

ED 322 Elementary Math Methods I Fall 2012

by Mary Pat Sjostrom

Course ID and Instructor Info

Syllabus

Chaminade University of Honolulu Education Licensure Course Syllabus

The Education Division's mission is to foster the development of knowledgeable, proficient, and reflective teachers and educational leaders. Our programs are based in the liberal arts tradition, Catholic Marianist values, current research, best practice, and professional standards. In this context we develop educators who demonstrate ethical, effective and culturally responsive practices, and a commitment to building a just and peaceful society.

Semester/Year	Fall 2012
Course Title	Elementary Math Methods I
Course Number(s)	ED 322
Credit Hours	3
Program	B.S. Elementary Education with K-6 licensure (Day Undergraduate)
Time(s)/Location	Tues-Thurs 2:30-3:50 Brogan 101
Instructor	Dr. Mary Pat Sjostrom
Office Hours	Tuesdays 10:30 – 12:30 Other times by appointment (please email)
Office Location	Brogan 118
Contact Information	Office: 808-739-8563 Email: msjostro@chaminade.edu sjostrom.chaminade@gmail.com

Course Description

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

Required: 8 hours of O&P

Prerequisite: Pass Praxis I, ED 220, ED 221

Conceptual Framework

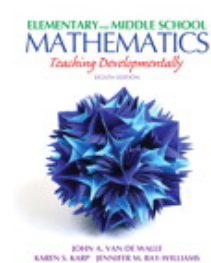
Conceptual Framework:

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.

Textbook and MyEducationLab

Textbook

Books packaged together **with access to MyEducationLab**: ISBN-10 0132894408
ISBN-13: 9780132894401



Van De Walle, J. A., Karp, K., & Bay-Williams, J. M.. (2013). *Elementary and Middle School Mathematics (8th Edition)*. Boston: Pearson Education, Inc.

Van De Walle, J. A., Karp, K., & Bay-Williams, J. M. (2013). *Filed Experience Guide: Resources for Teachers of Elementary and Middle School Mathematics (8th Edition)*. Boston: Pearson Education, Inc.

Note: These textbooks are used for ED 322 and ED 323.

See attached for MyEducationLab information.

Attachments  [ED322MyLab_Student_Info_Fall12.pdf](#)

General Course Information

General Course Information

Required Email and LiveText

Students are required to use their Chaminade University Email to correspond with instructors.

Students are required to use LiveText to submit projects and assignments at livetext.com

Withdrawal Dates and Financial Aid Information

Contact the Registrar for the last day to drop the class. Specific withdrawal information is available from the office of the University Registrar. Please be sure to contact your University financial aid counselor before dropping or withdrawing from any class, as this may impact your financial aid status.

Education Division Attendance Policy

The Chaminade Education Division has adopted the following attendance policy for all classes. Please be aware of this because an inability to attend class regularly and punctually will adversely affect your grade in the following ways:

- 1) Absences totaling more than 10% of the number of classes (will result in a lowering of the overall grade by one letter grade. A student who misses 20% or more should drop the class. More than 3 absences lowers grade one letter grade.
- 2) Tardy: 10% of class time is equivalent to ½ class absence. 10 min. = ½ class absence.

Late Work Policy

All assignments are due at the beginning of class on the days indicated on the syllabus. Late assignments will be reduced 5% each day they are late unless the student can produce a doctors note or other documentation to justify the lateness of the work. If work is handed in at the education office have someone there time stamp it to eliminate possible confusion over when you turned in the work. Those assignments which are used as a basis for classroom discussion (e.g., signature assignment drafts) cannot be handed in late for credit.

Writing Standards

All work submitted by Chaminade University students must meet the following writing standards. Written assignments should:

1. Use correctly the grammar, spelling, punctuation, and sentence structure of Standard Written English.
2. Develop ideas, themes, and main points coherently and concisely.
3. Adopt modes and styles appropriate to their purpose and audience.
4. Be clear, complete, and effective.
5. Carefully analyze and synthesize material and ideas borrowed from sources. In addition, the sources of the borrowed material should be correctly acknowledged to avoid plagiarism.

Plagiarism

Plagiarism is the offering of work of another as one's own. Plagiarism is a serious offense and may include, but is not limited to, the following:

1. Complete or partial copying directly from a published or unpublished source without proper acknowledgment to the author. Minor changes in wording or syntax are not sufficient to avoid charges of plagiarism. Proper acknowledgment of the source of a text is always mandatory.
2. Paraphrasing the work of another without proper author acknowledgment.
3. Submitting as one's own original work (however freely given or purchased) the original exam, research paper, manuscript, report, computer file, or other assignment that has been prepared by another individual.

Please refer to your **Student Handbook, General Catalog,** and the **Education Division Policy Manual** for other important institutional and academic policies including more detailed information regarding Plagiarism, Classroom department, Freedom of Expression, Add/Drop, Disabilities, and others.

