**Course Description**
This field-based course emphasizes the integration of research and theories about the process of learning mathematics. The development of logical reasoning in students, stages of intellectual development, appropriate questioning and problem solving strategies and techniques will be used with students in a public school setting. The TEKS addressing basic mathematics information, methods, and materials will be included.

**Methods of Instruction:**
The instructional methods used in this class include, but are not limited to: lecture, discussion, collaborative groups, individualized projects, demonstrations, media, group presentation, reading and response. BLACKBOARD is utilized for communication and class assignments information. **Students are to check their ASU email several times each week for communication from professors and ASU.**

**Materials Needed**
- *Principles to Action*, can download and purchase document ($4.99) from nctm.org. Once at the website, type *Principles to Action* in the search section. Select *Principles to Action (Book)* then select to purchase the download (pdf).
- TaskStream account.
- Articles and other readings as assigned
- Notebook

**Requirements**
Candidates are expected to complete all classroom and out-of-classroom assignments in order to successfully complete the course. Candidates are expected to check BLACKBOARD and ASU email on a regular basis each week. Candidates are expected to attend class, complete reading assignments each week, and complete assignments as scheduled. Candidates are expected to complete a field experience placement in the public schools. Candidates must access BLACKBOARD for electronic posting of syllabus, assignments, announcements, grading information, etc.

**Virtual Field Experience.** Candidates will be responsible for completing 10 hours of virtual observations and reflections at the elementary or middle school classroom level.
OUTCOMES
The following chart lists the learning outcomes for this course. Learning outcomes for this class are based on ASU Undergraduate Learning Goals, TExES Standards and Competencies for Teachers, and InTASC Standards. More information for each of these can be found at the Internet links listed below.

**ASU Undergraduate Learning Goals**

| 1. Liberal knowledge and skills of inquiry, critical thinking, and synthesis |
| 2. Core skills |
| 3. Specialized knowledge |
| 4. Social responsibility |
| 5. Cultural Identity |

**Texas Educator Standards - TExES Competencies**

| Standard V. Mathematical Processes. Understands and uses mathematical processes to reason mathematically, to solve mathematical problems, to make mathematical connections within and outside of mathematics, and to communicate mathematically. |
| Standard VII. Mathematical Learning and Instruction. Understands how children learn and develop mathematical skills, procedures, and concepts, knows typical errors students make, and uses this knowledge to plan, organize, and implement instruction; to meet curriculum goals; and to teach all students to understand and use mathematics. |
| Standard VIII. Mathematical Assessment. Understands assessment and uses a variety of formal and informal assessment techniques appropriate to the learner on an ongoing basis to monitor and guide instruction and to evaluate and report student progress. |

InTASC Standards addressed within this course:

1a, 1b, 1c, 1d, 1e, 1f, 1g, 1i, 2a, 2c, 2l, 2m, 2n, 3a, 3c, 3d, 3f, 3i, 3j, 3k, 3l, 3n, 3o, 3p, 3q, 3r, 4a, 4b, 4c, 4d, 4e, 4f, 4g, 4h, 4i, 4j, 4k, 4l, 4n, 4p, 4r, 5a, 5c, 5e, 5f, 5h, 5i, 5l, 5m, 5n, 5o, 5s, 6b, 6e, 6f, 6k, 6r, 7a, 7b, 7c, 7g, 7h, 7k, 7l, 7o, 7q, 8a, 8d, 8e, 8f, 8h, 8i, 8j, 8k, 8l, 8m, 8n, 8p, 8q, 8s, 9i, 9o, 10n, 10o, 10t


Angelo State University Undergraduate Learning Goals:


TExES Standards /Competencies:

[http://tea.texas.gov/Texas_Educators/Preparation_and_Continuing_Education/Approved_Educator_Standards/](http://tea.texas.gov/Texas_Educators/Preparation_and_Continuing_Education/Approved_Educator_Standards/)

Social Responsibility Goal

By the end of this course the candidate will:

- Demonstrate effective engagement in the community.

Assignments

See Blackboard for assignment information. A summary of class assignments is given below. Candidates will be expected to research and collect materials for their teaching and lesson planning. Other non-graded assignments may be given. All written assignments, presentations, media presentations, etc. must follow the writing style found in the most current edition of the *American...*
Psychological Association Publication Manual (APA Manual) which is available at the ASU library, at the bookstore, or on-line at http://www.apa.org/

Homework/Reflections – Students will complete homework including reflecting on various readings.
Lesson Plans – students will construct written lesson plans that can be taught in an elementary mathematics class. All lessons will be constructed via TaskStream.
Virtual Field Observations – Students will complete 10 hours of virtual field observations with reflections.
Teaching Mathematics Reflection – Students will complete a final reflection on teaching mathematics.

Before each class session, check Blackboard and print out and bring any documents needed for class.

