

Course Number	EDSS 543A
Course Title	Secondary Mathematics Education
CRN Number	41031
Days	Thursdays
Time	4:15-7:00
Course Location	University Hall 273
Semester / Year	Fall 2015
Instructor	Brian R Lawler
Phone	760-750-4260
E-Mail	blawler@csusm.edu
Office	University Hall 404
Hours	by appointment

SCHOOL OF EDUCATION MISSION & VISION STATEMENT

(Adopted by SOE Governance Community, January 2013)

Vision

To serve the educational needs of local, regional, and global communities, the School of Education advances innovative practice and leadership by generating, embracing, and promoting equitable and creative solutions.

Mission

The mission of the School of Education community is to collaboratively transform education. We:

- Create community through partnerships
- Promote and foster social justice and educational equity
- Advance innovative, student-centered practices
- Inspire reflective teaching and learning
- Conduct purposeful research
- Serve the School, College, University, and Community

BASIC TENETS OF OUR CONCEPTUAL FRAMEWORK

- Student centered education
- Research and theory specific to the program field inform practice
- Connections and links between coursework and application
- Strong engagement between faculty and candidates
- Co-teaching clinical practice
- Culturally responsive pedagogy and socially just outcomes

COURSE DESCRIPTION

Focuses on developing an understanding of theory, methodology, and assessment of Mathematics in integrated and secondary classrooms, Part A. This course is aligned with California's SB 2042 Standards.

Course Prerequisites

Admission to the Single Subject Credential Program.

Course Objectives

Learning to teach mathematics is a career-long inquiry. Thus you must expect that this course, in concurrence with your clinical practice, will only begin your education in learning how to teach mathematics. In concordance with this challenge, this course is intentionally focused on developing professionals in the field of secondary mathematics education. The course is but one stage in what I hope will be a continuing evolution for you as a mathematics teacher; learning to teach mathematics well will be the work of your career.

Specifically, the foci of this course are to: (1) developing an understanding of current practices in teaching mathematics, best practices in teaching mathematics, and the ways in which these practices intersect and conflict; (2) learning to teach (CCSS-M) content-specific concepts, algebraic thinking in particular, using effective, appropriate, and equitable strategies; and (3) experiencing and practicing how to teach for mathematical understanding through engaging students in practices of a mathematician (CCSS-M SMPs).

Enfolded into this course will be learning about children's mathematical ways of thinking and operating, creating a classroom environment that promotes the investigation and growth of mathematical ideas, developing strategies to ensure the success of all students in multi-cultural, heterogeneous settings, consideration of curriculum development, and the ongoing formation of a personal theory of mathematics teaching and learning grounded in work for social justice.

Unique Course Requirements

Observation and participation in the public schools, including collaborative planning with teachers.

Credit Hour Policy Statement

Per the University Credit Hour Policy, students are expected to spend a minimum of two hours outside of the classroom each week for each unit of credit engaged in learning.

REQUIRED TEXTS, MATERIALS AND ACCOUNTS

California Department of Education (2013/2010). *California Common Core Content Standards for Mathematics*. Sacramento, CA: Author. [free online at www.cde.ca.gov/be/st/ss]

Cohen, E. G. (2014). *Designing groupwork: Strategies for the heterogeneous classroom* (3rd ed.). New York: Teachers College Press.

Driscoll, M. J. (1999). *Fostering algebraic thinking: A guide for teachers, grades 6-10*. Portsmouth, NH: Heinemann.

Fendel, D.M., Resek, D., Alper, L., & Fraser, S. (1997). *Baker's choice Teacher's Guide and Student Blackline Masters*. Berkeley: Key Curriculum Press. [ISBN: 978-1-55953-145-0. I can loan you copies of this book. If you decide to purchase, contact the new publisher, It's About Time, at 1-888-698-TIME or purchase online at www.iat.com/imp-2nd-edition-isbn]

Additional readings will be made available online through Cougar Courses.

