Instructor: Colleen M. Eddy, Ed.D.
Office: Matthews 204-G
Phone: 940.565.2841 (office)
E-mail: colleen.eddy@unt.edu (Note: Please allow up to 24 hours for a response.)

Class Location: Online
Office Hours: By appointment using Zoom

Feel free to contact me as needed with any course-related needs. If your question needs immediate attention, you can leave a voicemail at 940-565-2841.

Teaching Assistant: Keely Hulme

Class Meetings Dates/Times
This is an online course. However, there are optional online meetings on Zoom some Mondays and Tuesdays TBD CST by class. These Zoom meetings will be recorded and posted with the corresponding Module.

Zoom Meeting Information
https://unt.zoom.us/j/92693643443

Meeting ID: 926 9364 3443
One tap mobile
+13462487799,,92693643443# US (Houston)
+16699006833,,92693643443# US (San Jose)

Catalog Description:
Research-based practices in the teaching of algebra. Focuses on the nature of algebraic thinking and reasoning as well as the overarching algebraic concepts.

Books
Required Text:


Optional Text:

UNT Library Course Web Page
Access required articles, suggested journals and suggested electronic resources on the UNT Library EDSE 5310 Course Web Page
M.Ed. C&I Goals
1. Understand the aims and impacts of curriculum and instruction on students. Students in our program should understand how historical and contemporary approaches to curriculum and instruction impact students, teachers, and communities differently.
2. Apply research and theory to practice. Students in our program should critically evaluate research and draw on developed theoretical paradigms to advance equitable educational approaches.
3. Identify equitable educational change. Students in our program should identify areas where they may struggle alongside students and communities to reduce harm and advance just educational practices and policies.

Course Goals
1. Students will research and critically analyze mathematical tasks, algebraic concepts and algebra curriculum using student’s lived experiences, histories, and communities.
2. Students will research proven equity-based instructional strategies and create and implement a professional development of algebraic reasoning for families and communities.

Course Design (Class Meetings)
This is an online course consisting of an introduction, 5 modules, and a final exam. Specific assignments and their due dates are posted within each module. To access the course content, go to: https://canvas.unt.edu. You will need your EUID and password; if you do not know your EUID and/or password, visit http://ams.unt.edu.

<table>
<thead>
<tr>
<th>Module</th>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>Algebra: For Whom? For What Purpose?</td>
<td>Rethinking Algebra for when concepts is taught and who has access to it.</td>
</tr>
<tr>
<td>Module 2</td>
<td>Algebraic Habits of Mind for Elementary</td>
<td>Understanding Algebra as a social justice right; considering how to partner with families and communities in the mathematics; ideas, reason, and practices for algebraic habits of mind in the elementary years</td>
</tr>
<tr>
<td>Module 3</td>
<td>Algebraic Habits of Mind for Middle School</td>
<td>Understanding how our identity with mathematics impacts our teaching; Socially and culturally scaffolding algebra from the concrete to the abstract; Developing the habits of mind of a mathematician that transcend algebra and into all mathematics</td>
</tr>
<tr>
<td>Module 4</td>
<td>Algebraic Habits of Mind for High School</td>
<td>How do teachers inspire wonder of mathematics in high school and build on students’ strengths? What does it mean to think like a mathematician?</td>
</tr>
</tbody>
</table>
**Module 5**

**Linking Multiple Representations**

How will your experiences in this class direct your leadership on when and what algebra is taught and who has access? Using equity practices for assessing student learning.

**Final Project: Families and Communities**

**Assignment Submission**

Assignments are to meet the following criteria:

- Submit all assignments on time, or notify me in advance to make other arrangements.
- Use the following naming convention as the file name for assignments:
  - [Last Name] – [Name of Assignment] e.g., Smith – Final Exam Essay
- Use an appropriate APA formatted heading on all assignments, including your name, the name of the assignment, the course information, your professor’s name, and the date submitted. Use Calibri, Arial, or Times New Roman fonts only. A title page can be used in lieu of a heading.
- For the final exam paper, use proper APA formatting throughout, including a title page.
- Submit assignments as .docx or .doc files (for the purpose of providing feedback).
- It is recommended that you visit the UNT writing center to receive feedback on your assignments and/or your final exam essay prior to submission. [https://writingcenter.unt.edu/online-tutoring](https://writingcenter.unt.edu/online-tutoring)

All submitted work must be original. Academic dishonesty, in any form, will not be tolerated. Any suspicion of plagiarism or other act of academic dishonesty will be reported to the university. It is the student’s responsibility to fully understand the university’s definition of plagiarism. Before beginning the course, visit UNT’s Student Academic Integrity site to read the academic integrity policy.

