Instructor: Dr. mutindi ndunda
Office: Room #323: School of Education, 86 Wentworth Street
Office Phone: 843-953-8046
Email: ndundam@cofc.edu or mumbuandunda@gmail.com
Office Hours: M&W: 12-3:30PM and by appointment
Meeting Times: M/W 9:25-10:40 AM ECTR 215

Course Description: This course focuses on the alliance of factual knowledge, procedural proficiency, and conceptual understanding. The parallels of learner development and the progressive nature of mathematics content standards are explored. Teacher candidates will study the elements necessary to help P-8 students achieve high-quality mathematics instruction.

More specifically, in accordance with South Carolina College and Career Ready Standards for Mathematics (SCCCR) and National Standards for mathematics, teacher candidates will explore numbers and operations, geometry, measurement, data analysis and probability, and algebra. Problem solving, reasoning, multiple representations, connections, and communication are stressed throughout the course coverage of these content areas, facilitating the development of deep conceptual understanding. At the successful completion of the course, teacher candidates will be equipped to teach their future elementary- and middle-school students in a variety of ways such that their students understand mathematics procedures and why mathematics concepts make sense.

Required Text and Resources
The text will be used to provide a system for learning the concepts. In addition, we will use online resources to help with deeper understanding of concepts. Please feel free to look up resources online to enhance your learning. Please remember, understanding is personal☺


5. Pbworks- This is an online interactive site which notifies the user when a message or an item has been posted on the site. You will use the site to:
   a) Submit your journals/reflections
   b) Download course materials that might not be on oaks
   c) Post questions that can be answered by our community.

6. Khan Academy: [https://www.khanacademy.org/](https://www.khanacademy.org/) This site has many short lessons addressing different math concepts. Please use it to review and enhance your math concept understanding.

7. Edmodo. I will use edmodo to post resources/assignments for you. I will provide the group password shortly.

**Outcomes for Candidates:**

TCs (Teacher candidates) will develop the understanding of how students learn to construct mathematical ideas from the concrete early childhood experiences through the development of abstract thinking abilities in young adolescence.  

SOE I; CAEP 1.1; NAEYC 4b; NMSA 1.K1, 1.P2, 1.P4, 5.K4

TCs will articulate a vision of school mathematics that supports access of all students to a curriculum that emphasizes important mathematical concepts; effective and engaging research-based instructional practices; and high expectations with appropriate accompanying accommodations.  

SOE II, III; CAEP 1.1, 3d; NAEYC 4b; NMSA 1.D3, 5.D7

TCs will convey an appreciation for the discipline of mathematics including its history and the contributions of diverse cultures to the field.  

SOE II, VII; CAEP 1.1

TCs will articulate the knowledge that mathematics curriculum must be coherent and focused on important useful concepts that are connected within the discipline and across disciplines.  

SOE II; CAEP 1.1, NAEYC 4b; NMSA 4.K2

TCs will recognize the importance of the role of student ideas, interests, and needs in the design, implementation, and evaluation of mathematically-based learning experiences.  

SOE I; CAEP 1.1; NAEYC 4b; NMSA 3.K5, 3.D4, 4.P3

TCs will demonstrate an understanding of the need for a variety of instructional strategies to effectively address

---

\(^1\) Common core math standards have changed “Pursuant to Act 200 passed by the General Assembly and signed by the Governor in June 2014.”
developmental, ability and learning style needs of PK-8 students exhibiting diversity in its many forms. SOE III; CAEP 1.1; NAEYC 1, 4b; NMSA 1.P5, 1.P10, 4.K3, 5.K2

TCs will develop the knowledge of, and dispositions that value, ongoing, systematic, formal, and informal assessment as an integral part of instruction that guides and enhances learning. SOE VI; CAEP 1.1; NAEYC 3, 4b; NMSA 1.P6, 5.K8, 5.D5, 5.P4, 6(all)

TCs will communicate about and through mathematics verbally and in writing using both everyday language and mathematical representations. SOE II; CAEP 1.1; NAEYC 4b; NMSA 4.K4, 4.D4, 4.P5