COURSE LEARNING OUTCOMES

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Authorization to Teach English Learners

This credential program has been specifically designed to prepare teachers for the diversity of languages often encountered in California public school classrooms. The authorization to teach English learners is met through the infusion of content and experiences within the credential program, as well as additional coursework. Candidates successfully completing this program receive a credential with authorization to teach English learners. (*Approved by CCTC in SB 2042 Program Standards, August 02*)

Teacher Performance Expectation (TPE) Competencies

The course objectives, assignments, and assessments have been aligned with the CTC standards for Single Subject Credential. This course is designed to help teachers seeking a California teaching credential to develop the skills, knowledge, and attitudes necessary to assist schools and district in implementing effective programs for all students. The successful candidate will be able to merge theory and practice in order to realize a comprehensive and extensive educational program for all students. You will be required to formally address the following TPEs in this course:

The following TPEs are given primary emphases:

- TPE 1b Subject Specific Pedagogical Skills for Single Subject Teaching (Mathematics)
- TPE 2 Monitoring Student Learning During Instruction

The following TPEs are given secondary emphases:

- TPE 3 Interpretation and use of assessments
- TPE 4 Making content accessible
- TPE 5 Student engagement
- TPE 6c Developmentally appropriate practices in grades 9-12
- TPE 6d Developmentally appropriate teaching practices for special education: teaching the special education population in the general education environment
- TPE 7 Teaching English learners
- TPE 8 Learning about students
- TPE 9 Instructional planning
- TPE 10 Instructional time
- TPE 11 Social environment
- TPE 13 Professional growth
- TPE 14 Educational technology in teaching and learning
- TPE 15 Social justice and equity

Teacher Performance Assessment

Beginning July 1, 2008 all California credential candidates must successfully complete a state-approved Teacher Performance Assessment (TPA), as part of the credential program of preparation. During the 2015-16 academic year the CSUSM Single Subject credential program will use the edTPA (Educative Teacher Performance Assessment).

edTPA

Beginning in fall 2015, for newly entering initial candidates, the CSUSM assessment system is the edTPA. To assist with your successful completion of the edTPA, a capstone class is part of your curriculum. In this class edTPA related questions and logistical concerns are addressed. Additional support materials are available on the edTPA website:

http://www.edtpa.com/PageView.aspx?f=GEN_Candidates.html

Additionally, to support your success in your credential program and with TPA, SOE classes use common pedagogical language, lesson plans (lesson designs), and unit plans (unit designs).

Assessment of Professional Dispositions

Assessing a candidate's dispositions within a professional preparation program is recognition that teaching and working with learners of all ages requires not only specific content knowledge and pedagogical skills, but positive attitudes about multiple dimensions of the profession. The School of Education has identified six dispositions – social justice and equity, collaboration, critical thinking, professional ethics, reflective teaching and learning, and life-long learning—and developed an assessment rubric. For each dispositional element, there are three levels of performance - *unacceptable*, *initial target*, and *advanced target*. The description and rubric for the three levels of performance offer measurable behaviors and examples.

The assessment is designed to provide candidates with ongoing feedback for their growth in professional dispositions and includes a self-assessment by the candidate. The dispositions and rubric are presented, explained and assessed in one or more designated courses in each program as well as in clinical practice. Based upon assessment feedback candidates will compose a reflection that becomes part of the candidate's Teaching Performance Expectation portfolio. Candidates are expected to meet the level of *initial target* during the program.

GENERAL CONSIDERATIONS

School of Education Attendance Policy

Due to the dynamic and interactive nature of courses in the School of Education, all candidates (course participants) are expected to attend all classes and participate actively. At a minimum, candidates (course participants) must attend more than 80% of class time, or s/he may not receive a passing grade for the course at the discretion of the instructor. Individual instructors may adopt more stringent attendance requirements. Should the candidate (course participants) have extenuating circumstances, s/he should contact the instructor as soon as possible. (*Adopted by the COE Governance Community, December, 1997*).

