ELE 303.002  
Teaching Mathematics in EC-6  
Spring 2016

Instructor: Dr. Ewing  
Course Time: Tuesdays and Thursdays, 12:30 – 1:45pm
E-mail address: ewingjs@sfasu.edu  
Location: 217
Office: 209 L  
Office Phone: 936.468.6608
Credits: 3 hours
Office Hours: Online – M (1:45—2:45); T (1:45—2:45 online); W (1:45—3:15 online); Th (1:45—3:15 online).

I. Course Description:
Examination of the mathematics curriculum for grades EC-6 with emphasis on current practices, trends, and research on effective practices for teaching mathematics. This course includes investigation of activities and materials appropriate for achieving mathematics objectives.

Pre-requisites: Admitted to Teacher Education; enrolled in Field II.

II. Intended Learning Outcomes/Goals/Objectives (Program/Student Learning Outcomes):

PLO 1 Candidates know, understand, and use the major concepts, principles, theories, and research related to development of children and young adolescents to construct learning opportunities that support individual students’ development, acquisition of knowledge, and motivation (ACEI 1; InTASC 1).
- SLO 1.1 Candidates implement developmental stages of childhood and early adolescence in instruction (ACEI 1; EC-6 Texas Mathematics Standard VI).
  - SLO 1.1.1 Assessment – Lesson Plans (Plan, implement, and reflect on a lesson that meets the needs of all elementary students.)
  - SLO 1.1.2 Assessment – Two tests and a final exam
- SLO 1.2 Candidates know and understand major concepts, principles, theories, and research to select current best practices for mathematics instruction.
  - SLO 1.2.1 Assessment – Mathematics Autobiography
  - SLO 1.2.2 Assessment – Candidates lead reading sessions about current practices in mathematical education

PLO 2 Candidates know, understand, and demonstrate a high level of competence in their content in the areas of English language arts, mathematics, science, and social studies (ACEI 2; InTASC 4).
- SLO 2.1 Candidates know, understand, and use the major concepts and procedures that define number and operations, algebra, geometry, measurement, and data analysis and probability (EC-6 Texas Mathematics ST I, II, III, IV, V).
  - SLO 2.1.1 Assessment- EC6 Department Content Practice Exam
  - SLO 2.1.2 Assessment – TExES EC6 Content Exam
  - SLO 2.1.3 Assessment – Content Knowledge Reflection
  - SLO 2.1.4 Assessment – AXE’/EMS DAY (Candidates participate in activities from the disciplines of mathematics, science, and literacy.)

PLO 3 Candidates use their knowledge of students, learning, curriculum, environment, diversity, communication, and community to plan and implement collaborative engaging, thought provoking, inquiry-based instruction to meet the needs of all learners (ACEI 3; InTASC 2, 3, 5, 7, 8; ISTE ST II).
- SLO 3.1 Candidates select and create learning experiences that are appropriate for curriculum goals, meaningful to elementary students, and based upon principles of effective mathematics teaching (e.g. activate students’ prior knowledge, anticipate preconceptions, encourage
exploration and problem-solving, and build new skills on those previously acquired) - (EC-6 Texas Mathematics ST VII; ISTE ST II).

- SLO 3.1 Candidates demonstrate knowledge of mathematical strategies appropriate for young children and adolescents (EC-6 Texas Mathematics ST VII).
  - SLO 3.1.1 Assessment – Lesson Plan (ISTE ST II)
  - SLO 3.1.2 Assessment – Tutor and develop strategies to meet English language learners’ needs

- SLO 3.2 Candidates demonstrate knowledge of mathematical strategies appropriate for young children and adolescents (EC-6 Texas Mathematics ST VII).
  - SLO 3.2.1 Assessment – Test on textbook
  - SLO 3.2.2 Assessment – Tutoring Project

- SLO 3.3 Candidates explore and use a variety of appropriate instructional strategies for students in grades EC-6 (e.g. using models, children's literature, and everyday experiences) (EC-6 Texas Mathematics ST VII).
  - SLO 3.3.1 Assessment – Lesson Plan
  - SLO 3.3.2 Assessment – Number Talk Presentation
  - SLO 3.3.3 Assessment – Tutoring Project

PLO 4 Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate, and strengthen instruction to promote continuous intellectual, social, emotional, and physical development of all children (ACEI 4; InTASC 6).

