San José State University
Department of Mathematics & Statistics
MTED 184 YZ: Student Teaching II – Classroom Teaching
Section 1, 8 units, Spring 2017

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Prerequisites:	MTED 394 and joint approval of Math & Statistics and Teacher Education departments.

Faculty Web Page and MYSJSU Messaging

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on Canvas at http://sjsu.instructure.com. You are responsible for regularly checking with the messaging system through MySJSU at http://my.sjsu.edu (or other communication system as indicated by the instructor) to learn of any updates.

Course Description

Minimum of 600 hours of field teaching and coaching in middle school or high school math classrooms. This course covers supervision of new Phase II and Year Long Placement Teacher Candidates and Interns who are required to be at their schools four periods each day and two weeks of full-day teaching.

Alignment with the Lurie College of Education Vision and Mission

The *mission* of the Lurie College of Education is to empower candidates with the skills, knowledge and dispositions that ensure access to excellence and equity in education for every student in our diverse, technologically complex, global community.

Shared Vision: The Lurie College of Education is an inclusive, engaged, diverse, intellectual community where teacher-scholars inspire life-long learning and advocacy for excellence and equity in education.

Alignment with the National Commission for Accreditation of Teacher Education Standards

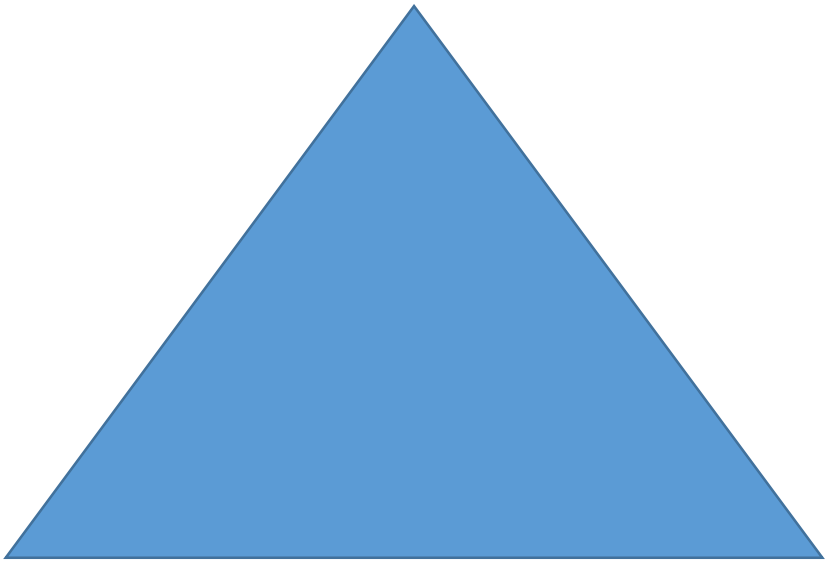
Standard 1: Candidate Knowledge, Skills, and Dispositions: Standard 1 Section 2 requires that teacher candidates reflect an understanding of pedagogical content knowledge delineated in professional, state, and institutional standards. Standard 1 Section 3 requires that teacher candidates develop meaningful learning experiences to facilitate learning for all students; reflect on their practice and make necessary adjustments to enhance student learning; know how students learn and how to make ideas accessible to them, and consider school, family, and community contexts in connecting concepts to students' prior experience.

Standard 3: Field Experience and Clinical Practice: Standard 3 requires that the program provide field experience so that candidates develop and demonstrate the knowledge, skills, and professional dispositions necessary to help all students learn.

Standard 4: Diversity: Standard 4 requires that the curriculum help students to demonstrate knowledge, skills, and dispositions related to diversity.

Math Phase II Implementation Structure to Achieve the Goal of Developing High Quality Skillful Teaching Practice

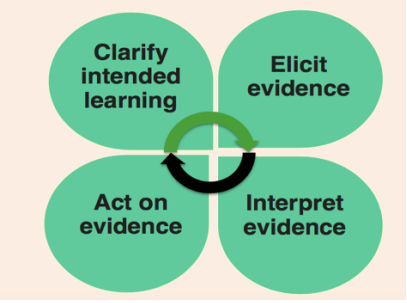
Teaching Goal:
Effectively implement the CACSM to help students achieve deep understanding of math



Teacher Learning Goal:
Improve one's own teaching practice by attending to student outcomes

Assessment Goal:
Use Formative Assessment Cycle to process students' learning effectively and in a sustained manner

Everyday Formative Assessment Process that will be Practiced in Support of Skillful Teaching: Teacher Candidates and Interns will use a four-clover formative assessment approach to teaching and learning mathematics during instruction in order to provide actionable feedback and adjust ongoing teaching and learning strategies that will improve their students' attainment of curricular learning targets/goals.



