

**DEPARTMENT OF TEACHER EDUCATION & ADMINISTRATION**  
**COLLEGE OF EDUCATION UNIVERSITY OF NORTH TEXAS**  
**EDSE 3500: Knowing & Learning in Mathematics and Science**  
**Section 001, Fall 2012 (Pratt)**

**Class Location:** Matthews 111  
**Class Dates and Times:** Tuesdays, 9:00 – 11:50 a.m.  
**Office Hours:** Tuesdays, 1:00 – 4:00 p.m. & Thursdays, 9:00 a.m. – 12:00 p.m., or by appointment  
**Instructor:** Sarah Smitherman Pratt, Ph.D.  
 Office: Matthews 204-M  
 Phone: 940.565.2030 (office); 225.788.4688 (cell)  
 E-mail: sarah.pratt@unt.edu (*Note: Please allow up to 24 hours for a response.*)

**Catalog Description:**

**EDSE 3500. Knowing and Learning in Mathematics and Science.** 3 hours. Psychological foundations of learning. Problem solving in mathematics and science education utilizing technology. Principles of expertise and novice understanding of subject matter. Implications of high stakes testing. Foundations of formative and summative assessment. Prerequisite(s): admission to the Teach North Texas program, a university grade point average of at least 2.50 and TNTX 1100 (may be taken concurrently) or consent of a Teach North Texas advisor in the College of Arts and Science

**Required Text:**

Snowman, J., McCown, R., & Beihler, R. (2012). *Psychology applied to teaching* (13<sup>th</sup> ed.). Boston, MA: Wadsworth.

**Course Objectives:**

<b>Students will be able to ...</b>	<b>Evidence:</b>
– use the clinical interview method to make sense of one’s reasoning about a topic in mathematics or science.	Clinical Interview Paper
– articulate standards for knowing mathematics and science and implications of these standards for assessment, especially standardized assessment.	Blackboard group and class discussions Analysis of Clinical Interviews Written Exam
– articulate what it means to know and learn relative to cognitive structures and describe how what people know changes and develops.	Blackboard group and class discussions Analysis of Clinical Interviews Written Exam
– describe the links between knowing and developing in learning theory and the content and evolution of scientific ideas.	Blackboard group and class discussions
– express informed opinions on current issues and tensions in education, especially as they relate to mathematics and science instruction.	Blackboard group and class discussions My Teaching Philosophy
– explore how various technologies support knowing and learning in mathematics and science.	Use of MS Office and Internet Blackboard group and class discussions Written Paper
– explore the implications of deficit-models of learning on issues of equitable learning environments.	Blackboard group and class discussions Written Paper

**Skills Related to TExES: Test Framework for Field 130: Pedagogy and Professional Responsibilities (8-12)**

*Domain I: Designing Instruction and Assessment to Promote Student Learning*

*Pedagogy and Professional Responsibilities Standard I*

Competency 001: The teacher understands human developmental processes and applies this knowledge to plan instruction and ongoing assessment that motivate students and are responsive to their developmental characteristics and needs.

Competency 002: The teacher understands student diversity and knows how to plan learning experiences and design assessments that are responsive to differences among students and that promote all students' learning.

Competency 003: The teacher understands procedures for designing effective and coherent instruction and assessment based on appropriate learning goals and objectives.

Competency 004: The teacher understands learning processes and factors that impact student learning and demonstrates this knowledge by planning effective, engaging instruction and appropriate assessments.

*Domain III: Implementing Effective, Responsive Instruction and Assessment Standards Assessed:*

*Pedagogy and Professional Responsibilities Standard I*

*Pedagogy and Professional Responsibilities Standard III*

Competency 007: The teacher understands and applies principles and strategies for communicating effectively in varied and learning contexts.

Competency 008: The teacher provides appropriate instruction that actively engages students in the learning process.

Competency 010: The teacher monitors student performance and achievement; provides students with timely, high-quality feedback; and responds flexibly to promote learning for all students.