TCs will demonstrate knowledge of the organization of the content standard areas of number and operations, algebra, geometry, measurement, data analysis and probability within the PK-8 mathematics curriculum as prescribed by the NCTM and the SC Standards. SOE II; CAEP 1.1; NAEYC 4b; NMSA 4, 6.K5

TCs will demonstrate the value and integrative nature of the process standards of problem solving, reasoning, communication, connections, and representations within the PK-8 mathematics curriculum as prescribed by the NCTM and the SC Standards. SOE II; CAEP 1.1; NAEYC 4b, 4c; NMSA 4, 5.K3, 5.P2, 6.K5

TCs will demonstrate competency in, and an understanding of the value of, a breadth and depth of mathematical knowledge and skills that extend beyond the level for which the candidate is preparing. SOE II; CAEP 1.1; NMSA 4.K1, 4.P2

**Course Assignments/Evaluation:**

It will be possible to earn 500 points during the semester. They will be distributed as follows:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test (4)</td>
<td>120</td>
<td>24%</td>
</tr>
<tr>
<td>Comprehensive final EXAM(1)</td>
<td>100</td>
<td>20%</td>
</tr>
<tr>
<td>Lesson &amp; Class demonstration (1)</td>
<td>30</td>
<td>6%</td>
</tr>
<tr>
<td>Standards Project</td>
<td>40</td>
<td>8%</td>
</tr>
<tr>
<td>Chapter outlines</td>
<td>40</td>
<td>8%</td>
</tr>
<tr>
<td>Homework (5)</td>
<td>80</td>
<td>16%</td>
</tr>
<tr>
<td>Article critique(1):</td>
<td>30</td>
<td>6%</td>
</tr>
<tr>
<td>Attendance</td>
<td>30</td>
<td>6%</td>
</tr>
<tr>
<td>Journals/ reflections (2)</td>
<td>30</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Test:**

There will be four tests (6% each) and a final comprehensive EXAM (20%).

**Text:**

3
There is a large quantity of excellent information and sample problems in the text. Because it will be impossible to discuss all of these valuable resources in class, students are expected to read the material and be familiar with the text exercises. I will provide you with chapter outlines for you to complete before class. These outlines will be graded (8%).

Course Requirements:

1. Demonstration of SOE Dispositions
Examples of how dispositions are evident are provided in italics.
- Belief that all students can learn, participation and attitudes expressed about students and learning
- Value and respect for individual differences, interactions in class discussions and participation in group work
- Value of positive human interactions, participation in class and in group work
- Exhibition and encouragement of intellectual curiosity, enthusiasm about learning, and willingness to learn new ideas, participation in class and group discussions and performance on assessments
- Dedication to inquiry, reflection, and self-assessment, participation in class and group discussions; performance on assessments (especially the reading and course reflections assignments)
- Value of collaborative and cooperative work, thoughtful, constructive critiques of others’ work, participation in class activities
- Sensitivity toward community and cultural contexts, participation in class and group discussions, tolerating, discussing, and respectfully listening to differing points of views
- Engagement in responsible and ethical practice, performance on assessments, class attendance, and participation in group activities
- Development of professional mastery over time, performance over time in writing, thinking, and expression of knowledge

2. Chapter readings and outlines/
There will be biweekly assigned chapter readings and outlines to complete. The chapter outlines help you focus and practice the main concepts addressed in the text and revisited in class. Outlines will be graded (8%). The outlines will be posted on OAKS as attachments for you to download and complete as you review the content.

3. Standards project
   A. The SCCCR are being called mathematical process standards that demonstrate “the ways in which students develop conceptual understanding of mathematical content and apply mathematical skills. As a result, the SCCCR Mathematical the process standards should be integrated within the content standards for each grade level and course. The process standards drive the pedagogical component of teaching and serve as the means by which students should demonstrate understanding of the content standards.
   B. Format: In grades K – 8:
      - GradeLevel.KeyConcept.StandardNumber (e.g., K.NS.1) or, if applicable,
      - GradeLevel.KeyConcept.StandardNumberStandardLetter (e.g., K.NS.4a)
C. 3. Mathematically Literate student can/ AKA Process standards

1. Make sense of problems and persevere in solving them.
2. Reason both contextually and abstractly.
3. Use critical thinking skills to justify mathematical reasoning and critique the reasoning of others.
4. Connect mathematical ideas and real-world situations through modeling.
5. Use a variety of mathematical tools effectively and strategically.
7. Identify and utilize structure and patterns.