ASU OP10.04 Academic Regulations Concerning Student Performance
http://www.angelo.edu/opmanual/#s10

Course Evaluation and Grading

1. Class attendance, participation, professionalism
2. Homework/Reflections .................................................. 20%
3. Lesson Plans ................................................................. 40%
4. Virtual Field Observations............................................. 25%
5. Teaching Mathematics Reflection ............................. 15%

Grading Policy:
90-100 = A
80 - 89 = B
70 - 79 = C
60 - 69 = D
Below 60 = F

Attendance Policy
Candidates are to adhere to ASU policy OP 10.04 and Unit policy.
http://www.angelo.edu/opmanual/#s10

As a developing teacher, your ability to demonstrate a positive and professional disposition toward your peers, assignments, practicum teacher, and the instructor is essential. Students are expected to be in class on time and to attend each scheduled class. Students should notify the professor by email or voice message if they are going to miss class.

There are a total of two excused absences for the semester (this includes being absent for class or online class meetings) that allow for occasions such as illness, bad weather, funeral attendance, and other such personal events. Contact the instructor before any online class meeting if you must be absent. Try to save your two excused absences for emergencies. Excused absences for medical or family reasons permit candidates to make up work missed yet still count as an absence. If you must be absent due to illness without a doctor note or for work, that is unfortunate but not excused. After 2 absences, the final grade for EACH additional absence will lower by one letter grade.
Candidates are expected to engage and complete the online modules in a timely manner and abide by the due dates listed in the course timeline.
ASU OP10.19 Student Absence for Observance of Religious Holy Day
http://www.angelo.edu/opmanual/#s10

ASU OP 10.15 Providing Accommodations for Students with Disabilities
http://www.angelo.edu/opmanual/#s10
http://www.angelo.edu/services/student_services/disability_services_overview.php
Persons seeking accommodations must contact the Student Life Office, Room 112 University Center, 942-2191, in order to request such accommodations prior to any accommodations being implemented. Students are encouraged to make this request early in the semester so that appropriate arrangements can be made.

Academic Honesty
Candidates are to be familiar with the ASU Student Handbook and the University Honor Code which includes the “Student Academic Honor Code Statement”
https://www.angelo.edu/student-handbook/
http://www.angelo.edu/dept/writing_center/academic_honesty.php
Candidates are to adhere to ASU policy. Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is contained in both print and web versions of the Student Handbook. Plagiarism or the use of Internet Web, etc. prepared papers is strictly forbidden! Faculty utilize Internet search links that assist in identifying plagiarized materials.

Specific conditions for courses taught in the Department for Teacher Education: At the first incident of plagiarism, the student will receive a zero (0) for the plagiarized assignment while this infraction will be noted on the student's records. Should there be a second occurrence of plagiarism, the student will receive a final grade of F for the course and another infraction report will be added to the student's permanent records.

Title IX at Angelo State University:
Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance. This is done in order to connect students with resources and options in addressing the allegations reported. As a student, you are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator. You may do so by contacting:
Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022 michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.
If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345. The Office of Title IX Compliance also provides accommodations related to pregnancy (such as communicating with your professors regarding medically necessary absences, modifications required because of pregnancy, etc.). If you are pregnant and need assistance or accommodations, please contact the Office of Title IX Compliance utilizing the information above. For more information about Title IX in general you may visit http://www.angelo.edu/title-ix.

Class Schedule
ED 4309 Mathematics: Elementary and Middle School Teacher
(tentative, may be adjusted by professor as needed)

Tentative Weekly Schedule of Classes

Week 1  Introduction, NCTM standards
Week 2  Children Learn Math, Problem Solving/Logical Reasoning
Week 3 Problem Solving Strategies, ESL Learners
Week 4 Teaching Mathematics
Week 5  Number Talks, Lesson Planning
Week 6  Teaching Strategies & Rationale
Week 7 Teaching Mathematics
Week 8 Mathematics Instruction & Assessment
Week 9-10 Spring Break!
Week 11-12 Module 1 Assessment & Virtual Field Experiences - Measurement
Week 13-14 Module 2 Virtual Field Experiences – Geometry & Number Sense, Patterns, Relationships
Weeks 15-16 Module 3 Virtual Field Experiences – Data, Probability, & Statistics
Week 17 Finals

Other Items
Cool Web Sites
www.Mathsdictionary.com
www.visualfractions.com/FindGrampystrict.html
http://nces.ed.gov/nceskids/createagraph/
http://nlvm.usu.edu/ Virtual manipulatives
http://jc-schools.net/tutorials/vocab/STUDY_BINGO.xls
http://www.nctm.org/ National Council of Teachers of Mathematics
http://blackboard.angelo.edu/ Blackboard access at Angelo State University
http://www.tea.state.tx.us/ Texas Education Agency
http://www.sbec.state.tx.us/ State Board for Educator Certification (Texas)
http://www.apa.org/ American Psychological Association
http://texas.ets.org/assessts/pdf/testprep_manuals/ TExES Test Preparation Resources - preparation manuals, practice tests, lists of competencies for state testing, etc.