For a complete description of standards and competencies refer to <http://www.texas.ets.org/prepMaterials/>

**NSTA Standards:** The National Science Teacher Association (NSTA) *Science Teacher Preparation Standards* addressed in the course are as follows:

Standard 3: Inquiry – Teachers of science engage students both in studies of various methods of scientific inquiry and in active learning through scientific inquiry. They encourage students, individually and collaboratively, to observe, ask questions, design inquiries, and collect and interpret data in order to develop concepts and relationships from empirical experiences.

Standard 5: General Skills of Teaching – Teachers of science create a community of diverse learners who construct meaning from their science experiences and possess a disposition for further exploration and learning. They use, and can justify, a variety of classroom arrangements, groupings, actions, strategies, and methodologies.

Standard 8: Assessment – Teachers of science construct and use effective assessment strategies to determine the backgrounds and achievements of learners and facilitate their intellectual, social, and personal development. They assess students fairly and equitably, and require that students engage in ongoing self-assessment.

**NCTM Standards:** The National Council of Teachers of Mathematics (NCTM) *Standards for Initial Preparation of Mathematics Teachers* addressed in the course are as follows:

Standard 3: Knowledge of Mathematical Communication – Candidates communicate their mathematical thinking orally and in writing to peers, faculty, and others.

Standard 6: Knowledge of Technology – Candidates embrace technology as an essential tool for teaching and learning mathematics.

Standard 7: Dispositions – Candidates support a positive disposition toward mathematical processes and mathematical learning.

Standard 8: Knowledge of Mathematical Pedagogy – Candidates possess a deep understanding of how students learn mathematics and the pedagogical knowledge specific to mathematics teaching and learning.

### **Course Description/Overview:**

This course focuses on issues of what it means to learn and know science and mathematics. What are the standards for knowing we will use? How are knowing and learning structured, and how does what we know

change and develop? For the science and mathematics educator, what are the tensions between general, cross-disciplinary characterizations of knowing (e.g. intelligence) and the specifics of coming to understand powerful ideas in mathematics and science? What are the links between knowing and developing in learning theory, and the content and evolution of scientific ideas? Also, current issues and tensions in education will be discussed, especially as it relates to mathematics and science instruction.

**Evaluation and Grading System:**

*Grading Scale:* A = 90-100% B = 80-89% C = 75-79% D = 70-74% F = 0-69%

- ❖ All course assignments are due at the beginning of class except where indicated in the syllabus.
- ❖ Electronic assignments must be submitted via Blackboard or tk20, as specified.
- ❖ No (0) points will be awarded for any late assignments.

<u>Assignment:</u>	<u>Percent Value:</u>	<u>Date Due:</u>
Class Preparations, Contributions, In-Class and Online Work	30%	<i>Weekly</i>
Clinical Interview Project	30%	November 27
Test #1: Mid-Term	15%	October 23
My Teaching Philosophy	10%	December 4
Test #2: Final Exam	15%	December 11
<b><i>TOTAL:</i></b>	<b><i>100%</i></b>	

Class Preparations, Contributions, In-Class and Online Work (30%)

*Weekly Engagement:*

To be effectively engaged in this class you will need to:

- 1) Be prepared by reading and reflecting on assigned material each week;
- 2) Show involvement in class through participation in class discussions;
- 3) Demonstrate purposeful engagement with activities during class time; and,
- 4) Reflect honestly after each class.

Grades for participation and personal responses will be assessed each week, according to attendance and engagement. The grading rubric for this part of in-class and on-line work is as follows:

- 2 points for participating in the classroom discussions and activities, or for participating in the on-line assignments;
- 1 point for leaving class early and/or arriving late (more than 15 minutes), for not fully participating in the discussions and activities, or for not participating in the on-line assignments;
- 0 points for no participation.

