

UTTC Teacher Education

Syllabus

MTH 277 Math for Elementary Teachers

| <u>Course Information</u> | <u>Instructor Information</u> |
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| Credit Hours: 3 | Instructor: Lezlie Mc Elwee |
| Year / Term: 2016 Fall | Phone: 701.255.3285 ext. 1752 Cell: 701-400-6782 |
| Class Location / ED B03 | Office Location: ED BLDG Office |
| Days / Time: MWF 11:00 a.m. – 11:50 a.m. | Office Hours: By Arrangement |
| Course Blog: | E-Mail: lmcElwee@uttc.edu |

MIDTERM

OCTOBER 19 - 20..... MID-TERM EXAMS

FINAL PROJECT/EXAM

DECEMBER 7 - 9 FINAL EXAMS

NO CLASS ON THESE DATES

SEPTEMBER 5..... LABOR DAY HOLIDAY

SEPTEMBER 8 - 11.....UTTC INTERNATIONAL POWWOW
(NO CLASSES ON FRI SEPT. 9 & SEPT. MON. 12)

NOVEMBER 11..... VETERAN'S DAY

NOVEMBER 24 - 25..... THANKSGIVING BREAK
(NO AFTERNOON CLASSES WED. NOV. 23)

OTHER DATES TO NOTE

AUGUST 22 CLASSES BEGIN

AUGUST 26LAST DAY TO REGISTER FOR FALL SEMESTER

SEPTEMBER 9LAST DAY TO ADD OR DROP A UTTC CLASS

SEPTEMBER 16 U.S. CONSTITUTION DAY

SEPTEMBER 19 – 23..... UTTC HOMECOMING WEEK

OCTOBER 7 N.D. FIRST NATIONS DAY

OCTOBER 19 COLLEGE CAREER FAIR

OCTOBER 21 MID-TERM GRADES DUE

NOVEMBER 1..... PRE-REGISTRATION FOR SPRING CLASSES

NOVEMBER 10 LAST DAY TO WITHDRAW WITH A "W"

DECEMBER 12 SEMESTER GRADES DUE

DECEMBER 16 FALL SEMESTER GRADUATES HONORING

Required Textbooks:

Beckmann, S., (2014). Mathematics for elementary teachers with activities. Pearson. (ISBN-978-0-321-82752-8).

Course Description:

Participants in this course will develop a deep understanding of mathematical concepts, procedures, and skills that are essential to being able to teach children mathematics in the elementary grades. Current trends in mathematics are emphasized, with particular attention to documents created by the National Council of Teachers of Mathematics. (Pre-requisite MTH 101)

Course Requirements:

- Attend all class sessions
- Complete all readings, activities, and projects assigned by the instructor
- Participate fully and effectively in class activities
- Complete all exams and quizzes

Grading Requirements:

Evaluation will be determined by completion of all requirements, attendance, and participation in class. The quality of work submitted will be a major factor. Each activity and assignment is designated specified points. The grade will be based upon the criteria delineated below

- Writing is expect to be at the collegiate level
- All assignments should be typed
- 10% of the total will be deducted if they are not

Scholarship, attitude, initiative, cooperation, and improvement will also be considered.

Evaluation of Student Performance (Including Grading Policy)**Grades**

| | | | |
|----------|----------------|----------------|------------------|
| A | 90-100% | C | 70-79% |
| B | 80-89% | D | 60-69% |
| | | Failing | Below 60% |

Evaluation Criteria: A course grade is earned based on the percentage of possible points and will follow the UTTC grading system. The following is a breakdown of percentage points earned:

50% Projects & Assignments

30% Course Participation

20% Tests/Quizzes

Submissions of Assignments:

Teacher candidates will be expected to submit all required documents as a hard copy to the instructor. It is essential that you save an electronic version of all of your assignments for this class. A thumbdrive (flashdrive) with at least 2 GB should be utilized.

Writing Style

All reports and presentations are required to be typed and have a cover page indicating:

- Candidate's name
- Title of their paper or presentation, and
- Date that the assignment is due.

At the lower portion of the cover page include:

- The name of the course
- Add the Teacher Education Department slogan: **“Preparing Competent, Caring Teachers”**

- Instructor's name

**When typing use Times New Roman, Arial, or Courier text style size 12.

**Double-spacing the body of your assignment is a must with deduction of points if not followed.

**Include a reference page if necessary.

**Points will be deducted from assignments that do not have a cover page and the required information.

Candidates are expected to be aware of assignments and their due dates. All assignments must be typed unless otherwise specified.