Course Content Learning Outcomes
(Aligned to the 2016 CCTC Teaching Performance Expectations)

Teaching Performance Expectations – Teacher candidates –	*Expectation*
C1. Engage and Support All Students in Learning	
1. Apply knowledge of students, including their prior experiences, interests, and social emotional learning needs, as well as their funds of knowledge, cultural, language, and socioeconomic backgrounds to engage them in learning.	Practice (P) and Assess (A)
2. Maintain ongoing communication with students and parents regarding achievement expectations.	P & A
3. Connect subject matter to real-life contexts and provide hands-on experiences to engage student interest, support student motivation, and allow students to extend their learning.	P & A
4. Use a variety of developmentally and ability-appropriate instructional strategies, resources, and assistive technology, including principles of Universal Design (and a Multitiered System of Supports(MTSS)), to support access to the curriculum for a wide range of learners within the (general education) classroom (and environment).	P & A
5. Promote students' critical and creative thinking and analysis through activities that provide opportunities for inquiry, problem solving, responding to and framing meaningful questions, and reflection.	P & A
6. Provide a supportive learning environment for students' first and/or second language acquisition by using research-based instructional approaches, including focused English Language Development, Specially Designed Academic Instruction in English (SDAIE), scaffolding across content areas, structured English immersion, and determine communicative intent, particularly with students with low verbal abilities.1	P & A
7. Provide students with opportunities to access the curriculum by incorporating the visual and performing arts, as appropriate to the content and context of learning.	N/A
8. Monitor student learning and adjust instruction while teaching so that students continue to be actively engaged in learning.	P & A
C2. Create and Maintain Effective Environments for Student Learning	
1. Promote students' social-emotional growth, development, and individual responsibility using positive interventions and supports, restorative justice, and conflict resolution practices to foster a caring community where each student is treated fairly and respectfully by adults and peers.	P & A
2. Create learning environments (i.e., traditional, blended, and online) that promote productive student learning, encourage positive interactions among students, reflect diversity and multiple perspectives, and are culturally responsive.	P & A
3. Establish, maintain, and monitor inclusive learning environments that are physically, mentally, intellectually, and emotionally healthy and safe to enable all students to learn, and recognize and appropriately address instances of intolerance and harassment among students, such as bullying, racism, and sexism.	P & A

4. Know how to access resources to support students, including those who have experienced trauma, homelessness, foster care, incarceration, and/or are medically fragile.	N/A
5. Maintain high expectations for learning, with appropriate support for the full range of students in the classroom.	P & A
6. Establish and maintain clear expectations for positive classroom behavior and for student to student and student to teacher interactions by communicating classroom routines, procedures, and norms to students and families.	P & A
C3. Understand and Organize Subject Matter for Student Learning Content Specific Pedagogy	
1. Demonstrate knowledge of subject matter, including the adopted California state standards and curriculum frameworks.	P & A
2. Use knowledge about students (e.g. IEP, IFSP, ITP, and 540 plans) and learning goals to organize curriculum to facilitate student understanding of subject matter, and make accommodations and/or modifications as needed to promote student access to the curriculum.	P & A
3. Plan, design, implement, and monitor instruction consistent with current subject-specific pedagogy in the content area(s) of instruction, and design and implement disciplinary and cross-disciplinary learning sequences, including integrating the visual and performing arts as applicable to the discipline.	P & A
4. Individually and through consultation and collaboration with other educators and members of the larger school community, plan for effective subject matter instruction and use multiple means of representing, expressing, and engaging students to demonstrate their knowledge.	P & A
5. Adapt subject matter curriculum, organization, and planning to support the acquisition and use of academic language within learning activities to promote the subject matter knowledge of all students, including the full range of English learners, Standard English learners, students with disabilities, and students with other learning needs in the least restrictive environment.	P & A
6. Use and adapt resources, standards-aligned instructional materials, and a range of technology, including assistive technology, to facilitate students' equitable access to the curriculum.	P & A
7. Model and develop digital literacy by using technology to engage students and support their learning, and promote digital citizenship, including respecting copyright law, understanding fair use guidelines and the use of Creative Commons license, and maintaining Internet security.	P & A
8. Demonstrate knowledge of effective teaching strategies aligned with the internationally recognized educational technology standards.	P & A
C4. Plan Instruction and Design Learning Experiences for All Students	
1. Locate and apply information about students' current academic status, content- and standards-related learning needs and goals, assessment data, language proficiency status, and cultural background for both short-term and long-term instructional planning purposes.	P & A