**Grading**

All course assignments and component weights are tentative and subject to change at the discretion of the instructor. The gradebook may or may not be set up to reflect these outcome weights; you should maintain your own calculations throughout the semester to determine your grade.

<table>
<thead>
<tr>
<th>Evidence of Course Outcomes</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion of Course Readings</td>
<td>30%</td>
</tr>
<tr>
<td>Article Reports</td>
<td>25%</td>
</tr>
<tr>
<td>Mathematical Tasks</td>
<td>15%</td>
</tr>
<tr>
<td>Final Project: Families and Communities</td>
<td>30%</td>
</tr>
</tbody>
</table>

A=90-100; B=80-89; C=75-79; D=70-74; F=below 69
Module Assignment Grading Guide:
Unless grading criteria are specified for the assignment

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent Work:</td>
</tr>
<tr>
<td>100, 95</td>
<td>- Assignment is completed thoughtfully, professionally, and with depth.</td>
</tr>
<tr>
<td></td>
<td>- It shows a commitment to learning and to the content of this course.</td>
</tr>
<tr>
<td></td>
<td>- It addresses the assignment requirements but also appears to be personally meaningful and/or relevant.</td>
</tr>
<tr>
<td></td>
<td>- Language/communication is professional and appropriate to the audience.</td>
</tr>
<tr>
<td></td>
<td>- There is a strong sense of academia in both the content and the production of the response.</td>
</tr>
<tr>
<td>A - B</td>
<td>Good Work:</td>
</tr>
<tr>
<td>90, 85, 80</td>
<td>- Assignment is complete and well done.</td>
</tr>
<tr>
<td></td>
<td>- Language/communication is professional and appropriate to the audience.</td>
</tr>
<tr>
<td>C, D, or F</td>
<td>Unsatisfactory:</td>
</tr>
<tr>
<td>75, 70, 50, 0</td>
<td>- Assignment does not meet one or more of the criteria above.</td>
</tr>
</tbody>
</table>

Course Requirements and Assessments

Discussion of Course Readings:
There are 5 sets of readings. For each set of readings from the textbook and articles. All readings for the set must be read and a response to the prompt for the group of readings must be provided. The response should be at least one paragraph in length, and it must address the readings assigned and the prompt. Each response must include at least one quote from an article with correct APA citation, and it is to be submitted electronically in the designated Forum.

Article Reports:
Abstracts of articles related to Final Project: Families and Communities
Article Summaries (4) - Four articles will be selected from approved mathematics education journals that specifically relate to a particular algebraic concept that includes
• Electronic version of the article is submitted with the summary
• Summary includes:
  o Algebraic concept stated, along with reference to state or Common Core State Standards in mathematics standards
  o Abstract, that summarizes the article well (150-200 words)
  o Analysis of the article, that is well-articulated

Mathematical Tasks:
There are 5 mathematical tasks provided. Each task must be attempted with all work shown. Submit in the designated discussion board. (To submit this electronically, you can either print the task, write on the paper, then scan it back in, or you can use an App that will allow you to record your process, which is completed by uploading the created file.)

Mathematical Tasks:
1. The Mind Reader
2. Open and Shut Case
3. Chicken
4. Snakes in Snakewood
5. Towering Numbers

<table>
<thead>
<tr>
<th>Module Assignment Grading Guide: Mathematical Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong> 100, 95 Excellent Work</td>
</tr>
<tr>
<td><strong>A</strong> - <strong>B</strong> 90, 85, 80 Good Work</td>
</tr>
<tr>
<td><strong>C, D, or F</strong> 75, 70, 50, 0 Unsatisfactory</td>
</tr>
</tbody>
</table>

Final Project: Families and Communities:
This is an opportunity for you to become an “expert” with respect to a particular mathematical concept, to learn about research materials to extend your thinking of many concepts (not just the one researched), and to lead students, families and communities in expanding their own thinking.