Student Learning Outcomes:

| <i>Through participation in this class the teacher candidate will:</i> | <i>Assessment</i> |
|--|---|
| 1. Demonstrate mathematical thinking and reasoning skills as evidenced by activities and projects with 80% accuracy. | Quizzes, Tests, and Assignments |
| 2. Demonstrate problem-solving techniques and strategies as evidenced by projects and group work. | Assignments, Projects |
| 3. Increase mathematical skills of systems used in the elementary school to 85% proficiency. | Quizzes, Tests, and Assignments |
| 4. Participate in a mathematical web quest on the Internet as evidenced by the completed project. | Web Quest Assignment |
| 5. Apply the use of technology through web-based activities as evidenced by the finished product. | Smartboard/Active Board Activities and Electronic Resources |

Relationship between ND ESPB Elementary Education Standards, Outcomes and Course Assessments

| ND ESPB Elementary Education Standard | Assessment | Program Outcome | Assessment |
|--|---|--|-----------------------|
| 50015.1 Development, Learning, and Motivation 2d. Mathematics | In class activities, homework, and final project (Math Activities Binder) | Content Knowledge and Skills: To provide the content knowledge necessary for effective teaching and learning (Core Beliefs 3 and 5; Relevance, Responsibility; INTASC Standards 4 and 7); | Math Lesson & Project |

United Tribes Technical College Teacher Education Conceptual Framework



The Teacher Education unit seeks to improve the quality of education in America by producing reflective professional educators who have demonstrated competency in the knowledge, skills and dispositions necessary for effective teaching through a coherent program of study. Using the INTASC (Interstate New Teacher Assessment and Support Consortium) standards, as well as the philosophy of the department's conceptual framework, Teacher Education has established candidate outcomes that are assessed throughout the Teacher Education program(s)

The Teacher Education program is based on shared core beliefs that incorporate the 4Rs - Relatedness, Relevance, Respect, and Responsibility.

Relatedness is evidenced by believing and behaving as if you are a relative to another person or thing. It is demonstrated and reinforced through collaborations with children and families.

Relevance is meaningful and authentic learning experiences tied directly to state and national standards. Candidates learn and experience reflective practice through hands-on practicums in the classroom under mentor and instructor guidance. They are provided the opportunity to study concepts that are meaningful and relevant to one's life and interests.

Respect is an important traditional Native value. Respect is demonstrated through candidate contributions and their respect of others' contributions. The disposition of respect is demonstrated through courtesy, kindness, and acceptance of individuals and their contributions.

Responsibility is a core value of Native cultures as well as the culture of teaching. Candidates are expected to demonstrate accountability for their actions and decisions as they engage in their general education and teacher education curriculum.

POLICIES

Course Attendance Policy

Regular class attendance is important for you to understand the material in this class. The responsibility for regular attendance is entirely yours. We understand there are circumstances that are justified for missing class (i.e. severe illness or death in the family); however, in JICS (my.uttc) you will still be counted absent from the course regardless of the circumstances. The instructor will document the reason for absences in the event that an issue arises due to excessive absences. In any event, the following procedures apply:

1. You are responsible for material covered in classes you miss.
2. You are responsible for the decision to be absent on the day of a scheduled examination well aware that you may not be able to take it later.
3. You may refer to the UTTC student handbook/planner that addresses campus attendance policies.

Expect class to last the entire scheduled time. You may not leave class early without a valid excuse or without having made prior arrangements with the instructor. Choosing to do so may result in you being considered absent for that class period.

Student Tardiness: You must be seated and ready to begin class at the scheduled time. Tardiness is unprofessional and will be recorded and closely monitored by the instructor of the course. Significant tardiness, arriving **fifteen (15) minutes after** the posted start time for a 50 minute class, *may* result in you being considered fully absent from class.

Tardiness will be documented within the JICS system. If tardiness becomes a problem, a staffing may be conducted.