2. Understand and apply knowledge of the range and characteristics of typical and atypical child development from infancy through adolescence to plan instruction for all students.	P & A
3. Design and implement instruction and assessment that reflects the interconnectedness of academic content areas and related student skills development in literacy, mathematics, science, and other disciplines across the curriculum, as applicable to the subject area of instruction.	P & A
4. Plan, design, implement and monitor instruction, making effective use of instructional time to maximize learning opportunities and provide access to the curriculum for all students by removing barriers and providing access through instructional strategies that include: * appropriate use of instructional technology, including assistive technology; * applying principles of UDL and MTSS; * use of developmentally, linguistically, and culturally appropriate learning activities, instructional materials, and resources for all students, including the full range of English learners; * appropriate modifications for students with disabilities in the general education classroom; * opportunities for students to support each other in learning; and use of community resources and services as applicable.	P & A
5. Promote student success by providing opportunities for students to understand and advocate for strategies that meet their individual learning needs and assist students with specific learning needs to successfully participate in transition plans (e.g., IEP/IFSP/ITP/504 plans.)	P & A
6. Access resources for planning and instruction, including the expertise of community and school colleagues through in-person or virtual collaboration, co-teaching, coaching, and/or networking.	P & A
7. Plan instruction that promotes a range of communication strategies and activity modes between teacher and student, and among students, that encourage student participation in learning.	P & A
8. Use digital tools and learning technologies across learning environments as appropriate to create new content and provide personalized and integrated technology-rich lessons to engage students in learning, promote digital literacy, and offer students multiple means to demonstrate their learning.	P & A
C5. Assess Student Learning	
1. Apply knowledge of the purposes, characteristics, and appropriate uses of different types of assessments (diagnostic, informal, formal, progress monitoring, formative, and summative) to design and administer classroom assessments, including use of scoring rubrics.	P & A
2. Collect and analyze assessment data from multiple measures and sources to plan and modify instruction and document students' learning over time.	P & A
3. Involve all students in self-assessment and reflection on their learning goals and progress and provide students with opportunities to revise or reframe their work based on assessment feedback.	P & A
4. Use technology, as appropriate, to support assessment administration, conduct data analysis, and communicate learning outcomes to students and families.	P & A

5. Use assessment information in a timely manner to assist students and families in understanding student progress in meeting learning goals.	P & A
6. Work with specialists to interpret assessment results from formative and summative assessments to distinguish between students whose first language is English, English learners, Standard English learners, and students with language or other disabilities.	P
7. Interpret English learners' assessment data to identify their level of academic proficiency in English as well as in their primary language, as applicable, and use this information in planning instruction.	P
8. Use assessment data, including information from students' IEP, IFSP, ITP, and 504 plans, to establish learning goals and to plan, differentiate, make accommodations and/or modify instruction.	P & A
C6. Develop as a Professional Educator	
1. Reflect on their own teaching practice and level of subject matter and pedagogical knowledge to plan and implement instruction that can improve student learning.	P & A
2. Recognize their own values and implicit and explicit biases, the ways in which these values and implicit and explicit biases may positively and negatively affect teaching and learning, and work to mitigate any negative impact on the teaching and learning of students. They exhibit positive dispositions of caring, support, acceptance, and fairness toward all students and families, as well as toward their colleagues.	P & A
3. Establish professional learning goals and make progress to improve their practice by routinely engaging in communication and inquiry with colleagues.	P & A
4. Demonstrate how and when to involve other adults and to communicate effectively with peers and colleagues, families, and members of the larger school community to support teacher and student learning.	P & A
5. Demonstrate professional responsibility for all aspects of student learning and classroom management, including responsibility for the learning outcomes of all students, along with appropriate concerns and policies regarding the privacy, health, and safety of students and families. Beginning teachers conduct themselves with integrity and model ethical conduct for themselves and others.	P & A
6. Understand and enact professional roles and responsibilities as mandated reporters and comply with all laws concerning professional responsibilities, professional conduct, and moral fitness, including the responsible use of social media and other digital platforms and tools.	P & A
7. Critically analyze how the context, structure, and history of public education in California affects and influences state, district, and school governance as well as state and local education finance.	P