*Course Readings Discussion Group Roles:*

A significant aspect of this course is to read and engage in the professional literature and research in education that explores and explains what it means to teach conceptually. Because many of us have limited experiences as students in classrooms based on reform methods, it is often difficult to consider how to teach in this manner. To consider changes in pedagogical strategies, each week that a reading assignment is due, part of class time will be dedicated to group discussions. Groups will be determined the first week of class, but the instructor reserves the right to change them if issues occur. The roles for each group member are outlined below; these roles will change each week. Rubrics will be submitted by the quizzer at the end of each discussion and recorded as part of the weekly grade for this category. The roles are: Key Keeper/Discussion Director; Literary Luminary; Connector; Word Wizard; and, Quizzer. These roles and the rubric are detailed on the course Blackboard web site.

Clinical Interview Project (30%):

Beginning the third week of class each pre-service teacher will spend approximately 30 minutes each alternate week interviewing with **one** child (based on your area of certification) in or out of a school environment for a total of five (5) interactions. The interview is to be focused on a conceptually-based activity. What you do will

depend on various factors: the age of the child, her/his academic development, his/her interests, and your content area. Much of what you do will probably (but not necessarily) relate to what the child is doing in her/his classroom. At the completion of each session you are to record your experiences from the session. See Blackboard for rubric and due dates for when the interviews will be checked in class and when the submission of the reflection paper and all artifacts of the interviews are due. This assignment must be uploaded to BlackBoard to receive credit.

**Teaching Philosophy Statement (10%):**

The purpose of this assignment is for the candidate to be able to demonstrate the ability to compare and contrast the implications for instruction based on a variety of theoretical perspectives such as: Behaviorism, Cognitivism, Constructivism, Social Constructivism, and/or Critical theory.

Submitting a teaching philosophy statement is a standard requirement of most school districts when applying for a position. Within the context of the courses you take in the Teach North Texas program, you should be continually thinking about your own teaching philosophy. As you are exposed to new ideas and experiences, your philosophy will more than likely change. One of the artifacts required in the Knowing and Learning course is a teaching philosophy statement. Keep in mind that you only have one chance to make a good first impression with prospective employers. Therefore, your philosophy statement should be well organized and clearly written. Misspellings and grammar or punctuation errors show a lack of professionalism. The rubric for your teaching philosophy statement as well as more details are provided on the Course Blackboard web site. This statement is to be uploaded to tk20.

**Mid-Term and Final Exam (each 15%):**

The Mid-Term and Final Exams will be given during class time. Each exam will cover course readings, discussions and activities. (The final is not cumulative; each exam focuses on specific parts of the course.) Each exam will be a combination of multiple choice and short answer questions.

**Proposed Course Schedule:**

<b>Week/ Date</b>	<b>Topic</b>	<b>Assignment</b>	<b>PPR Descriptive Statement</b>
1: 09/04	Course Introduction "Private Universe" video	Review: Course Syllabus Summer Talk Activity	
2: 09/11	Clinical Interviewing Applying Psychology to Teaching Effective Teachers	Chapter 1 from PAT* Introduction from How Students Learn♦ Ginsburg's article from Entering the child's mind: The clinical interview in psychological research and practice♦ Chapter 16 from PAT* Erlwanger article, Benny's conception of rules and answers in IPI Mathematics♦	Domain I Competency 1: A-P Competency 4: A-G
3: 09/18	Cognitive Development: Erickson Piaget Vygotsky * Discuss Clinical Interview #1	Chapter 2 from PAT* Chapter 6 (pp. 50-60) from The pupil as scientist♦ Insider Outsider Productions. (Producer). (2009, March 13). Piaget and Vygotsky in 90 seconds. [Video file]. Retrieved from <a href="http://www.youtube.com/watch?v=yY-SXM8f0gU">http://www.youtube.com/watch?v=yY-SXM8f0gU</a>	Domain I Competency 1: A-P Competency 3: B Competency 4: A-G

