GENERAL COURSE GOALS: The NCTM (National Council of Teachers of Mathematics) states, "A major goal of mathematics is to help children develop the belief that they have the power to do mathematics. This autonomy develops and grows as children gain confidence and learn that mathematics is not simply memorizing rules and procedures but that mathematics makes sense, is logical, and is enjoyable." Knowing mathematics involves doing mathematics. The goal of this course is to provide opportunities for undergraduate students to develop knowledge, skills and dispositions that will enable them identify and remediate student difficulties with mathematics and to pass along an enjoyment and confidence in mathematics to the students they tutor.

Expected Outcomes:
1. Candidates will be able to demonstrate an understanding of the state-adopted academic content standards reflecting the current California Mathematics Framework.
2. Candidates will be able to understand and effectively use materials, methods, and strategies for all students (i.e. ELD, special needs, gifted), providing them access to the core curriculum and beyond.
3. Candidates will be able to help students solve real-world problems using mathematical reasoning and concrete, verbal, symbolic, and graphic representations.
4. Candidates will be introduced to and create a mathematical teaching/learning environment that uses a variety of teaching strategies which address access, equity and the importance of the student’s family and cultural backgrounds and experiences in relation to mathematics education in California.
5. Candidates will be able to acquire a set of mathematics activities and resources to work with students of diverse abilities.
6. Candidates will become familiar with the concepts of pacing, level of student involvement, checking for understanding, and mastery versus performance learning.
7. Candidates will demonstrate the ability to select, administer, and interpret informal assessment tool(s) to assess student’s understanding of mathematics, including appropriate measures for initial, progress monitoring, and summative assessment of English learners for math content knowledge.
8. Candidates will be able to understand and effectively use systematic instructional strategies designed to make grade-appropriate or advanced math curriculum content comprehensible to English learners.

Course Requirements:
1. Students must submit a negative tuberculosis test and fingerprint screening prior to orientation at the school site. (Students convicted of drug, violence, or sex crimes are prohibited from participation in this course.)
2. The student will attend all class and tutoring sessions and participate seriously and spontaneously in class discussions and tutoring experiences.
3. The student will pass a competency exam in mathematics tutoring concepts and content prior to beginning the field practicum. The passing minimum is 75%.
4. The student will prepare a tutoring plan and appropriate materials each week for the 11/12 weeks of the practicum, which must be ready to view in advance of the tutoring session.

Required Texts: *available in the CSUS student bookstore
1. Required: SECOND EDITION- Teaching Mathematics to All Children: Designing and Adapting Instruction to Meet the Needs of Diverse Learners, 2/e; Author : Tucker, Benny; ISBN : 0-13-027021-0*

Class Times:
Tuesday & Thursday 8:00 - 9:30 a.m. (DH 207), first 3-4 weeks, then off campus (7:30 - 9 am) for 10-11 weeks

