EDUC 614-90-3: Elementary Math Methods
School of Education & Behavioral Sciences
[Chaminade University Honolulu](#)
Fall 2023 / 3 Credits
Online Graduate

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Learning Materials
- **Textbook (Required)**: J.A. Van DeWalle, K. Kary, J.M. Bay-Williams (2016). *Elementary and middle school mathematics: Teaching developmentally*. 10th ed. Pearson. ISBN-10: 013480208X
- **Textbook (Required)**: Parrish, Sherry (2014). *Number talks: Whole number computation, grades K-5.* Math Solutions. ISBN-10: 1935099655
- **Textbook (Required):** Parrish, S., Dominick, A. (2016). *Number talks: Fractions, decimals, and percentages*. Math Solutions. ISBN-13: 9781935099758
- **GroupMe App**: A way to stay up-to-date with all class routines, assignments, and questions between you, your professor, and your classmates.
- **Google Drive/3-Ring Binder**: This is comprised of 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]

Course Catalog Description
Philosophy and rationale for teaching math to young children. General math theory and concepts are demonstrated through the use of math materials and other manipulatives.

Course Overview
This elementary math methods course provides insight on how to teach different strategies to students in grades K – 6 on how to solve 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 ʻOlelo Noʻeau (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 (Naʻauao) 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

Program Learning Outcomes (PLOs)

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 (CLOs)

1	Students will be able to design real-world mathematics lessons that reflect appropriate consideration of student needs, objectives to be achieved, 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 lower and upper elementary mathematics.

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	Written Communication Oral Communication Quantitative Reasoning Critical Thinking
Program Outcomes	1, 2	1, 2	1, 2

*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. *

Assessment

The assignments in this course are each designed to contribute in a different and significant way to your knowledge and experience relative to diagnosis and remediation of mathematics, and to teaching elementary mathematics. Always be prepared to effectively participate to class discussions, analyze the thinking of others in class, and clearly explain your thinking in every assignment. A scoring rubric is provided with every assignment to ensure you know what is required to receive the score desired. Feedback and grades on all assignments are provided within 7 days of submission.

1. **Participation Assignments – 5% of Final Grade**
   Module 1: [1 point]
   - There is one participation assignment, described on Canvas, which contribute to your overall participation in this course: joining our class GroupMe with an initial post.

2. **Van De Walle Reflections (VDWR) – 10% of Final Grade**   [CLO 2 & 3]
   Modules 1, 2: [3 points each]
   - After reading the first five chapters in the Van De Walle textbook, you will submit reflections about what you read by responding to provided questions.

3. **Number Talks Reflections (NTR) – 25% of Final Grade**   [CLO 2 & 3]
   Modules 1, 2, 3, 4, 6, 7, 8, 9: [3 points each]
   - After reading specific pages in the Parrish & Dominick textbook and watching the corresponding classroom videos, you will submit reflections about what you saw by responding to provided questions.

4. **Problem-Solving Sets (PSS) – 30% of Final Grade**   [CLO 2, & 3]
   Modules 3, 4, 6, 7, 8, 9: [10 points per set]
   - Each chapter, you will complete five questions from each chapter's content. These questions will require detailed explanation of thought processes and mathematical drawings to show solutions.

5. **Three-Act Task – 30% of Final Grade**   [CLO 1]
   Module 2, 3, 5, 10: [45 points]
   - You will create your own 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	
90 – 100 %	A
80 – 89 %	B
70 – 79 %	C
60 – 69 %	D
0 – 59 %	F

A - Outstanding scholarship and an unusual degree of intellectual initiative
B - Superior work done in a consistent and intellectual manner
C - Average grade indicating a competent grasp of subject matter
D - Inferior work of the lowest passing grade, not satisfactory for fulfillment of prerequisite course work
F - Failed to grasp the minimum subject matter; no credit given

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 "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 ʻIke: 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 ʻIke'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. TutorMe 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.

Course & Chaminade University Policies

Late Work Policy
Always accepted, but feedback may be delayed.

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 travis.mukina@chaminade.edu. Online and/or in-person meetings can be arranged. Response time will take place up to 24 hours.

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 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, in order 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).

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
The following attendance policy is from the 2019-2020 Academic Catalog (p. 54-55). Faculty members should also check with their divisions for division-specific guidelines.

Students are expected to attend regularly all courses for which they are registered. Student should notify their instructors when illness or other extenuating circumstances prevents 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 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 may result in being withdrawn from the course by the instructor, although the instructor is not required to withdraw students in that scenario. Repeated absences put students at risk of failing grades.

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.