The content standards for K-5 are:

<table>
<thead>
<tr>
<th>Kindergarten</th>
<th>Grade 1</th>
<th>Grade 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Sense</td>
<td>Number Sense and Base Ten</td>
<td>Number Sense and Base Ten</td>
</tr>
<tr>
<td>Number Sense and Base Ten</td>
<td>Number Sense and Base Ten</td>
<td>Number Sense and Base Ten</td>
</tr>
<tr>
<td>Algebraic Thinking and Operations</td>
<td>Algebraic Thinking and Operations</td>
<td>Algebraic Thinking and Operations</td>
</tr>
<tr>
<td>Geometry</td>
<td>Geometry</td>
<td>Geometry</td>
</tr>
<tr>
<td>Measurement and Data Analysis</td>
<td>Measurement and Data Analysis</td>
<td>Measurement and Data Analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Sense and Base Ten</td>
<td>Number Sense and Base Ten</td>
<td>Number Sense and Base Ten</td>
</tr>
<tr>
<td>Number Sense – Fractions</td>
<td>Number Sense and Operations – Fractions</td>
<td>Number Sense and Operations – Fractions</td>
</tr>
<tr>
<td>Algebraic Thinking and Operations</td>
<td>Algebraic Thinking and Operations</td>
<td>Algebraic Thinking and Operations</td>
</tr>
<tr>
<td>Geometry</td>
<td>Geometry</td>
<td>Geometry</td>
</tr>
<tr>
<td>Measurement and Data Analysis</td>
<td>Measurement and Data Analysis</td>
<td>Measurement and Data Analysis</td>
</tr>
</tbody>
</table>

2. Examine and save the standards for K-5 and 6-8 grades. Read the overviews very carefully (pp.1-58).
3. Select two consecutive grade level standards. Example, K and 1 or 2 & 3 or 4 etc. Comment on the coherence of content within the grade levels.

Example: You can take standards from number sense and base 10 content (K-1)-see specific standards

---

2 These skills are similar to the common core mathematical Practices. The SCCCR explains how these skills look like in practice.
<table>
<thead>
<tr>
<th>Kindergarten</th>
<th>Grade 1</th>
<th>Grade 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Sense</td>
<td>Number Sense and Base Ten</td>
<td>Number Sense and Base Ten</td>
</tr>
<tr>
<td>Number Sense and Base Ten</td>
<td>Algebraic Thinking and Operations</td>
<td>Algebraic Thinking and Operations</td>
</tr>
<tr>
<td>Algebraic Thinking and Operations</td>
<td>Geometry</td>
<td>Geometry</td>
</tr>
<tr>
<td>Geometry</td>
<td>Measurement and Data Analysis</td>
<td>Measurement and Data Analysis</td>
</tr>
<tr>
<td>Measurement and Data Analysis</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. Answer the following questions:

a. List three mathematical content skills & three mathematical practice/process skills that elementary OR middle school teachers need to develop in order to ensure that their students develop **procedural fluency**, a deep **conceptual understanding**, and are able to apply their knowledge to solve problems as expected in the **SCCCR**?

b. Provide two reasons (in a paragraph format) justifying why the knowledge and process skills you have identified are important.

c. Identify at least three issues that might hinder the successful implementation of the SCCCR.

d. Plan a six minute lesson to teach the selected content from the SCCCR. Use the lesson format and rubric provided in this syllabus

i. For the selected grade level, choose a content area, a domain and one or two standards associated with that grade level.

ii. Outline the activities that you will engage your students in to develop the skills and practices noted in the SCCCR.

iii. Use manipulatives/visual models and communication in the lesson. Make sure you use these visuals/manipulatives appropriately.

iv. Ensure all students are engaged. Please note that calling one student to come to demonstrate their understanding of the problem on the smartboard is good. However, NOT all students are engaged.

v. Include assessments for the lesson you are teaching. How will you assess your students’ understanding of the concepts that you are teaching? Formal and informal assessments are important.