Attendance and Participation: Due to the intense and interactive nature of the course, regular attendance and full participation are expected. You will not grow/learn in the direction of the course objectives if not present for and engaged in the process. Therefore, the above SOE Attendance Policy is amplified as follows:

- Missing more than one class meeting will result in the reduction of one letter grade.
- Arriving late or leaving early on more than two occasions will result in the reduction of one letter grade.

You are expected to inform the instructor *prior* to an absence.

CSUSM Academic Honesty Policy

Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All assignments must be original work, clear and error-free. All ideas/material that are borrowed from other sources must have appropriate references to the original sources. Any quoted material should give credit to the source and be punctuated accordingly.

Academic Honesty and Integrity: Students are responsible for honest completion and representation of their work. Your course catalog details the ethical standards and penalties for infractions. There will be zero tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty, in accordance with the general rules and regulations of the university. Disciplinary action may include the lowering of grades and/or the assignment of a failing grade for an exam, assignment, or the class as a whole.

Incidents of Academic Dishonesty will be reported to the Dean of Students. Sanctions at the University level may include suspension or expulsion from the University.

Refer to the full Academic Honesty Policy at:

http://www.csusm.edu/policies/active/documents/Academic_Honesty_Policy.html

Plagiarism

As an educator, it is expected that each candidate (course participant) will do his/her own work, and contribute equally to group projects and processes. Plagiarism or cheating is unacceptable under any circumstances. If you are in doubt about whether your work is paraphrased or plagiarized see the Plagiarism Prevention for Students website <http://library.csusm.edu/plagiarism/index.html>. If there are questions about academic honesty, please consult the University catalog.

Students with Disabilities Requiring Reasonable Accommodations

Students with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disabled Student Services (DSS). This office is located in Craven Hall 4300, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Students authorized by DSS to receive reasonable accommodations should meet with their instructor during office hours or, in order to ensure confidentiality, in a more private setting.

All University Writing Requirement

All CSU students must demonstrate competency in writing skills as a requirement for graduation. At California State University San Marcos, students complete the graduation writing assessment through the All-University Writing Requirement. This requirement mandates that every course at the University must have a writing component of at least 2,500 words (approximately 10 pages). The assignments for this course meet this requirement.

Use of Technology

Candidates (Course participants) are expected to demonstrate competency in the use of various forms of technology (i.e. word processing, electronic mail, Moodle, use of the Internet, and/or multimedia presentations). Specific requirements for course assignments with regard to technology are at the discretion of the instructor. Keep a digital copy of all assignments for use in your teaching portfolio. All assignments will be submitted online, and some will be submitted in hard copy as well. Details will be given in class.

Electronic Communication Protocol

Electronic correspondence is a part of your professional interactions. If you need to contact the instructor, e-mail is often the easiest way to do so. It is my intention to respond to all received e-mails in a timely manner. Please be reminded that e-mail and on-line discussions are a very specific form of communication, with their own nuances and etiquette. For instance, electronic messages sent in all upper case (or lower case) letters, major typos, or slang, often communicate more than the sender originally intended. With that said, please be mindful of all e-mail and on-line discussion messages you send to your colleagues, to faculty members in the School of Education, or to persons within the greater educational community. All electronic messages should be crafted with professionalism and care.

Things to consider:

- Would I say in person what this electronic message specifically says?
- How could this message be misconstrued?
- Does this message represent my highest self?
- Am I sending this electronic message to avoid a face-to-face conversation?

In addition, if there is ever a concern with an electronic message sent to you, please talk with the author in person in order to correct any confusion.

COURSE REQUIREMENTS AND GRADED COURSE COMPONENTS

Final Exam Statement

There will be no final exam, distinct from the final assessment of the portfolio in assignment 7.