All files must be uploaded to the designated course folder by the date provided on the calendar. Video presentations will be submitted at the end of the specified module and peer reviews will be conducted in the last module of the course.
## Course Schedule

### COURSE INTRO ASSIGNMENTS
Opens on Tuesday, June 1

<table>
<thead>
<tr>
<th>Activity</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read: Welcome from Instructor</td>
<td></td>
</tr>
<tr>
<td>Read: Syllabus Review</td>
<td>TBD</td>
</tr>
<tr>
<td>Discussion: Math Autobiography (Write, Illustrate, or Video)</td>
<td>Due by Friday, June 4</td>
</tr>
<tr>
<td>Discussion: Your Proposed Timeline for Completion of Assignments</td>
<td></td>
</tr>
</tbody>
</table>

### MODULE 1: ALGEBRA: FOR WHOM? FOR WHAT PURPOSE?
Opens on Monday, June 1

<table>
<thead>
<tr>
<th>Activity</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read: <em>Impact of Identity</em> – Epilogue, Chapter 1,2</td>
<td></td>
</tr>
<tr>
<td>Read: <em>Radical Equations</em> – Appendix, Chapter 1</td>
<td>TBD</td>
</tr>
<tr>
<td>Skim: <em>Impact of Identity</em> – Part III</td>
<td></td>
</tr>
<tr>
<td>Discussion: What Mathematics? For Whom? For What Purpose? (<em>Reading #1</em>)</td>
<td>Due by Friday, June 4</td>
</tr>
<tr>
<td>Discussion: The Mind Reader (<em>Math Task #1</em>)</td>
<td></td>
</tr>
<tr>
<td>Assignment: Article Report Part I (<em>Article #1</em>)</td>
<td></td>
</tr>
</tbody>
</table>

### MODULE 2: ALGEBRAIC HABITS OF MIND FOR ELEMENTARY
Opens on Monday, June 7

<table>
<thead>
<tr>
<th>Activity</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read: <em>Impact of Identity</em> – Chapter 7,8</td>
<td>TBD</td>
</tr>
<tr>
<td>Read: <em>Radical Equations</em> – Chapter 3,4</td>
<td></td>
</tr>
<tr>
<td>Discussion: Algebraic Habits of Mind for Elementary (<em>Reading #2</em>)</td>
<td></td>
</tr>
<tr>
<td>Discussion: Open and Shut Case (<em>Math Task #2</em>)</td>
<td></td>
</tr>
<tr>
<td>Assignment: Article Report Part I (<em>Article #2</em>)</td>
<td></td>
</tr>
</tbody>
</table>

### MODULE 3: ALGEBRAIC HABITS OF MIND FOR MIDDLE SCHOOL
Opens on Monday, June 7

<table>
<thead>
<tr>
<th>Activity</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read: <em>Impact of Identity</em> – Chapter 3, 4</td>
<td>TBD</td>
</tr>
<tr>
<td>Read: <em>Radical Equations</em> – Chapter 5,6</td>
<td></td>
</tr>
</tbody>
</table>
### Module 4: Algebraic Habits of Mind for High School

Opens on Monday, June 7

| Read: Impact of Identity – Chapter 5 | Read: Radical Equations – Chapter 7 |
| Discussion: Algebraic Habits of Mind for High School (Reading #4) | Discussion: Snakes and Snakewood (Math Task #4) |
| Assignment: Article Report Part I (Article #4) | |

| Online Meeting, TBD |
| Due by Wednesday, June 23 |

### Module 5: Linking Multiple Representations

Opens on Saturday, June 12

| Read: Impact of Identity – Chapter 6 | Read: Radical Equations – Chapter 8 |
| Discussion: Linking multiple representations (Reading #5) | Discussion: Towering Numbers (Math Task #5) |

| Online Meeting, TBD |
| Due by Wednesday, June 30 |

### Final Project: Families & Communities

Opens on Saturday, June 7

| Due by Thursday, July 1 |

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*This course syllabus is intended to be a guide and may be amended at any time by the instructor.*
Conceptual Framework:
The Educator as Agent of Engaged Learning

Improving the quality of education in Texas schools and elsewhere is the goal of programs for the education of educators at the University of North Texas. To achieve this goal, programs leading to teacher certification and advanced programs for educators at the University of North Texas 1) emphasize content, curricular, and pedagogical knowledge acquired through research and informed practice of the academic disciplines, 2) incorporate the Texas Teacher Proficiencies for learner centered education, 3) feature collaboration across the university and with schools and other agencies in the design and delivery of programs, and 4) respond to the rapid demographic, social, and technological change in the United States and the world.