Grading:
Class and lab are C/NC It is based upon completion of assignments and attendance at classes/tutoring sessions.
<table>
<thead>
<tr>
<th>Week No.</th>
<th>Date</th>
<th>Class Location</th>
<th>Due this Day:</th>
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<tbody>
<tr>
<td>1</td>
<td>Tuesday 9/5</td>
<td>CSUS</td>
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<td>On Campus 8 - 9:30 a.m.</td>
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<td>2</td>
<td>Tuesday 9/12</td>
<td>Introduction/Learning Styles/Base 10</td>
<td>Read in Tucker: pp 65-74</td>
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<td></td>
<td>Thursday 9/14</td>
<td>Base 10 continued</td>
<td>Read in Tucker: pp 75 - 89</td>
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<td>3</td>
<td>Tuesday 9/19</td>
<td>More Base 10 games/math facts</td>
<td>Choose one game/activity and prepare for two students</td>
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<td></td>
<td>Thursday 9/21</td>
<td>Assessments, math facts: Lesson planning</td>
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<tr>
<td>4</td>
<td>Tuesday 9/26</td>
<td>Tutoring Proficiency Exam in Class</td>
<td>Fingerprint and TB test results due</td>
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<td></td>
<td>Thursday 9/28</td>
<td>Orientation at school site</td>
<td>Tucker Chap. 10 (relevant parts)</td>
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<td>5</td>
<td>Tuesday 10/3</td>
<td>Student interview/general facts assessment/play a game</td>
<td>Plan an interview questions, assessment, and game.</td>
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<td>Thursday 10/5</td>
<td>Plan for drill of facts, practice activity, game</td>
<td>Attendance and progress chart set up for each student</td>
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<td>6</td>
<td>Tuesday 10/10</td>
<td>Plan for assessment; practice/game</td>
<td>Tucker Chap. 11(relevant parts)</td>
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<td>Thursday 10/12</td>
<td>Plan for assessment; practice/game</td>
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<td>7</td>
<td>Tuesday 10/17</td>
<td>Plan for assessment; practice/game</td>
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<td>Thursday 10/19</td>
<td>Plan for assessment; practice/game</td>
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<td>8</td>
<td>Tuesday 10/24</td>
<td>Plan for assessment; practice/game</td>
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<td>Thursday 10/26</td>
<td>Plan for assessment; practice/game</td>
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<td>9</td>
<td>Tuesday 10/31</td>
<td>Plan for assessment; practice/game</td>
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<td>Thursday 11/2</td>
<td>Plan for assessment; practice/game</td>
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<td>10</td>
<td>Tuesday 11/7</td>
<td>Plan for assessment; practice/game</td>
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<td>Thursday 11/9</td>
<td>Plan for assessment; practice/game</td>
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<td>11</td>
<td>Tuesday 11/14</td>
<td>Plan for assessment; practice/game</td>
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<td>Thursday 11/16</td>
<td>Plan for assessment; practice/game</td>
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<td>12</td>
<td>Tuesday 11/28</td>
<td>Plan for assessment; practice/game</td>
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<td>Thursday 11/30</td>
<td>Plan for assessment; practice/game</td>
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<td>13</td>
<td>Tuesday 12/5</td>
<td>Plan for assessment; practice/game</td>
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<td>Thursday 12/7</td>
<td>Plan for assessment; practice/game</td>
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<td>14</td>
<td>Tuesday 12/12</td>
<td>Wrap up with student</td>
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<td></td>
<td>Thursday 12/14</td>
<td>Celebration</td>
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Credit/No Credit: More than 2 absences will result in No Credit for the class.

Late Work is not accepted.

Notification of Special Needs: Consistent with University policy, students must file a form with the Students and Disabilities Office and provide the instructor of all classes with a copy of the form by the end of the 2nd week of classes. In this way, we can accommodate the needs of students with disabilities.

Incompletes: Please note that a grade of Incomplete must be awarded in accordance with University policy—there must be a specific, identifiable course requirement that needs to be met due to unforeseen but fully justified reasons, and that there is still a possibility of earning credit. Students have two semesters to complete the work. (Fall 2006 inc. due by Dec 18, 2007).
1. Take ramp onto US-50 EAST - go 5.7 mi
2. Take the MATHER FIELD/RANCHO CORDOVA exit toward MATHER FIELD RD - go 0.4 mi
3. Turn L on MATHER FIELD RD - go 0.6 mi
4. MATHER FIELD RD becomes PASEO DR - go 0.3 mi
5. Turn L on LAS CASAS WAY - go 0.2 mi
6. Turn R on LA LOMA DR - go < 0.1 mi
7. Arrive at 2550 LA LOMA DR, RANCHO CORDOVA, on the L

8.
9.
10.
Kindergarten Mathematics Content Standards

At the end of kindergarten, students understand small numbers, quantities, and simple shapes in their everyday environment. They count, compare, describe, and sort objects, and develop a sense of properties and patterns.

**Number Sense**

Students understand the relationship between numbers and quantities (i.e., that a set of objects has the same number of objects in different situations regardless of its position or arrangement):

1.1 Compare two or more sets of objects (up to 10 objects in each group) and identify which set is equal to, more than, or less than the other.

Are there more circles or more triangles in the following collection?

\[ \bigstar \bigstar \bigstar \bigstar \bigstar \bigstar \bigstar \bigstar \bigstar \bigstar \]

1.2 Count, recognize, represent, name, and order a number of objects (up to 30).

Which numbers are missing?