Grading Standards

According to the *CSUSM Course Catalog*, each grade means that student performance has been:

- A** at the highest level, showing sustained excellence in meeting all course objectives and exhibiting an unusual degree of intellectual initiative. **Excellent**
- B** at a high level, showing consistent and effective achievement in meeting course objectives. **Good**
- C** at an adequate level, meeting the basic objectives of the course. **Satisfactory**
- D** less than adequate, meeting only the minimum course requirements. **Passing**
- F** such that minimum course requirements have not been met. **Failing**

I interpret these levels of student performance to mean that meeting the basic requirements detailed for a course assignment will typically result in a **B**-level grade. An **A** grade is meant to acknowledge achievement that goes beyond specified requirements and/or criteria. **A**'s are reserved for special efforts that exceed expectations, that demonstrate exceptional creativity, boldness, commitment, involvement, ingenuity, or elegance. By this nature,

A-level performance cannot be spelled out clearly in advance; else it would not be unexpected.

Weights for each assignment are provided as percentages above; these weights are meant to express importance when considering overall course success. Assignments will be provided feedback only, no grades, numbers, or rubric scores¹ (cf. <http://blog.mathed.net/2011/08/rysk-butlers-effects-on-intrinsic.html>). Compare the nature of the feedback received with the grade expectations described above. A student is encouraged to confirm their self-assessment of their progress toward meeting course objectives in the class at any time with the professor. Similarly, if a student would like feedback on projecting a final course grade, a similar conversation is welcome. Please request an office appointment.

Policy on Late/Missed Work

Make *prior arrangements* with the instructor for work to be submitted late.

¹ Butler, R. (1988). Enhancing and undermining intrinsic motivation: The effects of task-involving and ego-involving evaluation on interest and performance. *British Journal of Educational Psychology*, 58. (pp. 1-14). [available <https://www.dropbox.com/s/kc5lmw3cey6zes2/feedback%20and-or%20grades%3F.pdf?dl=0>]

Lipnevich, A. A. & Smith, J. K. (2008). *Response to assessment feedback: The effects of grades, praise, and source of information*. [online at <http://www.ets.org/Media/Research/pdf/RR-08-30.pdf>]

SCHEDULE/COURSE OUTLINE

Date	Topic*	Assignment to be Completed BEFORE Class Session
Session 1 27 aug 15 4:15-7:00	Course Introduction Mathematics Standards	<i>Read the CaCCSS-M, pp. ii-4, 57-60, & 122-144</i>
Session 2** 1 sep 15 10:30-1:00	Developing Mathematical Understanding	<i>Read Boaler & Gutstein a mathematical task</i>
Session 3 3 sep 15 4:15-7:00	Equity & Social Justice in Mathematics Education Algebraic Thinking & Student Interview	<i>Read Davis & Driscoll a mathematical task</i>
Session 4 10 sep 15 4:15-7:00	Algebraic Thinking Developing Lessons, and Lesson Plans	<i>Read Smith, & Driscoll a mathematical task</i> 3. Interview
Session 5 1 oct 15 4:15-7:00	Learning & Knowing Maths	<i>Read Brooks & Brooks, & Smith Watch Annenberg video a mathematical task</i>
Session 6 8 oct 14 4:15-7:00	Strategies for Differentiation & Language Learners Mathematics Education as a Learning Profession	<i>Read WestEd a mathematical task</i> 4. Lesson Plan
Session 7** TBD	Lesson Observation Mathematics Education as a Learning Profession	<i>Read Fendel et al. a mathematical task</i> 5. Professional Reading
Session 8 12 nov 15 4:15-7:00	Assessment	<i>Read Stuzman & Race (and 1-2 more articles) a mathematical task</i> 6. POW
Session 9 19 nov 15 4:15-7:00	Reflections on Student Teaching (Mathematics) Classroom Management --Engaging students --Building community	<i>Read NCTM a mathematical task</i> 2. Interactive Notebook 7. Electronic Portfolio

*This schedule is an *approximation*. Given the nature of learning being non-linear and not as predictable as one might wish, we will likely be altering the scheduled topics and possibly times and dates in order to accommodate student interest, observe and teach in mathematics classrooms, and take advantage of professional development opportunities. In particular, **reading assignments (in italics) are likely to adjust as the class unfolds.

**These sessions will be outside our normal classroom, usually at a school. Details will be provided in class.