<b>Week/ Date</b>	<b>Topic</b>	<b>Assignment</b>	<b>PPR Descriptive Statement</b>
4: 09/25	Age-Level Characteristics Understanding Student Differences	Chapter 3 (pp. 88-109) from PAT* Chapter 4 from PAT* Reflections on multiple intelligences from Phi Delta Kappan♦ Chapter 7 (pp. 202-214) from <i>Intelligence: Multiple perspectives</i>	Domain I Competency 2: A-G Domain II Competency 5: E, F, G Competency 6: H, I
5: 10/02	Addressing Cultural and Socioeconomic Diversity Accommodating Student Variability * Discuss Clinical Interview #2	Chapter 5 from PAT* Chapter 6 from PAT* Shared accountability: Encouraging diversity-responsive teaching in inclusive contexts from Teaching Exceptional Children♦ Response to intervention: Preventing and remediating academic difficulties from Child Development Perspectives♦	Domain I Competency 2: A-G Domain II Competency 5: A, E, F, G Competency 6: H, I
6: 10/09	Constructivist Learning Theory, Problem Solving, and Transfer	Chapter 10 from PAT* What is constructivism? (Attributes) ♦	Domain I Competency 2: A-G Domain II Competency 5: A, E, F, G Competency 6: H, I
7: 10/16	Constructivist Learning Theory, Problem Solving, and Transfer * Discuss Clinical Interview #3	Chapter 2 (pp.31-50) from <i>How people learn</i> ♦ Chapter 3 (pp. 51-78) from <i>How people learn</i> ♦ Chapter 9 (pp. 397-419) from <i>How students learn: Science in the classroom</i> ♦ Chapter 5 (pp. 217-256) from <i>How students learn: Mathematics in the classroom</i> ♦	Domain I Competency 1: A-P Competency 3: B Competency 4: A-G
8: 10/23	Mid-Term	This exam covers all assigned readings up to this point	
9: 10/30	Information-Processing Theory Behavioral Learning Theory: Operant Conditioning * Discuss Clinical Interview #4	Chapter 7 from PAT* Behaviorism in Psychology of classroom learning: An encyclopedia♦ Chapter 8 from PAT* Learners as information processors from Educational Psychologist♦	Domain I Competency 1: A-P Competency 3: B Competency 4: A-G
10: 11/06	Social Cognitive Theory	Chapter 9 from PAT* Social cognitive theory in Psychology of classroom learning: An encyclopedia♦	Domain I Competency 3: B Competency 4: A-G
11: 11/13	Motivation and Perceptions of Self Classroom Management * Discuss Clinical Interview #5	Chapter 11 from PAT* Chapter 12 from PAT*	Domain I Competency 1: A-P Competency 2: A-N Domain II Competency 5: A, E, F, G Competency 6: H, I
12: 11/20	Online Discussion: Secondary Science/Mathematics Teaching Methods and Methodology	Selected articles on Blackboard	Domain I Competency 3: B Competency 4: A-G

Week/ Date	Topic	Assignment	PPR Descriptive Statement
14: 11/27	Approaches to Instruction Assessment of Classroom Learning * Peer Review of Teaching Philosophy	Chapter 14 from PAT* Chapter 13 from PAT* Jones article: “Are lectures a thing of the past?” Clinical Interview Project Due to tk20 <sup>T</sup>	Domain I Competency 1: A-P Competency 2: A-G Domain II Competency 5: A, E, F, G Competency 6: H, I
15: 12/04	Knowing and Learning	Teaching Philosophy Due to tk20 <sup>T</sup>	
16: 12/11	Final Exam	10:30 a.m. – 12:30 p.m. This exam covers the assigned course readings from 10/30 – 12/04	Domain I Competency 3: B Domain III Competency 10: A

\*Indicates the course text, *Psychology Applied to Teaching* (13<sup>th</sup> ed.)

◆Indicates additional readings which can be found on the Course Blackboard Website

\*Due no later than 11:59 pm

<sup>T</sup> Indicates the assignment is to be uploaded into TK20. Note: Failure to upload the designated assignments into TK20 by the designated due date will result in a grade of 0 being assigned to the task. This is a course wide policy for EDSE 3500.

