Course Syllabus
Chaminade University Honolulu
3140 Waialae Avenue - Honolulu, HI 96816

Course Number: EDUC 667 IS
Course Title: SPED: K-12 Math Methods
Department Name: Education
College/School/Division Name: School of Education and Behavioral Sciences/ Education
Term: Spring 2024
Course Credits: 3
Class Meeting Days: Asynchronous
Class Meeting Hours: Asynchronous
Class Location: Online

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Office Hours: By appointmentUniversity

Course Catalog Description

Overview and application of mathematics instructional approaches, strategies, techniques, and assessment methods for students with mild/moderate disabilities in K-12 settings.

Conceptual Framework

The Education Division's Conceptual Framework is based upon a set of beliefs that flow from the University's vision and mission statements, the Division's vision and mission statements, and the core academic beliefs of Chaminade University. These values and beliefs are based on the Catholic Marianist principles; a commitment to mentor teacher and educational leader candidates to their fullest potential; a commitment to teaching, scholarship and research; and a commitment to serve the university and the larger community. This alignment is designed to prepare education professionals who meet the National Council for Accreditation of Teacher Education (NCATE) standards for effective teaching by demonstrating professional dispositions and empathy, content knowledge, and the pedagogical/leadership skills to work effectively work with a diverse community of learners.

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 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

Course Learning Outcomes

By the end of our course, students will be able to:

1. Demonstrate competency in mathematical content knowledge and evidence-based strategies in teaching exceptional learners
2. Analyze student work to diagnose errors, misperceptions and plan activities acquire mathematical concepts and/of skills that address these misperceptions.
3. Research and write a report on instructional and assistive technologies that would benefit students in gaining mathematical concepts and skills.
4. Create problem solving lesson plans using children's literature to help exceptional students understand and learn mathematical concepts.
5. Adapt traditional lesson plans and make them appropriate for diverse learners.

Alignment of Course Learning Outcomes

	CLO 1	CLO 2	CLO 3	CLO 4	CLO 5
Marianist Values	*2*	2	2,5	2	2,5
Program Learning Outcomes	1,2, 3	5	1, 4, 7	3, 6	3, 6

Program Learning Outcomes (PLOs): Upon completion of the M.A. in Teaching, students on Elementary, Secondary, Special Education program will be able to:

1. Synthesize knowledge of learner development, learner differences, diverse students and the learning environment to optimize learning for Elementary, Secondary, Special Education students.
2. Evaluate central concepts, tools of inquiry and structures of the subject matter disciplines for Elementary, Secondary, Special Education students.
3. Utilize formative and summative assessments, to determine, select, and implement effective instructional strategies for Elementary, Secondary, Special Education 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.

Essential Questions Addressed in This Course

	Related CLOs	Related PLOs
How do exceptional learners with differing abilities and learning styles acquire mathematical concepts and skills?	2, 4, 5	1, 6, 3
How can teachers identify mathematical misconceptions that students may and correct those misperceptions?	2, 3	2, 5
What are the instructional and assistive technologies (games, computer programs, etc.) that help exceptional students acquire mathematical concepts and /or skills?	1, 3, 4, 5	6, 4

Model Code of Ethics for Educators

The Model Code of Educator Ethics is intertwined throughout the various activities within this course, as well as the other courses you will take within this 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.

Course Prerequisites

Should be proficient in Google software, Microsoft Office, and Canvas.

Required Learning Materials

Elementary and Middle School Mathematics: Teaching Developmentally, Van de Walle, Karp & Bay-Williams
10th Edition
ISBN-10 **013480208X**

ISBN-13 978-0134802084

Course Website:

https://chaminade.instructure.com/courses/35342

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. 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.

Assessment

Your performance in this course will be assessed on the following:

Attendance/Participation: Full points will be awarded to those who turn in assignments on time, and who participate **on time** with enthusiasm, flexibility and respect, in discussions and activities.

Weekly Discussions and Assignments: Answers to the question related to the reading should be posted by the dates stated above. Full points will be awarded to papers that are submitted on time, are thorough in their responses, have a reflective section, and written to graduate standards of writing. These will be assigned from your readings. Answers should be based on content from the texts (citations included). Papers should be 1-2 double-spaced, page(s) for each discussion.

Grading Scale:

A: 190-200 B: 180-189 C: 170 – 179

Anything under 170 points is not a passing grade and the class will have to be re-taken.