Required Textbook

Single Subject Credential Program Student Teaching Handbook
http://www.sjsu.edu/secondary/students/student_teaching/Student%20Teaching%20Handbook%20Revised%2011-30-16.pdf

California Common Core Standards in Mathematics or California Mathematics Framework http://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf

Integrating the CA ELD Standards into K–12 Mathematics Teaching and Learning http://www.cde.ca.gov/sp/el/er/eldstandards.asp

Required Readings and Resources

PACT Handbook: http://www.sjsu.edu/education/pact/

Formative Assessment in Action Videos: *http://www.cde.ca.gov/Ta/tg/sa/fainaction.asp*

Formative Assessment Process: *http://www.smarterbalanced.org/wp-content/uploads/2015/09/Formative-Assessment-Process.pdf*

Classroom Protocol

Below are four basic norms and expectations for successful interactions in field placement, communication processes with mentor teacher, supervisor and peers, etc. These statements apply to new Phase II and Year Long Placement Teacher Candidates and Interns.

1. Notify teacher and university supervisor in case of absence from site.

2. Follow calendar and schedule.

3. Demonstrate appropriate professional disposition at all times and in all areas of reflection, responsibility, commitment to professionalism, and commitment to fairmindedness and equity (refer to p. 14 of Single Subject Credential Student Teaching Handbook).

4. Submit copies of lesson plans by e-mail two days in advance of scheduled observation so that we can engage meaningfully in co-planning and co-assessing and provide you with timely feedback.

Teacher Candidate Roles and Responsibilities

These statements apply to new Phase II and Year Long Placement Teacher Candidates and Interns.

1. Be present as scheduled for the duration of the semester - Professional dress and conduct.

2. Download and print the Teacher Candidate Handbook from the Single Subject Credential Program website: http://www.sjsu.edu/secondaryed/Programs/Student_Teaching/

3. Confer regularly with your mentor teacher and university supervisor to set growth goals and reflect on progress.

4. Adhere to the academic schedule of the school to which you are assigned, even if it differs from that of San Jose State University.

5. Arrive at the school site on time and prepared for the day.

6. Apply the theories and principles of pedagogy taught in university courses to classroom practice.

7. Learn about the students, school, school personnel and the surrounding community.

8. Identify specific learning needs of your students, especially English Language Learners.

9. Follow the curriculum.

9. Plan carefully and thoroughly for each day of teaching. Prepare a written lesson plan for every day that you teach. Provide your mentor teacher and your university supervisor with an advance copy of every lesson plan you deliver. This will be especially important if you become ill.

10. Inform the school, your mentor teacher, and your university supervisor of absences. At the beginning of the experience, determine how to contact each person.

11. Learn about and adhere to school rules and policies.

12. Strive to meet all expectations for teacher candidates.

13. Complete the PACT with high quality work.

14. Follow the steps below in cases of concerns (e.g., issues with your university supervisor, mentor teacher, and the supervision course).

(i) Talk to your university supervisor first.

(ii) If the concern persists, talk to the MTED 184YZ Coordinator (Dr. Cheryl Roddick).

(iii) If the concern is still unresolved, talk to the Secondary Education Program Coordinator (Rita Tracy).

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's Catalog Policies section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at

http://www.sjsu.edu/aars/policies/latedrops/policy/**.** Students should be aware of the current deadlines and penalties for dropping classes.

Assignments and Grading Policy

These statements apply to new Phase II and Year Long Placement Teacher Candidates and Interns.

A teacher candidate **must successfully meet ALL the requirements below** in order to pass the course. Course assignments/assessments in MTED 184YZ are fully described in the Single Subject Credential Program Student Teaching Handbook. These include:

1. Successful completion of two weeks of full-day solo teaching.

2. Mid-semester Formative Assessment (candidate, teacher, and supervisor).

3. Six university supervisor observations (with candidate lesson plans completed according to the Math Education Lesson Plan Template). At least one observation/lesson should use a technological tool to teach and learn mathematics.