- SLO 4.1 Candidates examine various options for informal assessment of the young child/adolescent (EC-6 Texas Mathematics ST VIII).
  - SLO 4.1.1 Assessment- Tutoring Project (Student Interview/Instructional Plan)

- SLO 4.2 Candidates demonstrate understanding of mathematical assessment of the development of young children and young adolescents (EC-6 Texas Mathematics ST VIII).
  - SLO 4.1.2 Assessment – Class Discussion on Assessment

PLO 5 Candidates know, implement, evaluate, and reflect upon research-based teaching, professional ethics, and professional learning resources to establish and maintain positive, collaborative relationships with families, colleagues, professional organizations, and community agencies to promote the intellectual, social, emotional, physical growth, and well-being of all children (ACEI 5; InTASC 9, 10).

- SLO 5.1 Candidates apply knowledge of the EC6 TExES Competencies. (TExES PPR)- (ACEI 5; Mathematics Generalist EC-6 Standard 9; PLO 5).
  - SLO 5.1.1 Assessment - T-Cert EC6 content examination preparation and provide a certificate of completion (ACEI 5; Mathematics Generalist EC-6 Standard 9; PLO 5).

- SLO 5.2 Candidates understand the value of positive/productive communication with families/administration (ACEI 5; Mathematics Generalist EC-6 Standard 9; PLO 5).
  - SLO 5.2.1 Assessment –Letter to Parents

- SLO 5.3 Candidates will explore the importance of being a reflective practitioner committed to continuous professional growth and development in the teaching of mathematics (ACEI 5; Mathematics Generalist EC-6 Standard 9; PLO 5).
  - SLO 5.3.1 Assessment – Lead Reading Sessions

ELE 303 is also guided by:
National Council for Teachers of Mathematics (NCTM) Principles and Standards:
http://standards.nctm.org/document/appendix/data.htm#TOP

III: Course Assignments
More information is available within the content module for each assignment.

1. Mathematics Autobiography--A reflection on mathematical experiences
2. Number Talk Presentation--Using the textbook as a guide, prepare a five minute number talk
3. Tutoring Project--Tutor an ELL and reflect on how to meet their needs.
4. Lead Reading Sessions--Select and lead discussions on current literature in the field of mathematics education.
5. Lesson--In groups, prepare and implement a mathematics lesson
6. Game Presentation--Bring in an educational mathematics game and justify how it can be applied to the classroom
7. **Letter to Parents**--Write to parents explaining your philosophy of mathematical education
8. **AXE’ EMS Day**--Activities that combine mathematics, science, and English Language Arts
9. **Two Tests**--You will be assessed on the literature and content covered in class
10. **Final Examination**--Essay questions that relate to the course
11. **Professionalism/Participation**--In order to receive full points for professionalism, teacher candidates need to have a positive attitude for each class session. Candidates are expected to stay on task for all class activities and be respectful to peers and instructor. All teacher candidates are expected to attend all face-to-face class meetings as scheduled. Each class missed without prior permission from the instructor will result in a loss of 5 points from the Professionalism/Participation point total.

IV. Evaluation and Assessments (Grading):

Students are encouraged to keep track of their own records of graded work and exam scores. All grades are posted in D2L. The following are examples of graded items. Refer to the course modules and separate timeline for specific assignments; however, the total possible points will be changed if assignments are altered. Assignments will be altered to meet students’ needs when appropriate. No extra assignments will be made; existing assignments may be revised or deleted.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics Autobiography</td>
<td>3</td>
</tr>
<tr>
<td>Number Talks Presentation</td>
<td>2</td>
</tr>
<tr>
<td>Tutoring Project</td>
<td>14</td>
</tr>
<tr>
<td>Lead Reading Sessions</td>
<td>6</td>
</tr>
<tr>
<td>Lesson</td>
<td>8</td>
</tr>
<tr>
<td>Math Game</td>
<td>2</td>
</tr>
<tr>
<td>Letter to Parents</td>
<td>3</td>
</tr>
<tr>
<td>AXE’EMS Day</td>
<td>4</td>
</tr>
<tr>
<td>Test I</td>
<td>10</td>
</tr>
<tr>
<td>Test II</td>
<td>10</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
</tr>
<tr>
<td>Professionalism/Participation</td>
<td>18</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Please note: Five points will be taken off from the total grade for each absence without prior permission from the instructor.