4. **Journal Article Critique.** You will write a critique of an article from *Teaching Children Mathematics*. The college of Charleston library has copies of this journal. Your argument should focus on important contemporary issues in mathematics education relevant to schools in South Carolina. As you may know, *Teaching Children Mathematics* (TCM) is an official journal of the National Council of Teachers of Mathematics (NCTM) and a forum for the exchange of ideas in curriculum, instruction, learning, and teacher education. The primary audience of TCM is elementary school teachers, and, as you will see, the journal contains many articles with ideas that are directly applicable to the classroom. Individuals with an interest in upper elementary and middle grades education should also look at *Mathematics Teaching in the Middle School* (MTMS) and are welcome to complete a critique from an article in that journal. You may join NCTM online at [http://www.nctm.org/membership/content.aspx?id=7618](http://www.nctm.org/membership/content.aspx?id=7618). You will be able to receive either journal online.
The objective of having you look at the journals is to get you familiar with them as resources for teaching elementary school mathematics and middle school mathematics. You are to critique an article from either TCM or MTMS. The critique should be from a "main" article -- one that is at least 3 pages long and focuses on an issue (example, math strategies that work etc, this is just an example). There are very many important math issues, best practices etc. (Editorials, reviews, and other short essays are informative but I want you to look at more extensive articles.) The journals are available in the library and you may select any main article from the last 4 years. The May issue each year contains a subject index and you are welcome to select an article on a topic that is of particular interest to you. The critique should be approximately two pages in length (word processed, double-spaced or the hand written equivalent) and focus on a (or the) major issue raised in the article. Remember to clearly state which article you are reviewing and include the volume and issue number of the journal.

Submit your written critique and a copy of the article on dropbox in oaks. Do not email the paper to the instructor. The dropbox has a due date after which you will not be able to submit your assignment.

When reading your critique, I will look for the following three components:

1. A brief summary of the message the author wishes to convey (provide enough detail to allow the reader of your critique to understand your comments – it is better to fully describe key points and omit lesser points than it is to mention lots of points and leave the reader wondering which of those were the most important)
2. Your opinions about the strengths and/or weaknesses of the message (be careful to note which of the comments you make are from the author and which are your reactions to the author)
3. How you will think or teach differently after reading the article (or reasons why the article will have no effect on your teaching).

Grading criteria for this assignment:

Substance of the critique:
Does the critique
- Show evidence that you have understood the central message contained in the article?
- Identify strengths and/or weaknesses in the article, or at least comment on the author’s ability to portray her or his message?
- Show in-depth reflection on the author's message and the implications of that message for you?

Composition skills:
Does the critique
- Communicate your ideas clearly?
- Contain carefully formed sentences and paragraphs?
- Contain a well-structured flow of ideas?

Preparation of manuscript:
Does the critique
- Show evidence that you read and carefully revised your work?
- Show that you took care to eliminate spelling and grammatical errors?
- Indicate care in the general appearance of the paper?

Points will be assigned as follows:

1. 31-32 points: An unusually insightful critique which includes a very clear summary, easy to follow reaction to the key points, and clear, honest commentary about the implications of the article for you.

2. 29-30 points: A thoughtful and carefully prepared critique showing some very keen insights and reflections.

3. 27-28 points: A well prepared paper that captures the essence of the ideas in the manuscript and provides reasonable reaction to them.

4. 25-26 points: A critique which is on the right track but misses important details or shows only minimal insight into the implications of the article.

5. 12 or fewer points: A critique that fails on more than one of the above criteria.
5. **Lesson Presentation**
Plan a short lesson (5 minute maximum) to teach your peers. This should be presented as you would teach it to the students in the selected grade cluster. Plan to organize and implement the lesson using all of the appropriate materials necessary.

**Lesson plan Format**

Name___________________________________

Date_________________

Grade level__________

**Standards:** Clearly state the standards and indicators addressed (using the state of South Carolina College and Career Ready Mathematics Standards).

**Concepts and Mathematical practices:** Clearly state the concepts/skills and mathematical practices that the lesson will address and/or enhance.