11, 12, 13, __, __, 16, __, __, 21, 22, 23, 24.

1.3 Know that the larger numbers describe sets with more objects in them than the smaller numbers have.

Students understand and describe simple additions and subtractions:

2.1 Use concrete objects to determine the answers to addition and subtraction problems (for two numbers that are each less than 10).

Pair up as many groups of beans from the left column with groups of beans from the right column so that each group adds up to 10 beans.

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**Number Sense** (Continued)

3.0 Students use estimation strategies in computation and problem solving that involve numbers that use the ones and tens places:

3.1 Recognize when an estimate is reasonable.

**Algebra and Functions**

1.0 Students sort and classify objects:

1.1 Identify, sort, and classify objects by attribute and identify objects that do not belong to a particular group (e.g., all these balls are green, those are red).

Students compare objects:

1. Which pencil is longer? Shorter?

2. Describe how the following objects are the same or different.

3. Show students buttons sorted into 3 sets as shown and ask them to identify how buttons were sorted.

Downloaded from the following site:
http://www.cde.ca.gov/re/pn/fd/documents/mathematics-f
2.0 Mathematical Reasoning

2.0.1 Students make decisions about how to set up a problem.

2.0.2 Students work with concrete objects and pictures to model problems.

2.0.3 Students solve problems in meaningful ways and justify their reasoning.

2.0.4 Students use the meaning used with concepts objects and procedures.

2.0.5 Students solve problems in meaningful ways and justify their reasoning.

2.0.6 Students make decisions about how to set up a problem.

2.0.7 Students work with concrete objects and pictures to model problems.

2.0.8 Students solve problems in meaningful ways and justify their reasoning.

2.0.9 Students use the meaning used with concepts objects and procedures.

2.0.10 Students solve problems in meaningful ways and justify their reasoning.

2.0.11 Students make decisions about how to set up a problem.

2.0.12 Students work with concrete objects and pictures to model problems.

2.0.13 Students solve problems in meaningful ways and justify their reasoning.

2.0.14 Students use the meaning used with concepts objects and procedures.

2.0.15 Students solve problems in meaningful ways and justify their reasoning.

2.0.16 Students make decisions about how to set up a problem.

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2.0.18 Students solve problems in meaningful ways and justify their reasoning.