Things to keep in mind:

- Note that tardiness is disrespectful to the other candidates, instructor, and yourself.
- If you have children that attend school (elementary, day care) please allow a half hour to drop them off prior to your class.
- Valuable information is generally presented in the first 10 minutes of class.
- If you must leave the class for any reason please do so as quietly as possible

Policy for Late Submission

Each candidate is responsible for obtaining the necessary information required in the event of an absence. It is the candidate's responsibility to contact one of your peers to obtain information concerning assignments, handouts, and any changes or announcements.

The assignments and course requirements (homework) must be completed by the due date and will be collected at the beginning of the class period. If an assignment is not handed in at the beginning of the class period, it is considered late. **Late work will not receive full credit if it is accepted at all.** All late work (if prior arrangements have been approved by the instructor) must be personally handed to the instructor. The amount of points deducted for late work is at the discretion of the instructor.

Midterm and Final Projects/Assignments – Ample amount of time will be given to teacher candidates to complete midterm and final artifacts; therefore midterm/final projects, assignments and/or test must be completed and submitted by the designated due date and time. Only hardship cases will be considered.

Student Behavior in the Classroom

UTTC students will conduct themselves in the classroom during class time in a responsible and respectful manner. Student behavior that interferes with learning in the classroom will not be tolerated. This behavior includes chronic tardiness, threatening confrontations, intoxication, inappropriate physical contact, lewd or disrespectful language or gestures directed at the instructor or at fellow students, bullying, direct or indirect intimidation, and conversations with other students that are not related to classroom topics. Faculty are expected to maintain professional management of classroom activities prior to, during and after class times. As such, if a student demonstrates behavior that disrupts or interferes with classroom activities, an instructor reserves the right to ask the student to leave the classroom, to contact campus

security, to request mediation by the academic department chair or an academic/personal counselor, or to file a formal complaint subject to a student disciplinary hearing.

Cell Phones

Out of respect and courtesy to your fellow students, your instructor, and yourself, please leave your cell phone off during class. If you absolutely must leave it on, please turn off the sound and use the silent ring mode. If a phone call is received, quietly take the call in the hall where you will be less of a distraction. **Texting is a distraction and a sign of disrespect. Please do not text in class.**

Students with Disabilities

United Tribes Technical College recognizes its responsibility for making reasonable accommodations to ensure there is no discrimination on the basis of a disability. The Office of Disabilities Services coordinates reasonable support services, accommodations, and appropriate referrals aimed at removing barriers and providing an equitable learning environment. If you have a disability, please contact the Disabilities Services office located in the Education Building Room 123B (first floor). The DSS department can also be reached at 701.255.3285 ext. 1516.

Programmatic Procedures

In an effort to monitor the quality of the courses and programs of the Teacher Education unit at United Tribes Technical College, work produced by candidates in this class may be randomly sampled for external review. This means that the instructor of this course may be asked to provide samples of student and/or candidate work for programmatic assessment purposes. All names and identifying information will be removed from any work samples provided for external review. In addition, the process of external review will in no way affect a grade or performance in this course.

Plagiarism and Academic Integrity

Plagiarism is the term for taking credit for work that is not your own. This means you cannot take material from articles, books or websites you find in the library and present it as your own work, you cannot let your friends prepare your assignments, and you cannot copy an assignment from a student who took the same course another semester. Plagiarism is taken seriously because this is a place for learning and new ideas; your assignments are the evidence you provide of your learning, your original ideas.

Providing work that is not your own or that is not unique to the assignment is inappropriate because it is a form of dishonesty. The consequences of plagiarism are severe: you will be given an F on the specific assignment, or the entire course, at the instructor's discretion. If you need advice on how to appropriately cite the work of others, please ask. Briefly as long as you acknowledge that an idea is not your own, but give the original source, and so long as the assignment contains sufficient original work in addition to whatever is quoted from others, you are generally not going to get into trouble.

Other violations of academic integrity are also inappropriate though they do not generally have the same severe consequences as plagiarism. One example would be lying about the reason for an absence, or signing someone else's name to a sign-in sheet when they were not present. Please keep in mind that students generally ask their instructors for recommendations, whether for jobs or for scholarships.

Background Checks

All Teacher Education candidates go through a background check through the state of ND. Because you will be working with children, prior offenses, serious or against children, will be cause for dismissal from the Teacher Education program. In addition, if you are under the influence of illegal drugs or alcohol while in class or working with children, a staffing will be called with the counseling department and you may be suspended from college indefinitely.