The educator as agent of engaged learning summarizes the conceptual framework for UNT’s basic and advanced programs. This phrase reflects the directed action that arises from simultaneous commitment to academic knowledge bases and to learner centered practice. "Engaged learning" signifies the deep interaction with worthwhile and appropriate content that occurs for each student in the classrooms of caring and competent educators. "Engaged learning" features the on-going interchange between teacher and student about knowledge and between school and community about what is worth knowing. This conceptual framework recognizes the relationship between UNT and the larger community in promoting the commitment of a diverse citizenry to life-long learning. In our work of developing educators as agents of engaged learning, we value the contributions of professional development schools and other partners and seek collaborations which advance active, meaningful, and continuous learning.

Seeing the engaged learner at the heart of a community that includes educators in various roles, we have chosen to describe each program of educator preparation at UNT with reference to the following key concepts, which are briefly defined below.

1. **Content and curricular knowledge** refer to the grounding of the educator in content knowledge and knowledge construction and in making meaningful to learners the content of the PreK-16 curriculum.

2. **Knowledge of teaching and assessment** refers to the ability of the educator to plan, implement, and assess instruction in ways that consistently engage learners or, in advanced programs, to provide leadership for development of programs that promote engagement of learners.

3. **Promotion of equity for all learners** refers to the skills and attitudes that enable the educator to advocate for all students within the framework of the school program.

4. **Encouragement of diversity** refers to the ability of the educator to appreciate and affirm formally and informally the various cultural heritages, unique endowments, learning styles, interests, and needs of learners.

5. **Professional communication** refers to effective interpersonal and professional oral and written communication that includes appropriate applications of information technology.

6. **Engaged professional learning** refers to the educator's commitment to ethical practice and to continued learning and professional development.

Through the experiences required in each UNT program of study, we expect that basic and advanced students will acquire the knowledge, skills, and dispositions appropriate to the educational role for which they are preparing or in which they are developing expertise.

A broad community stands behind and accepts responsibility for every engaged learner. UNT supports the work of PreK-16 communities through basic and advanced programs for professional educators and by promoting public understanding of issues in education.

Teacher Education & Administration

**Departmental Policy Statements**

*Disabilities Accommodation:* “The University of North Texas complies with Section 504 of the 1973 Rehabilitation Act and with the Americans with Disabilities Act of 1990. The University of North Texas provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please see the instructor and/or contact the Office of Disability Accommodation at 940-565-4323 during the first week of class.”

cheating. or fabrication, will not be tolerated in this class. Any act of academic dishonesty will be reported, and a penalty determined, which may be probation, suspension, or expulsion from the university.

Acceptable Student Behavior: Student behavior that interferes with an instructor’s ability to conduct a class or other students’ opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The university's expectations for student conduct apply to all instructional forums, including university and electronic classroom, labs, discussion groups, field trips, etc. The Code of Student Conduct can be found at https://deanofstudents.unt.edu/conduct

Attendance: See the instructor’s attendance policy.

Eagle Connect: All official correspondence between UNT and students is conducted via Eagle Connect and it is the student's responsibility to read their Eagle Connect Email regularly.

Cell Phones and Laptop: Students should turn off cell phones when they are in class unless the phones are being used for learning activities associated with the course.

SETE: The Student Evaluation of Teaching Effectiveness (SETE) is expected for all organized classes at UNT. This brief online survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Collection of Student Work: In order to monitor students' achievement, improve instructional programs, and publish research findings, the Department of Teacher Education and Administration collects anonymous student work samples, student demographic information, test scores, and GPAs to be analyzed by internal and external reviewers.

Comprehensive Arts Program Policy. The Elementary Education program area supports a comprehensive arts program to assist preservice and inservice teachers to design and implement curricular and instructional activities which infuse all areas of the arts (visual, music, theater, and movement) throughout the elementary and middle school curriculum.

Technology Integration Policy. The Elementary, Secondary, and Curriculum & Instruction program areas support technology integration to assist preservice and inservice teachers to design and implement curricular and instruction activities which infuse technology throughout the K-12 curriculum.

TEExES Test Preparation. To meet state requirements for providing 6 hours of test preparation for teacher certification candidates, the UNT TEExES Advising Office (TAO) administers the College of Education TEExES Practice Exams. Students who want to take a practice exam should contact the TAO (Matthews Hall 103). Students may take up to two exams per session that relate to their teaching track/field at UNT. Students should also plan accordingly, as they are required to stay for the entire testing period. Current students must meet the following criteria in order to sit for the TEExES practice exams: Students must (1) be admitted to Teacher Education, (2) have a certification plan on file with the COE Student Advising Office, and (3) be enrolled in coursework for the current semester. For TEExES practice exam information and registration, go to: http://www.coe.unt.edu/teexes-advising-office/teexes-exams If you need special testing accommodations, please contact the TAO at 940-369-8601 or e-mail the TAO at coe-tao@unt.edu. The TAO website is www.coe.unt.edu/teexes. Additional test preparation materials (i.e. Study Guides for the TEExES) are available at www.texes.ets.org

“Ready to Test” Criteria for Teacher Certification Candidates. Teacher certification candidates should take the TEExES exams relating to their respective certification tracks/teaching fields during their early-field-experience semester (i.e. the long semester or summer session immediately prior to student teaching).