4. Final Summative Assessment (candidate, teacher, and supervisor).

5. Consistent professional disposition evaluation in all areas of reflection, responsibility, commitment to professionalism, and commitment to fairmindedness and equity.

Evaluation

This is a credit/no credit practicum course. All assignments must be completed successfully in order receive credit. Each candidate will also participate in an exit interview with the university supervisor at the end of the semester to assess the candidate's current level of performance. To receive credit for this course you must:

- complete all assignments as per course syllabus;

- complete all assignments and assessments as per timeline in the Single Subject Credential Student Handbook;

- maintain satisfactory performance in the field assignments as required and evaluated by the teacher and the university supervisor;

- demonstrate appropriate professional disposition at all times *regardless of location*;

- ***and*** successfully complete all 15-18 weeks of intern/student teaching placement including two weeks of full-day solo teaching.

According to the California Commission on Teacher Credentialing (CCTC), candidates must attain competency in all areas of relevant content and communication outlined in the CCTC standards.

The Teacher Education Department has thus adopted procedures to ensure such competence. Should a candidate perform unsatisfactorily by failing to achieve the expected level of performance, the Process for Remediation would be enacted. If the process of remediation is unsuccessful, or if the candidate is removed from a practicum placement, she or he will not receive credit.

The candidate may have two opportunities to successfully complete MTED 184YZ. If time allows, the second opportunity may occur within the same semester. If there is not adequate time left in the semester, the second opportunity may occur in a subsequent semester. **Two unsuccessful experiences in MTED 184YZ will disqualify a candidate from the SJSU Single Subject Credential Program.** For more details about this policy, access the following link: http://www.sjsu.edu/secondary/program/academic_expectations_policies/index.html.

Any candidate who has been required to retake MTED 184YZ must meet with the Secondary Education Program Coordinator of the Department of Teacher Education and the Director of Field Placement who will determine whether the candidate will be allowed to re-enroll.

San José State University reserves the right to remove from the single subject credential program any candidate who demonstrates unprofessional behavior, including but not limited to prevarication, slander, negligence, or child endangerment.

University Policies

Academic integrity

Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The University's Academic Integrity policy S07-2, located at http://www.sjsu.edu/senate/S07-2.htm, requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/.

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU's Academic Integrity Policy S07-2 requires approval of instructors.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with

disabilities requesting accommodations must register with the Disability Resource Center (DRC) at http://www.drc.sjsu.edu/ to establish a record of their disability.

Student Technology Resources

Computer labs for student use are available in the Academic Success Center at http://www.sjsu.edu/at/asc/ located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library.

A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.

SJSU Writing Center

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at http://www.sjsu.edu/writingcenter. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)

MTED 184YZ SEQUENCE OF ACTIVITIES

Week	Date	Teacher Candidate (TC)/Intern (I) Activity	Mentor Teacher Activity	University Supervisor Activity
0	Jan 3-20	New Phase II TCs: Start Informal Orientation Phase Interns and Year Long Placement (YLP) TCs: Continue Lead (Solo) Teaching **AND** email university supervisor a copy of the school bell schedule and course syllabi		
1	Jan 24-Feb 3	New Phase II TCs**:** Begin Formal Orientation Phase **AND** email university supervisor a copy of the school bell schedule and course syllabi All: Start PACT Teaching Event Task 1 **(Spring 2017 PACT due date is April 17 by 4 PM)** **All: Attend 2-hour orientation meeting on 01/26/2017, 4:30-6:30 PM, MH 425.**	Provide feedback and approve course syllabi	Finalize formal classroom observation schedule with student teacher/intern Provide feedback and approve course syllabi
2	Feb 6-10	New Phase II TCs**:** Begin Transition Phase **AND** settle on dates for two weeks of full-day participation All: Send out PACT video permission slip to families **AND** settle on dates for planning, teaching, and writing PACT Teaching Event	Assist ST/intern with PACT video permission slip to families Finalize dates for planning, teaching, and writing PACT teaching event with ST/intern Finalize dates for two weeks of	Collect ST/Intern Timeline of Activities Classroom Observation 1: I/YLP TCs only