2.0.19 Students use the meaning used with concepts objects and procedures.

2.0.20 Students solve problems in meaningful ways and justify their reasoning.

2.0.21 Students make decisions about how to set up a problem.

2.0.22 Students work with concrete objects and pictures to model problems.

2.0.23 Students solve problems in meaningful ways and justify their reasoning.

2.0.24 Students use the meaning used with concepts objects and procedures.

2.0.25 Students solve problems in meaningful ways and justify their reasoning.

2.0.26 Students make decisions about how to set up a problem.

2.0.27 Students work with concrete objects and pictures to model problems.

2.0.28 Students solve problems in meaningful ways and justify their reasoning.

2.0.29 Students use the meaning used with concepts objects and procedures.

2.0.30 Students solve problems in meaningful ways and justify their reasoning.

2.0.31 Students make decisions about how to set up a problem.

2.0.32 Students work with concrete objects and pictures to model problems.

2.0.33 Students solve problems in meaningful ways and justify their reasoning.

2.0.34 Students use the meaning used with concepts objects and procedures.

2.0.35 Students solve problems in meaningful ways and justify their reasoning.

2.0.36 Students make decisions about how to set up a problem.

2.0.37 Students work with concrete objects and pictures to model problems.

2.0.38 Students solve problems in meaningful ways and justify their reasoning.

2.0.39 Students use the meaning used with concepts objects and procedures.

2.0.40 Students solve problems in meaningful ways and justify their reasoning.

2.0.41 Students make decisions about how to set up a problem.

2.0.42 Students work with concrete objects and pictures to model problems.

2.0.43 Students solve problems in meaningful ways and justify their reasoning.

2.0.44 Students use the meaning used with concepts objects and procedures.

2.0.45 Students solve problems in meaningful ways and justify their reasoning.

2.0.46 Students make decisions about how to set up a problem.

2.0.47 Students work with concrete objects and pictures to model problems.

2.0.48 Students solve problems in meaningful ways and justify their reasoning.

2.0.49 Students use the meaning used with concepts objects and procedures.

2.0.50 Students solve problems in meaningful ways and justify their reasoning.

2.0.51 Students make decisions about how to set up a problem.

2.0.52 Students work with concrete objects and pictures to model problems.

2.0.53 Students solve problems in meaningful ways and justify their reasoning.

2.0.54 Students use the meaning used with concepts objects and procedures.

2.0.55 Students solve problems in meaningful ways and justify their reasoning.

2.0.56 Students make decisions about how to set up a problem.

2.0.57 Students work with concrete objects and pictures to model problems.

2.0.58 Students solve problems in meaningful ways and justify their reasoning.

2.0.59 Students use the meaning used with concepts objects and procedures.

2.0.60 Students solve problems in meaningful ways and justify their reasoning.
Number Sense

2.0 Students demonstrate the meaning of addition and subtraction and use these operations to solve problems:

2.1 Know the addition facts (sums to 20) and the corresponding subtraction facts and commit them to memory.

I had 10 cupcakes, but I ate 3 of them. How many cupcakes do I have left? How many if I had 18 and ate 5?

2.2 Use the inverse relationship between addition and subtraction to solve problems.

2.3 Identify one more than, one less than, 10 more than, and 10 less than a given number.

2.4 Count by 2s, 5s, and 10s to 100.

Which numbers are missing?
24, 26, 28, 30, __, __, 36, __, 40, 42, 44, __, __, 50
15, 20, 25, 30, __, __, 45, __, 55, 60, __, 70, __, 80

2.5 Show the meaning of addition (putting together, increasing) and subtraction (taking away, comparing, finding the difference).

2.6 Solve addition and subtraction problems with one- and two-digit numbers (e.g., 5 + 5 = __).

Figure out how many pages I have read so far this week if I read 16 pages on Monday, 9 pages on Tuesday, none on Wednesday, and 7 pages on Thursday.

2.7 Find the sum of three one-digit numbers.

3.0 Students use estimation strategies in computation and problem solving that involve numbers that use the ones, tens, and hundreds places:

3.1 Make reasonable estimates when comparing larger or smaller numbers.
Algebra and Functions

1. Students use number sentences with operational symbols and expressions to solve problems.

1.1 Write and solve number sentences from problems. Expressions that express relationships involving addition and subtraction.

1.2 Use the following problems in succession:

1. a. Mark had some pencils in his desk. He put 5 more in his desk. How many pencils did Mark have?

2. b. Edith had 14 balloons. A number of them floated away. She had 5 left. How many did she lose?

3. c. Nina had 15 balloons. The two more than Nina had. How many balloons did Nina have?

4. d. The sum of 5 and 12 is 17. What is the sum of 3 and 8?

Measurement and Geometry

1. Students use numbers and units to describe the measurements of objects.

1.1 Identify common geometric figures, classify them by common attributes, and describe their relative position or location in space.

1.2 Tell time to the nearest half-hour and minute. How many hours until the time shown on the clock?

1.3 Identify common geometric figures, classify them by common attributes, and describe their relative position or location in space.

1.4 Measure the length of an object by using a ruler. How many inches is the length of the object?

1.5 Describe the shape of one page in your notebook and compare it to the size of the clock on the wall.
Grade Two  Mathematics Content Standards

By the end of grade two, students understand place value and number relationships in addition and subtraction, and they use simple concepts of multiplication. They measure quantities with appropriate units. They classify shapes and see relationships among them by paying attention to their geometric attributes. They collect and analyze data and verify the answers.

Number Sense

1.0  Students understand the relationship between numbers, quantities, and place value in whole numbers up to 1,000:

1.1  Count, read, and write whole numbers to 1,000 and identify the place value for each digit.

1.2  Use words, models, and expanded forms (e.g., 45 = 4 tens + 5) to represent numbers (to 1,000).

   Kelly has 308 stickers. How many sets of hundreds, tens, and ones does she have?

1.3  Order and compare whole numbers to 1,000 by using the symbols <, =, >.

2.0  Students estimate, calculate, and solve problems involving addition and subtraction of two- and three-digit numbers:

2.1  Understand and use the inverse relationship between addition and subtraction (e.g., an opposite number sentence for 8 + 6 = 14 is 14 - 6 = 8) to solve problems and check solutions.