Six Student Success Messages. The Department of Teacher Education & Administration supports the six student success messages on how to succeed at UNT: (1) Show up; (2) Find support; (3) Take control; (4) Be prepared; (5) Get involved; and (6) Be persistent. Students are encouraged to access the following website: https://success.unt.edu. The site contains multiple student resource links and short videos with student messages.

Technical Requirements and Assistance

The following information has been provided to assist you in preparation for the technological aspect of the course.
UIT Help Desk  http://www.unt.edu/helpdesk/index.htm
Hardware and software necessary to use Canvas:  https://clear.unt.edu/supported-technologies/canvas/requirements
Computer and Internet Literacy  http://clt.odu.edu/oso/index.php?src=pe_comp_lit
Headset/Microphone (if required for synchronous chats)

Minimum Technical Skills Needed
Navigating and using basic tools of Canvas
Using email and attaching documents
Creating and submitting a video presentation
Creating and submitting files in commonly-used word processing program formats
Copying and pasting text between applications

Online Student Resources
Links to all of these services can be found on https://clear.unt.edu/canvas/student-resources

- **Academic Resource Center**: http://www.unt.edu/academics.htm
  Buy textbooks and supplies, access academic catalogs and programs, register for classes, and more.

- **Center for Student Rights and Responsibilities**: http://www.deanofstudents.unt.edu/conduct
  Provides Code of Student Conduct along with other useful links.

- **Office of Disability Accommodation**: http://www.disability.unt.edu/
  ODA exists to prevent discrimination on the basis of disability and to help students reach a higher level of independence.

- **Counseling and Testing Services**: http://www.studentaffairs.unt.edu/counseling-and-testing-services
  CTS provides counseling services to the UNT community, as well as testing services such as admissions testing, computer-based testing, and career and other testing.

- **UNT Libraries**: http://www.library.unt.edu/
  Online library services.

- **Online Tutoring**: http://www.writinglab.unt.edu/online-tutoring
  Chat in real time, mark-up your paper using drawing tools, and edit the text of your paper with the tutor’s help.

- **The Learning Center Support Programs**: http://learningcenter.unt.edu/support-programs-lc
  Various program links provided to enhance the student experience.

- **Supplemental Instruction**: http://www.learningcenter.unt.edu/si
  Program for every student, not just for students who are struggling.

- **UNT Writing Lab**: http://www.writinglab.unt.edu/
  Offers free writing tutoring to all UNT students, undergraduate and graduate.

- **Math Tutor Lab**: http://www.math.unt.edu/mathlab
  Located in Sage Hall, Room 103.
• **Succeed at UNT**: [http://www.success.unt.edu/](http://www.success.unt.edu/)
  How to be a successful student information.

**Other Student Resources**

- **UNT Portal**: [http://my.unt.edu](http://my.unt.edu)
- **UNT Library Information for Off-Campus Users**: [http://www.library.unt.edu/services/facilities-and-systems/campus-access](http://www.library.unt.edu/services/facilities-and-systems/campus-access)
- **UNT Computing and Information Technology Center**: [http://citc.unt.edu/services-solutions/students](http://citc.unt.edu/services-solutions/students)
- **UNT Academic Resources for Students**: [http://www.unt.edu/academics.htm](http://www.unt.edu/academics.htm)
- **Computer Labs**: [provide information if departmental labs are available for use to students]. General access computer lab information (including locations and hours of operation) can be located at: [http://www.gacl.unt.edu/](http://www.gacl.unt.edu/)

**Important Notice for F-1 Students taking Distance Education Courses**

**Federal Regulation**


The paragraph reads:

(G) For F–1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F–1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

**University of North Texas Compliance**

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student’s responsibility to do the following:

1. Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.
(2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose. Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email internationaladvising@unt.edu) to get clarification before the one-week deadline.

NOTE: THIS COURSE SYLLABUS IS INTENDED TO BE A GUIDE AND MAY BE MODIFIED AT ANY TIME AT THE INSTRUCTOR’S DISCRETION.