**Source of idea:** Textbook or resource used for your lesson.

**Objective:** Clearly state what students will be able to do at the conclusion of the lesson.

**Materials:** List all manipulative, tools, or other materials needed by the teacher and by the students.

**Motivational activity:** Describe the introductory experience that will quickly engage students in the lesson. Possible activities: a real word problem that connects topic to something relevant; questions: What if? What if-not? Ex. Tell me everything you know about quadrilaterals. Be creative and/Look up other ideas online.

**Main lesson activity:** Describe the significant elements of the lesson. Include what you will be doing (including examples you plan to use), what the students will be doing, and what mathematical concepts you will be addressing.

**Assessment activity:** Describe/provide assessments (at least two) formal and informal that you will use to assess students’ achievement of the goals/objectives

**Closing activity:** Describe a summarizing experience that will enable the students to consolidate what they have learned and for you to determine the extent to which they have achieved your objective.  

*Note:* Each lesson should actively involve the students.
Fall 2016

Lesson Plan

Scoring Form

Lesson ____________________________ Date __________ Name_______________________
Name___________________________           Name _______________________________________

Lesson Plan

1. Grade level     (1p)  _____
2. Standards/benchmarks                          (3p)  _____
3. Content & Objectives    (2p)  _____
4. Materials      (2p)  _____
5. Motivational activity    (2p)  _____
6. Lesson body     (4p)  _____
7. Assessment(s) Appropriate (4p)  
8. Closing activity     (2p)  _____

Total      (20p)  _____

Teaching experience

1. You arrived in the classroom on time.    (2p) _____
2. You exhibited familiarity with the lesson plan.   (4p) _____
3. You exhibited knowledge of the content.    (5p) _____
4. Materials were attractively prepared and/or well organize.             (4p) _____
5. Students were actively involved in the lesson.   (8p) _____
6. Students were engaged in mathematics for the time allotted.  (8p) _____
7. You continuously assessed students understanding    (5p)    _____
8. You exhibited enthusiasm and interest in students’ learning.            (4p) _____
9. You were able to ask good questions of the students.  (3p) _____
10. Your instructions for the students were clearly articulated.             (3p) ___
11. You displayed professional behavior. (4p) ____

Total (50p) ____

6. Homework:
There will be 5 HW covering the material assigned; some of which will be done during the class time.

7. Journals/Reflections
You will be required to submit two reflections are graded on the class’s pbwiki site. Be thoughtful about the topics. You are encouraged to maintain a math learning journal throughout the semester.

8. Tests:
You will have 4 tests and one final test. Tests will be based on content for the Praxis as well as warm-ups, content, class discussions, the NCTM and SC Standards, and any other material designated by the instructor.

Due Dates: All assignments must be turned in at the beginning of class and/or online On OAKS on the due dates. Late assignments will be assessed a penalty of one letter grade per 24 hours they are late. DO NOT give assignments to School of Education personnel. No credit will be given for homework assignments completed during class time UNLESS the homework is to be completed in class. Assignments will NOT be accepted via email.

EDEE/TEDU Attendance Policy
- Allowable absences: 3 absences
- Students will be tardy if they arrive in class within the first 10 minutes after class has started.
- Three tardies result in one absence.
- Students will be absent if they arrive after 10 minutes or if they leave class early for any unexcused reason.
- **Students who exceed allowable absences will be dropped with a WA. WA becomes an F on a transcript.**
- If a student exceeds allowable absences due to extenuating circumstances beyond the student’s control, a panel of professors from that semester will review the circumstances and make a final decision.
- **SNAP students** must see the professor within the first two weeks of the course if they wish special accommodations.
- **Athletes** who will miss class due to athletic events must see the professor within the first two weeks of the course and submit athletic schedule for the semester, identifying classes that will be missed. No other absences will be allowed for athletes who miss the maximum allowable absences due to athletic events.

Written and Oral Communication: You are expected to use correct grammar at all times. Points will be deducted on written assignments for grammatical errors. All references must follow the American Psychological Association (APA) Guidelines for Term Papers. Electronic guidelines may be found on Web.
The Owl at Purdue is an excellent APA resource. [http://owl.english.purdue.edu/owl/resource/560/01/](http://owl.english.purdue.edu/owl/resource/560/01/) The Writing Lab is located in the Addlestone Library Room 107.