2.2  Find the sum or difference of two whole numbers up to three digits long.

   Use drawings of tens and ones to help find the sum 37 + 17 and the difference 25 - 19. Now do the same problems again using addition and subtraction algorithms.

2.3  Use mental arithmetic to find the sum or difference of two two-digit numbers.

   In a game, Myong and Naoki are making addition problems. They make two two-digit numbers out of the four given numbers 1, 2, 3, and 4. Each number is used exactly once. The winner is the one who makes two numbers whose sum is the largest. Myong had 43 and 21, while Naoki had 31 and 24. Who won the game? How do you know? Show how you can beat both Myong and Naoki by making up two numbers with a larger sum than either (Adapted from TIMSS, gr. 4, V-4). (This problem also supports Mathematical Reasoning Standard 1.0.)

3.0  Students model and solve simple problems involving multiplication and division:

3.1  Use repeated addition, arrays, and counting by multiples to do multiplication.

   Draw a simple picture of seating 30 people in rows of 10. Show and explain how this is related to multiplication. Do this also for rows of 3, and again for rows of 5.

3.2  Use repeated subtraction, equal sharing, and forming equal groups with remainders to do division.

   Kim decides to store away his marbles. He knows there are bags that hold up to 10 marbles each. Kim has 38 marbles, and he tries to spend money on as few bags as he can. How many bags does he have to buy? How many if he has 51 marbles? (Keep in mind that there is no such thing as “half a bag” or “part of a bag.”)

3.3  Know the multiplication tables of 2s, 5s, and 10s (to “times 10”) and commit them to memory.

4.0  Students understand that fractions and decimals may refer to parts of a set and parts of a whole:

4.1  Recognize, name, and compare unit fractions from 1/8 to 1/2.

   True or false?
   1.  One-fourth of a pie is larger than one-sixth of the same pie.
   2.  1/4 > 1/3
   3.  1/7 < 1/9

4.2  Recognize fractions of a whole and parts of a group (e.g., one-fourth of a pie, two-thirds of 15 balls).

4.3  Know that when all fractional parts are included, such as four-fourths, the result is equal to the whole and to one.

5.0  Students model and solve problems by representing, adding, and subtracting amounts of money:

5.1  Solve problems using combinations of coins and bills.

   Lee has a wallet with 5 nickels, 9 dimes, and a dollar bill. In how many ways can you pay with correct change for a pen worth $1.15? What about one worth 65 cents?
Number Sense (Continued)

1.0 Students use estimation strategies in computation and problem solving that involve numbers that use the ones, tens, hundreds, and thousands places.

2.0 Use the commutative and associative rules to simplify mental calculations and to check results.

Algebra and Functions

1.0 Students model, represent, and interpret quantitative relationships by creating and solving problems involving addition and subtraction.

2.0 These classes: a) have 24 students, and b) have 30 students. If Room 3 drops out of Room 4 with 20 students, how many students will you need for Room 4?
Instructions for completing the **Request for Live Scan Service** form:

1. Print two (2) copies of the **Request For Live Scan Service** Form 41-LS (see next pages in this document). Complete both copies, printing your full legal name and all other requested information. Use the following abbreviations when completing the hair and eye color requests: BLK (black), BLND (blonde), BL (blue), BRN (brown), GRN (green), GRY (gray), and HZL (hazel).

2. Take the completed forms to an office that conducts the fingerprint Live Scan.
   a. In the Sacramento area, the Department of Justice (DOJ) located at 4949 Broadway, Sacramento, CA, phone (916) 227-3310, the University Police Department on the Sacramento State campus sometimes conducts these scans (please call 916-278-6851 for an appointment), or contact your local police/sheriff’s department. The Live Scan operator will collect fees at the time your prints are scanned. At this time, the Live Scan fee is approximately $66.00.
   b. If you live outside the Sacramento area, please call the DOJ at (916) 227-3823 for a referral to a Live Scan service operator in your area.

3. After your fingerprints have been scanned, make sure the Live Scan operator has completely filled out the bottom of both Live Scan forms (they will keep one copy).