**Grading Scale (based on percentage of total points earned)***

- **A** = 90-100% of possible points
- **B** = 80-89% of possible points
- **C** = 75-79% of possible points
- **F** = 74% or fewer of possible points

Teacher candidates must score 75% or higher of the total points possible to pass ELE 303 and move to the Student Teaching semester.

*In addition to percentage of points earned, in order to receive an “A” in this course, all assignments must be submitted on or before the due date (see assignment policy, section IX). Your final grade will be lowered one (1) letter grade if you neglect to submit all assignments."
### V. Tentative Course Outline/Calendar:

#### Timeline for ELE 303.002 Spring, 2016

Dr. Ewing

<table>
<thead>
<tr>
<th>Date</th>
<th>Class Activities</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/19</td>
<td>Discuss Course Expectations</td>
<td>Write Mathematics Autobiography</td>
</tr>
<tr>
<td>1/21</td>
<td>Introduce Number Talks</td>
<td>TCERT Course Certificate (DUE: 1/31)</td>
</tr>
</tbody>
</table>
| 1/26 | Educational Game  
Number Talks (1st grade) | Read Standards Module from D2L |
| 1/28 | Online Class | Read Number talks Pages 1 to 47  
Review Standards Module  
Online discussion |
| 2/2  | 5E Lesson (Dr. Ewing)  
Number Talks (2nd grade) | Read Strategies Module |
| 2/4  | 5 E Lesson (Dr. Ewing)  
Number Talks (3rd grade) | Read Share and Compare Pages 1 to 20  
Study for Test I |
| 2/9  | Number Talks (4th grade)  
Test I | Read Share and Compare Pages 21 to 37 |
| 2/11 | Diversity  
Number Talks (Kindergarten) | Read Diversity Module  
Read Number Talks Pages 48 to 66 |
| 2/16 | Discuss Tutoring Project  
Number Talks (Kindergarten, 1st, 2nd) | Write Tutoring Interview Lesson |
| 2/18 | Number talks (5th Grade)  
Raguet Tutoring | Write Tutoring Reflection |

<table>
<thead>
<tr>
<th>Date</th>
<th>Class Activities</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 2/23 | 5 E Lesson Group 1  
Discuss Tutoring | Plan for Raguet Tutoring |
| 2/25 | Number talks (5th Grade)  
Raguet Tutoring | Write Tutoring Reflection |
<table>
<thead>
<tr>
<th>Date</th>
<th>Class Activities</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 3/1    | • 5 E Lesson Group 2  
• Raguet Tutoring                                                             | • Write Tutoring Reflection       |
| 3/3    | • 5 E Lesson Group 3  
• Raguet Tutoring                                                             | • Write Tutoring Reflection       |
| 3/8    | • 5 E Lesson Group 4  
• Content                                                                       | • Read Share and Compare Pages 38 to 50 |
| 3/10   | • Raguet Tutoring                                                               | • Write Tutoring Reflection; Hand in Tutoring Project |
| 3/22   | • AX’EMS Day                                                                   | • Read Share and Compare Pages 51 to 61 |
| 3/29   | • 5 E Lesson Group 5  
• Number talks (5th Grade)                                                     | • Study for Test II               |
| 3/31   | • Test II  
• Number talks (5th Grade)                                                   | • Read Teaching Mathematics in Elementary School Module--Part I |
| 4/5    | • 5 E Lesson Group 6  
• Group I leads Reading Discussion on ‘Teaching Mathematics in Elementary School--Part I’ | • Read Teaching Mathematics in Elementary School Module--Part II |
| 4/7    | • 5 E Lesson Group 7  
• Group II leads Reading Discussion on ‘Teaching Mathematics in Elementary School--Part II’ | • Read Number Sense Module |
| 4/12   | • 5 E Lesson Group 8  
• Group III leads Reading Discussion on “Number Sense”                           | • Read Assessment Module          |
| 4/14   | • 5 E Lesson Group 9  
• Group IV leads Reading Discussion on ‘Assessment’                              | • Read Problem Solving Module     |
| 4/19   | • Number talks (5th Grade)  
• Group V leads Reading Discussion on ‘Problem Solving’                           |                                  |
| 4/21   | • Content Knowledge  
• Number talks (5th Grade)                                                    | • Bring a math game to next class |
| 4/26   | • Math games                                                                   |                                  |
| 4/28   | • TBA                                                                           |                                  |
VI. Readings (Required and recommended – including texts, websites, articles, etc.):