**Evaluation Scale**

<table>
<thead>
<tr>
<th>Letter Grades</th>
<th>Percentage Range</th>
<th>Grade Points</th>
<th>Letter Grades</th>
<th>Percentage Range</th>
<th>Grade Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
<td>4.0</td>
<td>C</td>
<td>79-81%</td>
<td>2.0</td>
</tr>
<tr>
<td>A-</td>
<td>91-92%</td>
<td>3.7</td>
<td>C-</td>
<td>77-78%</td>
<td>1.7</td>
</tr>
<tr>
<td>B+</td>
<td>89-90%</td>
<td>3.3</td>
<td>D+</td>
<td>75-76%</td>
<td>1.3</td>
</tr>
<tr>
<td>B</td>
<td>86-88%</td>
<td>3.0</td>
<td>D</td>
<td>72-74%</td>
<td>1.0</td>
</tr>
<tr>
<td>B-</td>
<td>84-85%</td>
<td>2.7</td>
<td>D-</td>
<td>70-71%</td>
<td>0.7</td>
</tr>
<tr>
<td>C+</td>
<td>82-83%</td>
<td>2.3</td>
<td>F</td>
<td>≥69%</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**CofC Honor System:** Academic honesty and integrity are highly regarded in this class and are assessed on several levels. As a student at the College of Charleston you have agreed to uphold the policies outlined in the Student Handbook: A guide to civil and honorable conduct both in your coursework and as a representative of the College in field experiences and clinical practice situations. Violations to the Code of Conduct outlined on pages 10-11 in the Student Handbook will be reported to the Honor Board. Additionally, violations may affect course grade. As EDEE is a dual program, in that we recommend candidates for teacher certification, professors reserve the right to document violations that would impact student certification (e.g., attendance problems in field experiences and clinical practice, professionalism in schools).

**ADA Accommodations:** In compliance with the Americans Disabilities Act (ADA), all qualified students are entitled to “reasonable accommodations.” The instructor must be notified during the first week of class of any accommodations needed.

**Course Outcomes:** All teacher preparation programs in the School of Education (SOE) are guided by a commitment to Making the Teaching Learning Connection through three Elements of Teacher Competency which are at the heart of the SOE Conceptual Framework: 1) understanding and valuing the learner, 2) knowing what and how to teach and assess and how to create an environment in which learning occurs, and, 3) understanding themselves as professionals. These three competencies underlie all learning and assessment in this course, helping you develop the knowledge, skills, and dispositions necessary to become an effective teacher.

Course outcomes are derived from the standards set forth by NCTM (National Council of Teachers of Mathematics). The standards listed in parentheses at the end of each course outcome relate to those of the
SOE, NAEYC (National Association for the Education of Young Children), CAEP (Council for the Accreditation of Educator Preparation), and NMSA (National Middle School Association. These standards define, respectively, expectations for the School of Education, early childhood teachers, elementary teachers, and middle grades teachers. The following outcomes are organized by the Elements of Teacher Competency:

**Course Expectations**

What I expect from you. Please put a check.

- You are expected to conduct yourself maturely and respectfully in the classroom so that the classroom atmosphere will remain supportive and positive:
- You will act in a professional and ethical manner as befits the teaching profession. The effort, detail, and thoughtfulness you put into your work should reflect the standards of performance you will be expected to meet as a teacher.
- You will come to class ready to expand your knowledge of mathematics.
- Your attitude towards your fellow classmates and your professor will always be kind and respectful.
- You will work hard and take initiative in your learning as well as other's learning. You will work actively with your peers, sharing, taking and giving, listening and explaining, questioning and answering. You will be genuinely curious about others’ ideas, and take the responsibility for being prepared for participation in class discussions and group work, and for assisting your peers in coming to an understanding of mathematics. You should expect the same from your classmates.
- You will arrive to class on time and stay in the classroom until the end of class. If you will need to arrive late or leave class early, you should let me know before class starts. You will take care of any pressing personal needs you may have before coming to class.
- You will come ready to ask questions, explore, make mistakes, reflect and grow while helping others grow.
- You will not settle for answers, rules and formulas—you will work until the rules and formulas are fully understood, and the answers are justified and connected to other ideas.
- You will stay organized, keep up with the work, and get help if you feel lost. The usual rule of thumb for college courses is a minimum of two hours of study out of class for every hour in class.
- Math can be an exciting but also a challenging course. We will face the challenge together with a positive attitude. Although there may be times when you feel overwhelmed at the quantity or difficulty of the work, keeping a positive attitude is essential to your success and the success of those around you.
## Course Schedule