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 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

Course Policies

Late Work Policy

All assignments should be turned in by the due date. Late assignments will be accepted only at the discretion of the instructor.

Grades of "Incomplete"

If students are unable to complete the course due to circumstances beyond their control, the instructor will consider offering a grade of "incomplete". This will provide the student with up to 30 days beyond

the end of the term to complete all outstanding course requirements. Please note that a grade of "incomplete" must be discussed with the instructor before the end of the term. If a student does not contact the instructor by the end of the term to discuss the possibility of an incomplete, they will be awarded the grade they have earned to that point.

Writing Policy

All written course assignments must follow American Psychological Association (APA) standards for writing student papers (See chapter six of APA manual).

Instructor and Student Communication

Questions for this course can be emailed to the instructor at laura.farris@chaminade.edu. Online, in-person and phone conferences can be arranged. Response time will take place up to 24-48 hours

Cell phones, tablets, and laptops

Out of consideration for your classmates, please set your cell phone to silent mode during class. Students are encouraged to bring laptops or tablets to class as the instructor will assign online activities and readings that will require the use of a laptop or tablet. Laptops and tablets should not be misused, such as checking distracting websites. Use your best judgment and respect your classmates and instructor.

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

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 Catalogue.

Schedule

Assignment	Pts		Due Date
Signature Assignment: Math Unit	40	This will be a case study on a focus learner from your O & P sessions. Create a math unit on one strand covered in the common core math standards on which your student is working on. It will contain three (3) to five (5) sequential lesson plans that cover the stages discussed in the text (exploratory or developmental, practice and application) that build upon one another. You will need to have pre and post assessment data and samples of student artifacts. In addition, your lesson should incorporate principles of the Chaminade Lesson Plan template (in DocShare) to address diverse learners and have multiple ways to present material, engage the student and assess. Teaching methods should be evidence-based. To be submitted to LiveText.	End of week 9

Assignment	Pts		Due Date
Diagnosis and Remedial Plans (one per week starting in week 2)	40 (5 each)	(These can be found in DocShare). You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.	Ongoing through week 9
Instruction and Assistive Technology Report	10	Research instructional and assistive technologies (games, computer programs, web-based sites, school subscriptions, etc.) that help exceptional students acquire mathematical concepts and /or skills. A list of 4-6 items with a short descriptive paragraph of the uses and benefits of each item will suffice. Provide an example of how you might use them in your classroom. To be submitted to the instructor.	End of week 2
Problem Based Lesson Plan Using Children's Literature	10	Using the *Literature Connections* as a resource (at the end of chapters 8-23 of the required textbook) or another children's book which you know of related to math, you will choose a book and write a paragraph synopsis of the story. Then you will create a lesson plan having to do with problem solving using the *Three Phase Lesson Format* found in Chapter 4 of the required textbook. The book should be used as the *Before Phase* of the lesson. To be submitted to the instructor.	End of week 4
Adapted Lesson Plan	10	Using a traditional math lesson from a Common Core text book, you will adapt it to fit the needs for exceptional learners. Make sure to describe the needs of the student(s) so as to "match" the adaptations to the needs. Include specific strategies that are designed to build the focus learners' maintenance, generalization, and/or more independent performance of the task(s).The University lesson plan, the textbook lesson plan, or personal lesson plan format may be used. To be submitted to the instructor.	End of week 6
Weekly Threaded Discussions	90	These will be assigned from your readings. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s). Responses to each of your peers are required. Late postings will result in loss of points.	Ongoing

WEEK 1

*Required reading from text: Chapters 1-4 (pages 1-83).

*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).

Week 1 Discussion Questions:

1. Introduce yourself in a short paragraph. Give the instructor an insight to what type of learner you are.

2. Go to the website by copying and pasting the following address:
   Classroom Warm-Up Routine: Math Class Warm-Up
   *https://www.teachingchannel.org/**videos**/class-warm-up-routine*

This 8th grade Math class uses a quick warm-up to clarify certain Math concepts. It is a video clip from the Colorado Council of Teachers of Mathematics conference. After watching the video, share a one paragraph reflection of your thoughts.

3. There are certain characteristics that one needs to succeed as a teacher of mathematics. Name two of them, and explain why they are essential (related to textbook reading).

