so as to reflect both the Catholic, Marianist values of the institution and to 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 the time of their 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
1	Van De Walle Textbook Chapter 1: Teaching Mathematics in the 21st Century Chapter 2: Exploring What It Means to Know and Do Mathematics Chapter 3: Teaching through Problem Solving Number Talks Textbook Chapter 1: What is a Classroom Number Talk?	Course Completion Plan Introductory Post VDWR (Chap 1 - 3) NTR (Chap 1)
Module 2	Van De Walle Textbook Chapter 4: Planning in the Problem-Based Classroom Chapter 5: Creating Assessments for Learning Number Talks Textbook Chapter 2: How Do I Prepare for Number Talks?	VDWR (Chap 4 - 5) NTR (Chap 2) Three-Act Task Information and Understanding
Module 3	Van De Walle Textbook Chapter 7: Developing Early Number Concepts and Number Sense Number Talks Textbook Chapter 3: How Do I Develop Specific Strategies in the K-2 Classroom?	NTR (Chap 3) Three-Act Task (First Submission)
Module 4	Van De Walle Textbook Chapter 8: Developing Meanings for the Operations	NTR (Developing Operations) PSS (Chap 8)
Module 5	Van De Walle Textbook Chapter 9: Developing Basic Fact Fluency	NTR (Basic Multiplication Facts) PSS (Chap 9)
Module 6	Work Week Three-Act Task **Milestone #2	Three-Act Task (Second Submission)
Module 7	Van De Walle Textbook Chapter 10: Developing Whole-Number Place-Value Concepts	PSS (Chap 10)
Module 8	Van De Walle Textbook Chapter 11: Developing Strategies for Addition and Subtraction Computation Number Talks Textbook Chapter 5: How Do I Develop Specific Addition and Subtraction Strategies in the 3-5 Classroom?	NTR (Chap 5) PSS (Chap 11)
Module 9	Van De Walle Textbook Chapter 12: Developing Strategies for Multiplication and Division Computation Number Talks Textbook Chapter 7: How Do I Develop Specific Multiplication and Division Strategies in the 3 - 5 Classroom?	NTR (Chap 7) PSS (Chap 12)
Module 10	Work Week Three-Act Task	Three-Act Task (Final Submission)