		All: Submit *Proposed Timeline of Activities* document to university supervisor	full-day participation with ST/intern Coteach with ST/intern	
3	Feb 13-17	New Phase II TCs**:** Begin Lead (solo) Teaching Phase (Teach in two different classrooms with two different preps)	Coteach with ST/intern	Classroom Observation 1: I/YLP TCs only
4	Feb 20-24	New Phase II TCs**:** Submit *Orientation Phase Checklist* to university supervisor	Coteach with ST/intern Submit Orientation Phase Checklist	Classroom Observation 1: All
5	Feb 27-Mar 3		Coteach with ST/intern	Classroom Observation 1: All
6	Mar 6-10		Coteach with ST/intern	Classroom Observation 2: All
7	Mar 13-17		Fill out the Phase II-III Teacher candidate Evaluation Form Coteach with ST/intern	Classroom Observation 2: All Conduct three-way midterm Evaluation
8	Mar 20-24	New Phase II TCs**:** Submit *Lead Teaching Phase Checklist* to university supervisor	Submit Lead Teaching Phase Checklist Coteach with ST/intern	Classroom Observation 3: All Conduct three-way midterm Evaluation
9	Mar 27-31	SJSU Spring Break	Coteach with ST/intern	
10	Apr 3-7		Coteach with ST/intern	Classroom Observation 3: All
11	Apr 10-14		Coteach with ST/intern	Classroom Observation 4: All
12	Apr 17-21	All: PACT Teaching Event Portfolio due April 17 by 4 PM	Coteach with ST/intern	Classroom Observation 4: All

		New Phase II TCs**:** Begin two weeks of full day participation (does not apply to interns and YLP TCs)		
13	Apr 24-28		Coteach with ST/intern	Classroom Observation 5: All
14	May 1-5		Coteach with ST/intern	Classroom Observation 5: All
15	May 8-12		Fill out the Phase II-III Teacher candidate Evaluation Form	Classroom Observation 6: All
16	May 15-19		Coteach with ST/intern	Classroom Observation 6: All Conduct three-way final evaluation
17	May 22-26		Coteach with ST/intern	Conduct three-way final evaluation All “I” grades sent to Registrar
	May 27	Commencement		
18	May 29-30	End of SJSU Spring Semester	Coteach with ST/intern	
18/19		All: End Lead (Solo) Teaching Phase (should end at the end of the semester for the school at which the teacher candidate is placed)	Coteach with ST/intern	Final grades sent to Registrar at the end of Lead Solo Teaching

Date: _____ Subject & Grade Level: _____ Teacher: _____
Lesson Title (include chapter section number, name of book, & page numbers): _____
Essential Math Question: _____

CACSM Content Standards		
Domain	**Cluster**	**Standard(s)**

CACSM Practice Standard(s)	
Cluster(s)	**Specific Action(s)**

Prerequisite CACSM Content Standard(s)

Success Criteria Expressed in Cognitive Rigor Objective Terms
At the end of the 55-minute lesson, I (the student):

Academic Language Objectives
At the end of the 55-minute lesson, I (the student):

Supporting Material/s and Resource(s)

Lesson Activity		
Time	**Sequence**	**Potential issues, Barriers, and Solutions**
Accommodations and Additional Notes		

Include worksheet activities and other relevant resources, if applicable.

Name of Student Teacher/Intern: _____ **Observer:** _____ **Date:** _____

Mathematics Classroom Observation Guide

I. Classroom culture is conducive to learning mathematics.

A. Ideas, questions, and contributions are exchanged respectfully.

|_| Students and teachers interact respectfully.
|_| Students interact collegially.
|_| Students listen actively and ask for clarification when they don't understand.

B. Discussions are based on sound mathematical reasoning.

|_| Students use supporting and refuting claims to inform reflection and discourse.
|_| Students rely on their own thinking and logical arguments to evaluate ideas.
|_| Students explain, question, and critique their own understanding.
|_| Student use examples and evidence to challenge ideas and inferences.
|_| Students differentiate between and among personal, informal, and mathematical ways of knowing.

C. Math content is made accessible to each student.

|_| Content and instruction is adjusted based on the background knowledge and skills of each student.
|_| Explanations and clarifications are clear, accurate, and accessible to each student.
|_| Spoken and unspoken messages communicate that each student is capable of learning math content knowledge.
|_| Each student actively participates in thinking and learning.
|_| Each student experiences problems that ultimately lead to new insights.
|_| Each student experiences mathematically productive struggles and perseveres.