Extra-curricular Activities

Academic achievement is a top priority in Teacher Education. If you are involved in extracurricular activities, you must be keeping up with your studies or instructors will not approve travel. Our job is to ensure that you have every opportunity for academic success by attending classes and completing assignments.

Class Cancellation Policy

In every situation, the decision to cancel classes is taken very seriously. The reputation of the College and the integrity of the academic program rely on every class being conducted according to the schedule. On the course schedule for this syllabus, the dates you will not have class are identified. These are circumstances that your instructor is aware of at the beginning of the semester when the campus is closed or the instructor and/or students have other commitments.

On rare occasions, there are unexpected emergencies that require class to be cancelled. If you want your instructor to contact you prior to class to let you know of a cancellation, be sure the instructor has your current phone number. Otherwise, if your instructor is not able to come to class, one of the other Teacher Education instructors will cover to make sure you get the educational experience you deserve.

Appropriate Dress

You may dress casually when we have regular class; however, when we have guest speakers or if you are teaching and/or presenting, you must dress professionally. This means dress slacks, dress shirts and ties for men and dresses with hose, dress slacks, and appropriate blouses for women.

Special Assistance

I am available by appointment. If you have any questions or concerns, arrange an appointment with me as soon as possible. Don't wait until the semester is almost over!

There is tutoring available for all candidates if needed. If you feel you would benefit from working with a tutor, please let me know and I will assist you in making arrangements. I encourage you to take advantage of this assistance if you feel you would benefit from it.

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| <p><i>The Disclaimer</i> – This syllabus may be adapted to meet the needs of the class and schedules of outside resource persons necessary to meet the objectives of the class.</p> |
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Tentative Class Schedule

| We ek | Date | Topic | Readings /Assignment | Assignments Due |
|----------|---|---|--|-------------------------|
| 1 | Aug. 22 - 26 | Numbers and the Base Ten System | Read Chapter 1.1 & 1.2 Activity 1A to 1F | Aug. 26 |
| 2 | Aug. 29 – Sept. 2 | Numbers and the Base Ten System | Read Chapter 1.3 & 1.4 Activities 1G to 1Q | Sept. 2 |
| 3 | Sept. 5 – 9 <i>No Class Sept. 5 Labor Day Summit Sept. 6-8 No Class Sept.9 Pow-Wow Family Day</i> | Summit Conference Attendance | Reflection Paper on session attended at the Summit | Sept. 13 |
| 4 | Sept. 12 – 16 <i>No Class Sept. 12 Indigenous Day</i> | Fractions and Problem Solving | Read Chapter 2.1 to 2.5 Activities 2A to 2X | Sept. 18 |
| 5 | Sept. 19 - 23 | Addition and Subtraction | Read Chapter 3.1 to 3.5 Activities 3A to U | Sept. 23 |
| 6 | Sept. 26 – Sept. 30 | Multiplication | Read Chapter 4.1 to 4.3 Activities 4A to 4J | Sept. 30 |
| 7 | Oct. 3 - 7 | Multiplication | Read Chapter 4.4 to 4.6 Activities 4K to 4U | Oct. 7 |
| 8 | Oct. 10 – 14 | Multiplication of Fractions, Decimals, and Negative Numbers | Read Chapter 5.1 to 5.4 Activities 5A to 5L | Oct. 14 |
| 9 | Oct. 17 - 21 <i>Midterms</i> | Review and Midterm Exam | | Oct. 21 Midterm Exam |
| 10 | Oct. 24 - 28 | Division | Read Chapter 6.1 to 6.3 Activities 6A to 6L | Oct. 28 |
| 11 | Oct. 31 - Nov. 1 | Division | Read Chapter 6.4 to 6.6 Activities 6M to 6R | Nov. 1 |
| 12 | Nov. 7 - 10 <i>No Class Nov. 11 Veterans Day</i> | Ratio and Proportional Relationships | Read Chapter 7.1 to 7.5 Activities 7A to 7T | Nov. 10 |
| 13 | Nov. 14 - 18 | Number Theory | Read Chapter 8.1 to 8.7 Activities 8A to 8S | Nov. 18 |
| 14 | Nov. 21 - 25 <i>No Class Nov. 24 – 25</i> | Algebra | Read Chapter 9.1 to 9.4 Activities 9A to 9T | Nov. 23 |

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|-----------|---------------------------|-----------------------|---|--------------|
| | <i>Thanksgiving Break</i> | | | |
| 15 | Nov. 28 – Dec. 2 | Algebra | Read Chapter 9.5 to 9.8 Activities 9U to 9OO | Dec. 2 |
| 16 | Dec. 5- 9 | Review and Final Exam | | Final Dec. 9 |
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Assignment Descriptions

Activities: Students will complete assigned activities for each chapter from the textbook for the course.