Standards

Program Learning Outcomes (PLOs)

Successful teacher candidates in Chaminade initial teacher licensure programs will demonstrate knowledge, skills, and dispositions in the following areas:

1. **Content Knowledge**(*Knowledge of subject matter*)
2. **Developmentally Appropriate Practice** (*Knowledge of how students develop and learn, and engagement of students in developmentally appropriate experiences that support learning*)
3. **Pedagogical Content Knowledge**(*Knowledge of how to teach subject matter to students and application of a variety of instructional strategies that are rigorous, differentiated, focused on the active involvement of the learner*)
4. **Educational Technology**(*Knowledge of and application of appropriate technology for student learning*)
5. **Assessment for Learning**(*Knowledge of and use of appropriate assessment strategies that enhance the knowledge of learners and their responsibility for their own learning*)
6. **Diversity**(*Skills for adapting learning activities for individual differences and the needs of diverse learners and for maintaining safe positive, caring, and inclusive learning environments*)
7. **Focus on Student Learning**(*Skills in the planning and design of meaningful learning activities that support and have positive impact on student learning based upon knowledge of subject matter, students, the community, curriculum standards, and integration of appropriate technology*)
8. **Professional & Ethical Dispositions and Communication**(*Professional dispositions, professionalism in teaching, and ethical standards of conduct consistent with Marianist values, and positive and constructive relationships with parents, the school community and professional colleagues*)

Course Learning Outcomes

At the end of this course the candidates will:

1. Know and understand the fundamental concepts and procedures related to number and operations, algebraic reasoning, geometry, measurement, data analysis and probability. (PLO 1)
2. Consistently engage in problem solving and communication, use reasoning and proof, make connections, and use multiple representations in deepening their mathematical understanding. (PLO 1)
3. Plan mathematics lessons that teach students in grades K-3: (PLO 3)
 1. to understand and use the major concepts and procedures that define number and operations, algebra, geometry, and measurement.
 2. to explore, conjecture and reason logically, to solve non-routine problems, to communicate about and through mathematics, and to connect ideas within mathematics and between mathematics and other intellectual activity.
4. Know what mathematical preconceptions, misconceptions, and error patterns to look for in elementary student work as a basis for improving understanding and constructing appropriate learning experiences and assessments. (PLO 5)
5. Know and be able to help students understand the history of mathematics and contributions of diverse cultures to that history. (PLO 6)
6. Foster students' use of appropriate technology tools. (PLO 4)

Course Outline (tentative)

Dates	Topic	Chapter	Additional Resources
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Aug. 28, 30	Teaching Mathematics in the 21st Century	1	NCTM <i>Principles and Standards, Common Core</i> , Hawaii Standards, MyEducationLab
Sept. 4, 6, 11	Knowing and Doing Mathematics Lesson Study	2	NCTM <i>Principles and Standards</i> , MyEducationLab
Sept. 13, 18, 20	Problem Solving Lesson Planning	3	<i>Illuminations</i> , MyEducationLab
Sept. 25, 27	Early Number Concepts Lesson Planning	8	<i>Illuminations</i> , MyEducationLab
Oct. 2, 4	Lesson Planning Lesson Study	4	<i>Illuminations</i> , MyEducationLab
Oct. 9, 11	Assessment Lesson Planning	5	<i>Illuminations</i> , MyEducationLab
Oct. 16, 18, 23	Whole Number Operations: Addition and Subtraction Basic Facts Mastery	9 10	<i>Illuminations</i> , MyEducationLab
Oct. 25, 30, Nov. 1, 6	Place Value Concepts	11	
Nov. 8, 13	Whole Number Computation: Addition and Subtraction	12	
Nov. 15, 20	Fraction Concepts	15	
Nov. 27, 29	Lesson Study		
Dec. 4, 6	Lesson Study Presentations		

Course Requirements and Assessment

Assignments

Assignment (alignment to Program and Course Outcomes)	Points	Description	Due Date	Submission
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Lesson Plan (Lesson Study) (PO 3; CO 3, 4)	30	Participate in Lesson Study: Work with a small group to write a lesson plan, teach it, revise it and repeat the cycle.	Final submission with reflection due Dec. 4 Presentation to class Dec. 4-6	LiveText
Problem Investigations (PO 1; CO 1, 2)	10 (2 at 5 points each)	Problem solving investigations	1) Sept. 18 2) TBA	LiveText
O & P (PLO 3; CLO 3)	20	Complete and submit 3 assignments (from Field Experiences Guide); keep a log and a reflective journal) for each O&P visit.	TBA	LiveText
Weekly Assignments (PO 1, 6; CO 1, 5)	30	Work assigned in class and in MyEducationLab	TBA	
Case Discussion (PO 5; CO 4)	5	Participate in 2 Case Discussions in class, submit a summary and reflection.	TBA	
Technology Use (PO 4; CO 6)	5	Identify 3 classroom activities that use technology appropriately; demonstrate one to the class.	TBA	

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Assessment

Grading Scale:

- A 90 - 100
- B 80 - 89
- C 70 - 79
- F Below 70