II. Math content is Intellectually engaging.

A. Math content is significant, accurate, and worthwhile.

|_| Math content is explicit and apparent to students.
|_| Math content is primarily focused on big ideas supported by relevant concepts, procedures, reasoning, and applications.
|_| Math content is clearly aligned with at least one standard for mathematical practice.
|_| Math content is consistent with the CACSM.
|_| Math content is accurate.
|_| Math content is developmentally appropriate and scaffolded appropriately.
|_| Math is portrayed as coherent, focused, and rigorous.

B. Math content builds on students' prior ideas or experiences.

|_| Students reveal their preconceptions about the math content, the underlying related concepts, or the nature of mathematics.
|_| Students reveal their underlying thinking and reasoning and the source of their preconceptions.
|_| Students recognize links between their preconceptions or previously learned math concepts and the activities or experiences in the math lesson.

C. Math content is intentionally connected to the classroom activities and experiences.

|_| Student actions and interactions focus on understanding important and relevant math content.
|_| Students generate and explore questions about the math in the lesson.

|_| Students can articulate the intended math content of a lesson, activity, or experience.

Mathematics Classroom Observation Guide

Name of Student Teacher/Intern: _____ Observer: _____ Date: _____

III. Instruction fosters and monitors deep student understanding of mathematics

A. Instruction fosters students' emerging understanding of math content.

|_| Students are confronted with examples that challenge their initial ideas as opportunities for productive struggle.

|_| Questions enhance the development of students' understanding of key concepts connected to the lesson.

|_| Clear and accurate explanation/clarification are provided at appropriate points.

|_| Opportunities are provided for students to build on their present understanding as they develop new understandings.

|_| Student-generated questions are pursued based on their relevance to the math content and their potential to deepen student understanding.

B. Instruction monitors students' emerging understanding of math content.

|_| Student ideas are recognized, even when they are vaguely articulated.

|_| Responses to student questions or comments address the mathematical idea expressed in their thinking and relate it to the focus of the lesson.

|_| Learning experiences are modified or added to ensure students develop the necessary mathematical content knowledge.

|_| Instruction incorporates appropriate formative assessment strategies, thus, permitting the teacher to adjust teaching and learning in ways that improve students' attainment of learning targets and goals.

IV. Students organize, relate, and apply their mathematical knowledge

A. Students make sense of the intended mathematical ideas and concepts.

|_| Students work on answering mathematical questions or solving problems and communicate their findings in precise terms using appropriate tools.

|_| Students clarify their own ideas, observations, reasoning, models, and explanations.

|_| Students self-monitor the accuracy of their understanding and revise their ideas based on mathematical reasoning and examples.

|_| Students recognize changes in their initial ideas and cite experiences and/or evidence that led to them.

|_| Students describe the difficulties they confronted in developing new and more accurate understanding.

B. Students reflect on their own understanding of the mathematical content.

|_| Students engage in private think time to reflect on the content within the lesson.

|_| Students reflect critically on their own and each other's processes, reasoning, and explanations.

|_| Students discuss what they understand and don't understand about the intended content.

C. Students make connections between the math content in the current lesson and prior experiences.

|_| Students articulate a purpose for the content beyond the immediate classroom lesson.

|_| Students make multiple connections to what they already know or to applications in real world contexts.

|_| Students apply what they learn beyond the context of the original problem.

|_| Students connect the mathematical ideas to everyday life.

Name of Student Teacher/Intern: _____ Observer: _____ Date: _____

CLASSROOM DEBRIEF

List or describe areas of strengths and concerns.

I. Was my class conducive to learning mathematics?	II. Was the math content I just taught Intellectually engaging to my students?
III. Did my instruction foster and monitor deep understanding of mathematics?	IV. Were my students able to organize, relate, and apply their mathematical knowledge?

_____ _____ _____

Signature of Student Teacher/Intern Signature of University Supervisor Signature of Cooperating Teacher

Name of Student Teacher/Intern: _____ Observer: _____ Date: _____

LESSON DETAILS

Number of Students: _____ Class Observed: _____ Time of Observation: _____

Lesson Sequence:

Name of Student Teacher/Intern: _____ Observer: _____ Date: _____