Chapter Review Exercises: After each chapter students will complete questions to determine comprehension of the material covered in the textbook and lecture.

Terminology: Students will be responsible for learning new terminology related to mathematical concepts covered in the course and will be assessed on the application of the terminology.

Integration Activities: Throughout the semester the students will participate and create activities that are integrate mathematical concepts into other courses. The students will be responsible for competing reflection papers following the activity to analyze how math was integrated into the other courses. As part of the analysis the students will identify the mathematical standards addressed in the activity or lesson.

Designing Activities: The students will design and present three activities for teaching assigned mathematical concepts. The activities will following a prescribed outline provided to the students.

Manipulative: The students will develop a minimum of three assignments to be used in an elementary math class on how to incorporate a manipulative to teach or reinforce a mathematical concept.

Technology in Math: Create a database of technology resources that can be used in the math classroom. The resources will include but are not limited to Smart Board/Active Board lessons, I-Pad applications, web resources, smart phone applications, etc. You will identify the resource, write a brief description, describe how the resource will be used, identify strengths and limitations, and identify alternatives.

Cultural and Math: Using different numeration systems students will explore how culture effects math.

Field Experience: The students will be required to observe an elementary math class and complete a reflection paper.

Shoe Box Math: Students will create a self-contained math activity in a shoebox which can be used by individuals or small groups to reinforce a mathematical concept. The students will field test their activity and then make applicable changes based on feedback.

Tests/Quizzes: Quizzes will be given to determine comprehension of mathematical concepts covered in the class. The students will also take a midterm and a final test based on the material covered in the textbook and class discussions.

Conference Attendance

To support the UTTC motto, “Leadership Begins Here”, all students are required to participate in the United Tribes Technical College Tribal Leader Summit & Trade Show September 6 – 8, 2016 at the Bismarck Event Center. Students are expected to be at the Summit from 1 PM – 3 PM on Tuesday and 9 AM – 3 PM on Wednesday and Thursday. Bussing to and from the campus will be provided. Sign in sheets will be available at the registration tables for all students to sign upon arrival and again at departure. Bussing to and from the campus will be provided.

For each session attended, the student is expected to write 3-4 sentences that connect the presentation to the “Tribal leadership” theme. Include the name of the presenter, a brief description of the content presented, presenter style, and a session-related reflection connecting the theme to something you learned. Visiting the exhibit hall can be included as a session. The reflection paper is considered an assignment for each one of the students’ courses and is recorded as either points or a letter grade. One reflection paper can be submitted for multiple courses.

Rubric
MATH 277 Homework 10-point Grading

Late homework, if graded, will be given half credit.

| Points | Description | Requirements |
|--------|---------------------------|---|
| 10 | Excellent | All problems are completed. Work is neatly done and readable. All work is clearly shown and is mathematically correct. Answers are given in the proper form using correct notation. Answers to application problems are in complete sentences with proper units. |
| 8-9 | Good | All problems are completed. Work shows good understanding and is mostly correct. Answers are usually given in the proper form. |
| 6-7 | Basic | Most problems are attempted. Work shows some understanding, but there are some mathematical errors. Some answers are incomplete or have errors in notation or are not in the required form. |
| 4-5 | Emerging | Many problems are not attempted or are incomplete. Work shows minimal understanding of concepts and/or minimal effort |
| 2-3 | Credit for minimal effort | Most problems not attempted or incomplete. Little or no work shown. Work that shows some relevant effort but is seriously flawed. Homework requirements not followed. |
| 0-1 | | Most problems not attempted. Homework guidelines not followed. Answers are given with no work. Work not readable. A zero is given for nothing handed in. |

Please sign this form, detach from syllabus, and return to the instructor.

Course Title: Math for Elementary Teachers

Course Number: MTH 277

Credit Hours: Three (3)

Instructor: Lezlie Mc Elwee

My signature below indicates that I have read and understand this syllabus and have been given a copy of my own to keep.

Student's Printed Name

Student Signature

Date