<table>
<thead>
<tr>
<th>Month/Date</th>
<th>Topic</th>
<th>Reading/ Texts O’Daffer et al Text &amp; Other assigned readings</th>
<th>Assignment and due dates</th>
</tr>
</thead>
</table>
| 08/24      | * Introductions to EDEE 323-review. Go over assignments for clarification  
* Join Class wiki on pbworks                                                                                                                   | Detailed discussion of assignments/expectations  
Introduce beliefs about mathematics article                                                                                                         | * Review assessments & expectations  
* Complete Beliefs table 1.1 (on OAKS)  
* Journal #1: Post on wiki- 2-3 paragraph about your beliefs about math and how they influence your learning & teaching. Give at least two strategies that you will use to change these beliefs for yourself & your students  
* Article Critique-find article  
* Download the SCCCR standards for mathematics |
| 08/29      | * Beliefs about mathematics and how they compare to the mathematical practices those students should develop.  
* Math anxiety article by Sparks (2011)  
* Chap. 1. A vision of school mathematics (Standards-based Mathematics)  
* South Carolina State mathematics standards                                                                                               | Examine beliefs about math & math anxiety -adaptive and maladaptive beliefs -addressing these beliefs SCCCR and NCTM standards: implications for integration. | |
| 09/05      | * Understanding how children learn mathematics  
* Numeration systems                                                                                                                           | Discuss Chap. 1 pp. 1-52 Chap. 2 sect 2.4 HW#1 (Start work in class)                                                        | * Journal #1 due  
* Outline chap. 1  
* Outline chap 2 sect 2.4 |
| 09/07      | * Set and whole number operations  
* Mental math                                                                                                                                              | Chap. 2 sect: 2.1 Chap 3: 3.1                                                                                                  | * Outline chap. 2 sect 2.1  
* Outline chap. 3. Sect 3.1  
* HW#1 due |
| 09/12      | * Addition and subtraction-  
* Base ten blocks                                                                                                                                              | Chap 2 section 2.2 Start working on HW#2                                                                 | * Chap 2 sect 2.2 outline  
* Draft lesson plan idea  
** Journal #2 due  
  a) Briefly describe two main opportunities and at least |

