

ED 322 Syllabus Fall 2011

by Mary Pat Sjostrom

Course and Instructor Information

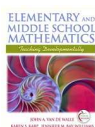
Course Syllabus

ED 322 Elementary Math Methods I

Semester/Year	Fall 2011
Course Title	Elementary Math Methods I
Course Number(s)	ED 322
Credit Hours	3
Program	B. S. Elementary Education with K-6 Licensure (Undergraduate)
Class Day/Time	Tues-Thurs 11:30 - 12:50
Class Location	Brogan Education 101
Instructor	Dr. Mary Pat Sjostrom
Office Hours	Mondays and Wednesdays 11:30 - 12:30; Tuesdays 2:30 - 4:30 These are published office hours. In reality, I am very available - please see me after class or email me to make an appointment.
Office Location	Brogan 118
Contact Information	Office: 808-739-8563 Email: msjostro@chaminade.edu sjostrom.chaminade@gmail.com

Required Textbook:

Books packaged together with access to MyEducationLab: ISBN 9780132464666



Van De Walle, J. A., Karp, K., & Bay-Williams, J. M.. (2010). *Elementary and Middle School Mathematics (7th Edition)*.

Boston: Pearson Education, Inc.



Bay-Williams, J. M., & Van De Walle, J. A. (2010). *Filed Experience Guide: Resources for Teachers of Elementary and Middle School Mathematics (3rd Edition)*.

Boston: Pearson Education, Inc.

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

Catalog 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: 6 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.

Standards

Conceptual Framework

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.

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 Requirements

Assignments

Assignment (alignment to Program and Course Outcomes)	Points	Description	Due Date	Submission
3 Lesson Plans (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 Nov. 29	LiveText
Problem Investigations (PO 1; CO 1, 2)	10 (2 at 5 points each)	Problem solving investigations	1) Sept. 29 2) Oct. 27	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)	15	Participate in class work	TBA	
Case Discussion (PO 5; CO 4)	5	Participate in a Case Discussion in class, submit a summary and reflection.	Oct. 18	

Technology Use (PO 4; CO 6)	5	Identify 3 classroom activities that use technology appropriately; demonstrate one to the class.	TBA	
Textbook Assignments (PO 1, 6; CO 1, 5)	15	Complete assignments related to textbook, as assigned.	TBA	MyMathLab (Pearson)

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.

Assessment

Grading Scale:

A 90 - 100

B 80 - 89

C 70 - 79

F Below 70

Course Outline

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Week	Topic (Assigned Reading)
1	Principles and Standards for School Mathematics (Chapter 1)
2	Learning Mathematics with Understanding (Chapter 2)
3	Problem Solving (Chapter 3)
4	Problem-Based Instruction (Chapter 4)
5	Early Number Concepts and Number Sense (Chapter 8) Introduction to Lesson Study; Concept Maps
6	Meanings of Operations (Chapter 9) Planning a Lesson
7	Strategies for Learning Basic Facts (Ch 10) Teaching a Lesson
8	Place Value Concepts (Ch 11) Assessment (Ch 5)

9	Place Value Concepts (Ch 11) Revising the Lesson
10	Whole Number Computation (Ch 12) Assessment (handouts, case discussion)
11	Estimation (Ch 13) Teaching the Revised Lesson
12	Fraction Concepts (Ch 15)
13	Algebraic Thinking (Ch 14, pp. 254-266)
14	Reflective Practice
15	Signature Assignment

General Course Information

Education Division Attendance Policy

Education Division Attendance Policy

(Revised 3/8/10)

As stated in the Chaminade University Catalog, students are expected to attend all classes for courses in which they are registered.

Students must follow the attendance policy as stipulated in the syllabus of Education Division courses. Penalties for not meeting the attendance requirements may result in lowering of the grade, withdrawal from the course, or failing the course.

1. Excused Absences

- Since it is expected that students will participate in all class sessions, excused absences are only granted in exceptional situations where evidence is provided by the student to the instructor. Examples would include illness (with verification by a doctor) or the death of a close family member. Students should notify their instructors when a situation prevents them from attending class and make arrangements to complete missed assignments. While notification of the instructor by a student that he/she will be absent is courteous, it does not necessarily mean the absence will be excused.
- In cases where excused absences constitute a significant portion of a course's meetings (e.g., more than 20% of on-ground course meetings, or a significant portion of online or hybrid courses), the instructor should refer the case to the Dean with a recommendation on how the case should be handled (e.g., withdrawal or incomplete).

2. Unexcused Absences. Chaminade University policy states that in cases where unexcused absences are equivalent to more than a week of classes the instructor has the option of lowering the grade. In the Education Division we have added detailed guidelines to cover different types of courses and class schedules:

- **On-ground courses.** When unexcused absences total 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 withdraw or be administratively withdrawn.
 - a. Accelerated Semester Classes (10 classes): More than one absence lowers grade one letter. Missing more than two classes results in failure or withdrawal.
 - b. Undergraduate Day Courses TTh (30 classes): More than 3 absences lowers grade one letter. Missing more than six classes results in failure or withdrawal.

c. Undergraduate Day Courses MWF (45 classes): More than 4 absences lowers grade one letter. Missing more than nine classes results in failure or withdrawal.

- **Hybrid courses** (online combined with 3 or more on-ground meetings): One absence from on-ground classes lowers grade one letter. Two or more absences from on-ground meetings results in failure or withdrawal. For the online portion of the course the instructor will specify and enforce expectations for online participation and receipt of assignments appropriate to the design of the course.
- **Online courses and online portion of hybrid courses:** The instructor will specify and enforce expectations for online participation and receipt of assignments appropriate to the design of the course.

3. Additional Notes

- If a student does not log on to an online or hybrid course for the first two weeks, the instructor should notify the Dean and the student will be withdrawn from the course.
- Any student who stops attending an on-ground course or stops participating in an online course without officially withdrawing may receive a failing grade.
- **Tardy:** 10% of class time is equivalent to 1/2 class absence, and minutes are cumulative.

University Policies

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](https://c1.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.

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.

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