Student Conduct Policy
Campus life is a unique situation requiring the full cooperation of each individual. For many, Chaminade is not only a school, but a home and a place of work as well. That makes it a community environment in which the actions of one students may directly affect other students. Therefore, each person must exercise a high degree of responsibility. Any community must have standards of conduct and rules 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 under Student Life.

For further information, [please refer to the Chaminade Catalog](#).

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 verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in 45 hours of engagement.

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.

How This Course Meets the Credit Hour Policy

The paragraph below outlines how students will meet the required hours of engagement in the course through regular instruction and academic engagement. There are two components to the amount of time students will spend in a course:

1. Time spent on key assessments, including study time (e.g., projects, essays, assessments)
2. Additional time each week (e.g., reading, studying, researching)

This is a three-credit hour course requiring 135 clock hours of student engagement, per the official CUH Credit Hour Policy. Students enrolled in this course are anticipated to spend 85 hours completing key assessments. There will be an additional 50 hours of work required beyond what is listed here (video lectures, reading, studying, researching), averaging 5 hours each week.

Below is how the 135 hours are calculated in more detail:

- Time Spent on Key Assessments:
  - Van De Walle & Number Talks Reflections = 40 hours reading, viewing, & reflecting
  - Problem-Solving Sets = 20 hours completing
  - Three-Act Task = 25 hours creating
  - Sub-Total = 85 hours
- Total required engagement 135 hours – 85 hours = 50 hours remaining
- 50 hours divided by 10 weeks = 5 additional hours each week

Course Schedule

Module # Dates	Module Content	Assignments
Module 1 October 2nd – 8th	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 Whole Number Computation Textbook Chapter 1: What is a Classroom Number Talk?	○ GroupMe Registration ○ VDWR (Chap 1 – 3) ○ NTR (Module 1)
Module 2 October 9th – 15th	Van De Walle Textbook Chapter 4: Planning in the Problem-Based Classroom Chapter 5: Creating Assessments *for* Learning Number Talks Whole Number Computation Textbook Chapter 2: How Do I Prepare for Number Talks?	○ VDWR (Chap 4 & 5) ○ NTR (Module 2) ○ Three-Act Task Information & Understanding • **Zoom Meeting (October 15th @ 11am HST)**
Module 3 October 16th – 22nd	Van De Walle Textbook Chapter 7: Developing Early Number Concepts and Number Sense Chapter 8: Developing Meanings for the Operations Number Talks Whole Number Computation Textbook Chapter 3: How Do I Develop Specific Strategies in the K – 2 Classroom?	○ NTR (Module 3) ○ PSS (Chap 8) ○ Three-Act Task (First Submission)
Module 4 October 23rd – 29th	Van De Walle Textbook Chapter 9: Developing Basic Fact Fluency Chapter 10: Developing Whole-Number Place-Value Concepts Number Talks Whole Number Computation Textbook Select Videos from Different Chapters	○ NTR (Module 4) ○ PSS (Chap 9) ○ PSS (Chap 10)
Module 5 Oct 30th – Nov 5th	Work Week Three-Act Task	○ Three-Act Fraction Task (Second Submission)
Module 6 November 6th – 12th	Van De Walle Textbook Chapter 11: Developing Strategies for Addition and Subtraction Computation Number Talks Whole Number Computation Textbook Chapter 5: How Do I Develop Specific Addition and Subtraction Strategies in the 3 – 5 Classroom?	○ NTR (Module 6) ○ PSS (Chap 11)
Module 7 November 13th – 19th	Van De Walle Textbook Chapter 12: Developing Strategies for Multiplication and Division Computation Number Talks Whole Number Computation Textbook Chapter 7: How Do I Develop Specific Multiplication and Division Strategies in the 3 – 5 Classroom?	○ NTR (Module 7) ○ PSS (Chap 12)
Module 8 November 20th – 26th	Van De Walle Textbook Chapter 14: Developing Fraction Concepts Number Talks Fractions, Decimals, & Percentages Textbook Introduction: Why Fractions, Decimals, and Percentages? Chapter 3: What Are the Big Ideas with Rational Numbers? Chapter 4: Number Talks to Help Students Build Fractional Reasoning	○ NTR (Module 8) ○ PSS (Chap 14)
Module 9 Nov 27th – Dec 3rd	Van De Walle Textbook Chapter 15: Developing Fraction Operations Number Talks Fractions, Decimals, & Percentages Textbook Chapter 6: Number Talks for Addition with Fractions Chapter 7: Number Talks for Subtraction with Fractions Chapter 8: Number Talks for Multiplication with Fractions Chapter 9: Number Talks for Division with Fractions	○ NTR (Module 9) ○ PSS (Chap 15)
Module 10 December 4th – 10th	Work Week Three-Act Task	○ Three-Act Task (Final Submission)