| REQUIRED: | Number Talks by Sherry Parrish  
ISBN: 978-1-935099-11-6  
You DO need the DVD. |
| --- | --- |
| REQUIRED: | Share and Compare by Larry Bushman  
| Access to: |  
- [http://www.tea.state.tx.us/teks/index.html](http://www.tea.state.tx.us/teks/index.html) (Texas Education Agency, TEKS website)  
| REQUIRED: | You are accountable for all content module pages from D2L in addition to the reading from the two textbooks. |
| FEM Statement: | In this course you must purchase and activate the LiveText add-on, Field Experience Module (FEM), PRIOR to your first day of field experience/clinical teaching. Failure to purchase and activate the account and/or submit the required assignment(s) within the FEM system may result in course failure. FEM must be purchased from www.livetext.com for a fee of $20.00. |
| LiveText Statement: | This course uses the LiveText data management system to collect critical assessments for students who are Perkins College of Education majors (undergraduate, graduate, and doctoral) or majors in other colleges seeking educator certification through the Perkins College of Education. Students who do not have an existing LiveText account will receive an access code via the SFA email system within the first week of class. You will be required to register your LiveText account, and you will be notified how to do this via email. If you forward your SFA e-mail to another account and do not receive an e-mail concerning LiveText registration, please be sure to check your junk mail folder and your spam filter for these e-mails.  
If you have questions about obtaining or registering your LiveText account, call ext. 1267 or e-mail [SFALiveText@sfasu.edu](mailto:SFALiveText@sfasu.edu). Once LiveText is activated, if you have technical questions, call ext. 7050 or e-mail [livetext@sfasu.edu](mailto:livetext@sfasu.edu). Failure to activate the account and/or submit the required assignment(s) within the LiveText system may result in course failure. |
VII. Course Evaluations:
Near the conclusion of each semester, students in the Perkins College of Education electronically evaluate courses taken within the PCOE. Evaluation data is used for a variety of important purposes including:

1. Course and program improvement, planning, and accreditation;
2. Instruction evaluation purposes; and
3. Making decisions on faculty tenure, promotion, pay, and retention.

As you evaluate this course, please be thoughtful, thorough, and accurate in completing the evaluation. Please know that the PCOE faculty is committed to excellence in teaching and continued improvement. Therefore, your response is critical!

In the Perkins College of Education, the course evaluation process has been simplified and is completed electronically through MySFA. Although the instructor will be able to view the names of students who complete the survey, all ratings and comments are confidential and anonymous, and will not be available to the instructor until after final grades are posted.

VIII. Student Ethics and Other Policy Information (found at https://www.sfasu.edu/policies):

Class Attendance and Excused Absence (Policy 6.7)
Regular, punctual attendance, participation, and, if indicated in the syllabus, submission of completed assignments are expected at all classes, laboratories, and other activities for which the student is registered. Based on university policy, failure of students to adhere to these requirements shall influence the course grade, financial assistance, and/or enrollment status. The instructor shall maintain an accurate record of each student’s attendance and participation as well as note this information in required reports and in determining final grades. Students may be excused from attendance for reasons such as health, family emergencies, or student participation in approved university-sponsored events. However, students are responsible for notifying their instructors in advance, when possible, for excusable absences. Whether absences are excused or unexcused, a student is still responsible for all course content and assignments. Students with accepted excuses may be permitted to make up work for up to three weeks of absences during a semester or one week of a summer term, depending on the nature of the missed work. Make-up work must be completed as soon as possible after returning from an absence.

Assignments submitted after the due date without prior permission from the instructor will be reduced a point for each day late.