4. Name at least two examples of a tool that could help students to do mathematics and gain relational understanding of a concept. Describe a specific example of a way each tool could help develop this understanding (related to textbook reading).

5. Describe at least three different ways a teacher could provide support and challenge to meet any special student needs (related to textbook reading).

WEEK 2

*Diagnosis and Remedial Plan:
(Each week these will be found on Canvas). You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.

*Instruction and Assistive Technology Report:
Research instructional and assistive technologies (games, computer programs, web-based sites, school subscriptions, etc.) that help exceptional students acquire mathematical concepts and /or skills. A list of 4-6 items with a short descriptive paragraph of the uses and benefits of each item will suffice. Provide an example of how you might use them in your classroom. To be submitted to the instructor.

*Required reading from text: Chapters 5-7 (pages 84-141).
*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 2 Discussion Questions:

1. Provide at least two examples of potential writing prompts and how they could enhance students' thinking about mathematics or be used for assessment.

2. Describe two strategies that could be used with students who display difficulties in math, such as those with mild disabilities or who fall into RTI tier 2, and an appropriate example of how each could be used with a student.

3. Describe in your own words the central ideas of culturally responsive mathematics instruction.

WEEK 3

*Diagnosis and Remedial Plan:
You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.

*Required reading from text: Chapters 8-11 (pages 142-246).

*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 3 Discussion Questions:

1. Briefly describe a learning sequence that would help to develop an early number concept and/or number sense. Provide the name of the concept it would develop, a potential manipulative material that could be used, how it would develop this concept, and one way you might connect the activity to a real world application.

2. Describe at least four kinds of models one could use to model a multiplication or division situation.

3. Name two key ideas or strategies that can guide a teacher's efforts to help older students who still struggle with basic facts, and describe briefly how each could be helpful.

4. Describe an activity that would help your students to better conceptualize numbers that are very large. Describe how this activity would build conceptualization.

WEEK 4
*Problem Based Lesson Plan Using Children's Literature
Using the *Literature Connections* as a resource (at the end of chapters 8-23 of the required textbook) or another children's book which you know of related to math, you will choose a book and write a paragraph synopsis of the story. Then you will create a lesson plan having to do with problem solving using the *Three Phase Lesson Format* found in Chapter 4 of the required textbook. The book should be used as the *Before Phase* of the lesson. To be submitted to the instructor.
*Diagnosis and Remedial Plan:
You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.

*Required reading from text: Chapters 12-13 (pages 247-298).
*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 4 Discussion Questions:

1. Provide an addition or subtraction problem and a potential student-invented strategy that could be used to compute it. Explain why a student-invented strategy could be valuable. Describe a method you could use to encourage the development and/or use of this method.

2. Provide a multiplication or division problem and a potential strategy that could be used to compute it. Explain why this strategy could be valuable. Describe an activity you could use to encourage the development and/or use of this method.

3. Which is an example of the *compensation* strategy and how do you know? Justify your answer.

a) $63 \times 5 = 63 + 63 + 63 + 63 + 63 = 315$
b) $27 \times 4 = 20 \times 4 + 7 \times 4 = 80 + 28 = 108$
c) 27×4 is about 30 $(27 + 3) \times 4 = 120$; then subtract out the extra 3×4, so $120 - 12 = 108$
d) $46 \times 3 = 46 \times 2$ (double) $+ 46 = 92 + 46 = 138$

WEEK 5

*Diagnosis and Remedial Plan:
You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.

*Required reading from text: Chapters 15-17 (pages 339-428).
*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 5 Discussion Questions:

1. Researchers have described a number of reasons that students have a tendency to struggle with fraction concepts. Name two of these reasons, and describe a method a teacher might use to address each.

2. Name two of the major guidelines to consider when developing computational strategies for fractions. Describe an instructional sequence that would support each guideline.

3. Name two methods that could help students develop the connection between fractions and decimals. Then describe how these methods develop conceptual understanding.

WEEK 6
*Adapted Lesson Plan:
Using a traditional math lesson from a Common Core text book, you will adapt it to fit the needs for exceptional learners. Make sure to describe the needs of the student(s) so as to "match" the adaptations to the needs. Include specific strategies that are designed to build the focus learners' maintenance, generalization, and/or more independent performance of the task(s). The University lesson plan, the textbook lesson plan, or personal lesson plan format may be used. To be submitted to the instructor.
*Diagnosis and Remedial Plan:
You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.