---

3 Schedule is subject to change for corrections/adjustments

14
<table>
<thead>
<tr>
<th>Date</th>
<th>Assignment</th>
<th>Chapter/Section</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>09/14</td>
<td>* Multiplication and division</td>
<td>Chapter 2: 2.3</td>
<td>Outline chap. 2. Sect. 2.3 HW#2 due</td>
</tr>
</tbody>
</table>
| 09/19     | * Understanding Integers  
             * Operations & Properties  
             * Addition and subtraction using models  
             Base ten blocks            | Chapter 5: 5.1  | * Outline Chap. 5: sect 5.1  
                                         |                  | * Article Critique Due                |
| 09/21     | * Understanding Integers operations and properties  
             * Multiplication and division and other properties of integers (introduction)  
             * Work on your Standards Project | Chapter 5: section 2  
                                         |                  | * Outline chap. 5: sect 2  
                                         |                  | * Draft of standards project-to be shared in class |
| 09/26     | Test #1                                                                     |                  | Test #1                                    |
| 09/28     | * Algorithms for addition and subtraction (base 10 and others)  
             * Algorithms for Multiplication and division with manipulatives (base ten blocks, counters)  
             * Standards Project        | Chap 3 section 3.3 and 3.4  
                                         |                  | * Outline chap. 3: sect.3  
                                         |                  | * Outline chap. 3 sect. 4  
                                         |                  | * Draft of standards project-to be shared in class |
| 10/03     | * Number theory—  
             * factors & divisibility  
             * Prime and composite numbers  
             * GCF & LCM             | Chapter 4.1     | * Outline chap.4. sect. 1  
                                         |                  | * Due HW# 3 due               |
| 10/05     | * Number theory  
             * Prime and composite numbers GCF & LCM (continued)          | Chap. 4.2       | *Outline chap.4. sect. 2               |
| 10/10     | Test #2                                                                     |                  |                                            |
| 10/12     | Standards project                                                          |                  |                                            |
| 10/19     | Standards project                                                          |                  |                                            |
| 10/19 ONLINE IN OAKS | * Rational number operations  
             * Adding & subtracting fractions  
             * base ten blocks/pattern blocks | Chapter 6: 6.1 & 6.2 | Online Quiz (HW#4) to be taken after online instruction. The quiz will be available to you only after you have viewed the videos. It is available for a limited time! |
| 10/24 ONLINE IN OAKS | * Rational number operations:  
             * multiplying & dividing fractions  
             * Operations with decimals  
             * Comparing, ordering and connecting rational numbers  
             * NO FACE TO FACE CLASS-LECTURES ON OAKS | Chapter 6 section 6.4 & 6.5 |                                            |
<p>| 10/26     | * Proportional Reasoning                                                    | Chap 7: 7.1-7.3  | Outline chap 7 sect 1-7                    |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/31</td>
<td>* Problems with fractions, percentage, ratio and proportion</td>
<td>All lessons will be presented this day. Prepare a five min lesson</td>
</tr>
<tr>
<td></td>
<td>* Revise for test #3</td>
<td></td>
</tr>
<tr>
<td>11/02</td>
<td>* Lesson presentation in groups.</td>
<td>Lesson plans</td>
</tr>
<tr>
<td></td>
<td>* Geometry, basic concepts and constructions</td>
<td>Outline chap.10 sect 1</td>
</tr>
<tr>
<td>11/09</td>
<td>* Geometry contd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Points, segments &amp; lines Angles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Triangles and Quadrilaterals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Geometer Sketchpad (Lab)</td>
<td></td>
</tr>
<tr>
<td>11/07</td>
<td>* 11/07 : FALL BREAK</td>
<td></td>
</tr>
<tr>
<td>11/09</td>
<td>* Geometry contd</td>
<td>Chapter 10 sect 10.2- to 10.5</td>
</tr>
<tr>
<td></td>
<td>* Points, segments &amp; lines Angles</td>
<td>*Outline chap. 10 sect 1-5</td>
</tr>
<tr>
<td></td>
<td>* Triangles and Quadrilaterals</td>
<td>*Standards project draft check</td>
</tr>
<tr>
<td>11/014-11/16</td>
<td>Extending Geometry-</td>
<td>Chapter 11 section 11.4</td>
</tr>
<tr>
<td></td>
<td>* Three dimensional figures</td>
<td>HW#5 (start working on it)</td>
</tr>
<tr>
<td></td>
<td>* Polyhedra, prisms, cones, spheres</td>
<td>Chapter 12 section 12:1-12.2</td>
</tr>
<tr>
<td></td>
<td>* Measurements</td>
<td>*Outline chap 11. Sect 4</td>
</tr>
<tr>
<td></td>
<td>* Concept of measurement</td>
<td></td>
</tr>
<tr>
<td>11/21</td>
<td>* Measurements Contd</td>
<td>Outline chap 12 sect 3</td>
</tr>
<tr>
<td></td>
<td>* Areas with Geoboards</td>
<td>HW#5 due</td>
</tr>
<tr>
<td></td>
<td>* Surface area and volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Analyzing data</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Types of data</td>
<td></td>
</tr>
<tr>
<td>11/23-27</td>
<td>* Thanksgiving</td>
<td></td>
</tr>
<tr>
<td>11/30</td>
<td>* Review for Test #4 and Final</td>
<td>Test # 4</td>
</tr>
<tr>
<td></td>
<td>* Evaluations</td>
<td></td>
</tr>
<tr>
<td>12/05</td>
<td>* TEST #4</td>
<td>Standards project Due in Dropbox</td>
</tr>
<tr>
<td>12/07</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>TBA</td>
<td>* Final Exam</td>
<td>(8:00 AM-11AM) Room</td>
</tr>
</tbody>
</table>