All teacher candidates are expected to attend all face-to-face class meetings as scheduled. Each class missed without prior permission from the instructor will result in a loss of 5 points from the Professionalism/Participation point total.

Academic Accommodation for Students with Disabilities (Policy 6.1 and 6.6)
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 936-468-3004 as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilitiyservices/. If you are experiencing difficulty with Standard English and the conventions of speaking and writing, you should seek assistance at the campus Academic Resource Center. Call 936-468-4108. Check the Online Academic Resource Center for help with writing or math. You may also visit the following web site for assistance in writing: www.columbia.edu/acis/bartleby/strunk

Student Academic Dishonesty (Policy 4.1)
Abiding by university policy on academic integrity is a responsibility of all university faculty and students.

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiariam. Cheating includes, but is not limited to:
- using or attempting to use unauthorized materials on any class assignment or exam;
- falsifying or inventing of any information, including citations, on an assignment; and/or;
- helping or attempting to help another in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were one’s own. Examples of plagiarism include, but are not limited to:

- submitting an assignment as one’s own work when it is at least partly the work of another person;
- submitting a work that has been purchased or otherwise obtained from the Internet or another source; and/or,
- incorporating the words or ideas of an author into one's paper or presentation without giving the author credit.

Penalties for Academic Dishonesty
Penalties may include, but are not limited to reprimand, no credit for the assignment or exam, re-submission of the work, make-up exam, failure of the course, or expulsion from the university

Student Appeals
A student who wishes to appeal decisions related to academic dishonesty should follow procedures outlined in Academic Appeals by Students (6.3).

Withheld Grades (Policy 5.5)
At the discretion of the instructor of record and with the approval of the academic unit head, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F, except as allowed through policy [i.e., Active Military Service (6.14)]. If students register for the same course in future semesters, the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Student Code of Conduct (Policy 10.4)
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program. Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This policy applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare: Early Alert Program at SFA. Information regarding the iCare program is found at https://www.sfasu.edu/judicial/earlyalert.asp or call the office at 936-468-2703.

Additional Information:
To complete Certification/Licensing Requirements in Texas related to public education and other professional settings, you will be required to:

1. Undergo criminal background checks for field or clinical experiences on public school campuses; the public school campuses are responsible for the criminal background check; YOU are responsible for completing the information form requesting the criminal background check. If you have a history of criminal activity, you may not be allowed to complete field or clinical experiences on public school campuses. At that point, you may want to reconsider your major while at SFASU.
2. Provide one of the following primary ID documents: passport, drivers license, state or providence ID cards, a national ID card, or military ID card to take the TExES exams (additional information available at www.texas.ets.org/registrationBulletin/ <http://www.texas.ets.org/registrationBulletin/>). YOU must provide legal documentation to be allowed to take these mandated examinations that are related to certification/licensing requirements in Texas. If you do not have legal documentation, you may want to reconsider your major while at SFASU.
3. Successfully complete state mandated a fingerprint background check. If you have a history of criminal activity, you may want to reconsider your major while at SFASU.

For further information concerning this matter, contact Katie Snyder 936-468-1740 or snyderke1@sfasu.edu.

IX. Other Relevant Course Information:

Professionalism:
In order to receive full points for professionalism, teacher candidates need to have a positive attitude for each class session. Candidates are expected to stay on task for all class activities and be respectful to peers and instructor.

Writing/Mechanics Policy:
Please refer to the Writing/Mechanics Guidelines and Reminders on D2L. Each assignment that does not follow these guidelines will have ¼ of a point reduced.

Requirements For Advancement In Teacher Education
In order to take the next course(s) in the professional teacher education sequence, departmental policy requires that students maintain a G.P.A. of 2.5 or better. Students failing to maintain at least a 2.5 G.P.A. will be dropped from professional education courses.

Nondiscrimination
“No person shall, on the basis of race, color, religion sex, age, national origin, handicap, or veteran status, be subjected to discrimination or be excluded from participation in or be denied the benefits of employment or any educational program or activity operated by Stephen F. Austin State University.” (Reference: SFASU General Bulletin 2004-2005) (see Discrimination Complaints/Sexual Harassment E-46: http://www.sfasu.edu/policies/discrim_complaints_sexual_hrmsnt.asp)

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