*Required reading from text: Chapter 14 (pages 299-338).
*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 6 Discussion Questions:

1. Describe two different ways you could determine whether a function is linear. Describe how these two methods relate to one another, and a possible classroom activity that would help students to see this connection.

2. Describe three different ways algebra can be connected to other areas of the mathematics curriculum.

WEEK 7
*Diagnosis and Remedial Plan:
You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.

*Required reading from text: Chapters 18-19 (pages 429-487).
*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 7 Discussion Questions:

1. Construct an example of when confusing additive and proportional thinking could result in an incorrect answer. Describe an incorrect process that a learner might follow. Describe a correct way to find the solution and a way you might help the learner to see his error.

2. Name two strategies or methods for helping students to develop estimation skills. Describe how these strategies/methods would contribute to conceptual understanding.

WEEK 8
*Diagnosis and Remedial Plan:
You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). To be submitted to the instructor.

*Required reading from text: Chapters 20-21 (pages 488-557).
*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 8 Discussion Questions:

1. Describe one of the major content goals in geometry, why it is important, and an activity that could help students develop conceptual understanding of a topic that falls into this content goal.

2. Name two situations that could require data to be displayed. Choose the most appropriate data display format for each and explain the reasoning for your choice.

3. Provide two examples of questions that would help guide class discussions about data interpretation. Explain how each question could help develop students' ability to analyze data.

WEEK 9
*Signature Assignment:
This will be a case study on a focus learner from your O & P sessions. Create a math unit on one strand covered in the common core math standards on which your student is working on. It will contain three (3) to five (5) sequential lesson plans that cover the stages discussed in the text (exploratory or developmental, practice and application) that build upon one another. You will need to have pre and post assessment data and samples of student artifacts. In addition, your lesson should incorporate principles of the University Lesson Plan template to address diverse learners and have multiple ways to present material, engage the student and assess. Teaching methods should be evidence-based. To be submitted to the instructor.

*Diagnosis and Remedial Plan:
You will be presented students' work from the different strands of mathematics. You will analyze these samples, diagnose errors and misconceptions, and determine instructional strategies to remediate the misunderstandings. You will then list strategies and give examples showing how you would 'reteach' and construct accurate meaning for the student. (1 page double spaced). Should be submitted to the instructor.

*Required reading from text: Chapters 22-23 (pages 558-607).
*Responses to all Discussion Questions are required as is a response to each of your peers' reflections. Answers should be based on content from the text with a minimum of 2 citations included. This should be 1-2 double-spaced, page(s).
Week 9 Discussion Questions:
Describe two activities that can help develop probability concepts for students.
Describe an activity that could help students gain a conceptual understanding of a real number concept.
The classic "Monty Hall Problem" is a favorite for studying probability. In the game show, one of the three doors has a big prize. The contestant guesses one door, but before revealing what is behind that door, Monty shows the contestant a goat behind one of the doors not selected. Then he offers the contestant the opportunity to switch doors. Does the contestant have a better chance of winning the big prize by *switching* or *staying* with the original choice (or does it not matter)? There are numerous methods of answering this question. Make a convincing argument for your own answer based on the ideas and techniques of Chapter 22.

WEEK 10
*Signature Assignment:
This will be a case study on a focus learner from your O & P sessions. Create a math unit on one strand covered in the common core math standards on which your student is working on. It will contain three (3) to five (5) sequential lesson plans that cover the stages discussed in the text (exploratory or developmental, practice and application) that build upon one another. You will need to have pre and post assessment data and samples of student artifacts. In addition, your lesson should incorporate principles of the University Lesson Plan template to address diverse learners and have multiple ways to present material, engage the student and assess. Teaching methods should be evidence-based. To be submitted to the instructor.

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 a minimum of 45 hours of engagement, regardless of varying credits, duration, modality, or degree level. 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. Terms that have alternative lengths, such as 10 week terms, should have an equivalent amount of faculty instruction and out-of-class student work to meet each credit hour. Direct instructor engagement and out-of-class work result in total student engagement time of 45 hours for one credit. The number of engagement hours may be higher, as needed to meet specific learning outcomes.

Specific Credit Situations
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

Activity Group	Hours of Engagement

Assignments	102 hours
Reading / Research (including Course text)	38 hours
Total	140 hours

1.6 hours each week.