#### *Attendance, Participation, and Dispositions Policies:*

This course is designed and organized to be highly collaborative and experiential. It will involve literature discussion groups, and small and large group discussions. Therefore, your attendance and participation are essential to your learning. It is not possible to be enriched by discussions and collaborations if you are not present or prepared for class. If you decide to miss an entire class period or part of it for any reason, then you will not receive full participation credit for that class session. Involvement in class activities cannot be made up, thus it is imperative that you are present and prepared for each class session. Poor or late attendance, not attending for the full class time, or lack of preparation (i.e., not completing reading assignments or other non-graded assignments) will adversely affect your grade for this course. If you miss more than 30 minutes of a class, you will be counted as absent. Whether you have an excused or unexcused absence, you are still missing important components to the course. You are responsible for material covered during absences.

- 2 absences = final grade in the course will be lowered by one full letter grade
- 3 absences = final grade in the course will be lowered by two full letter grades
- 4 absences = F in the course
- 3 tardies = 1 absence, this means arriving to class late *and/or* leaving class early

If you miss class, you are responsible for all announcements, assignments and information presented or discussed in class. It is your responsibility to contact other members of the class or the instructor to obtain information missed during your absence. Please make an appointment to see the course instructor.

#### *General Classroom Policies:*

- All course readings must be read before class.
- Be punctual to class – if you are late, see the course instructor after class.
- Please be respectful by not speaking while others are presenting during class.
- Please do not eat in class.
- All grades/points for assignments are final.
- If you have any questions about grades/points awarded to assignments, make an appointment to see the course instructor during the course instructor’s office hours.
- Course instructor will not discuss grades/points during class time. Please make an appointment.
- All citations must be in the APA format.
- Do not upload draft copies of assignments onto BlackBoard.
- All assignments are required to be uploaded onto BlackBoard.

- All deadlines are final.
- NO CELL PHONE USE/CELL PHONE TEXTING during the scheduled class session!

### *Submitting Work*

All assignments will be submitted via Blackboard Learn 9.1. Assignments posted after the deadline will be considered late and points will be deducted from the final grade.

### *Grading and Grade Reporting*

Grading rubrics for all assignments can be found on the course Blackboard Learn 9.1 website with the assignment. Students are encouraged to review the grading rubrics to guide them in successfully completing all assignments.

### *Student Evaluation of Teaching Effectiveness (SETE):*

The 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.

### *Writing Policy*

Teachers are judged on the accuracy of everything they write, whether it is a letter to parents or an email to a principal or a worksheet for students. Your written products – including, but not limited to, papers, lesson plans, and emails – should include appropriate and accurate spelling, grammar, punctuation, syntax, format, and English usage. You should expect that all assignments will be evaluated on these writing skills, in addition to any other expectations of a particular assignment.

### *Written Assignments*

All assignments within this course will utilize APA (6<sup>th</sup> Ed.) formatting guidelines. All assignment will be uploaded to BlackBoard in the designated “Assignments” section. The UNT Writing Lab (Auditorium Building, 105) offers one-on-one consultation to assist students with their writing assignments. To use this resource, call (940) 565-2563 or visit <http://www.unt.edu/writinglab/>

### ***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

#### **ACADEMIC INTEGRITY**

Students are encouraged to become familiar with UNT’s policy on academic integrity:

[http://policy.unt.edu/sites/default/files/untpolicy/pdf/7-Student\\_Affairs-Academic\\_Integrity.pdf](http://policy.unt.edu/sites/default/files/untpolicy/pdf/7-Student_Affairs-Academic_Integrity.pdf)

Academic dishonesty, in the form of plagiarism, 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.

#### **STUDENT CONDUCT**

Expectations for behavior in this class accord with the Code of Student Conduct: “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 instruction forum at UNT. Students engaging in unacceptable behavior\* will be directed to leave the classroom and the instructor may refer the student to the Center for Student Rights and Responsibilities 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 classrooms, labs, discussion groups, field trips, etc.” See <http://www.unt.edu/csrr/>

### **ETHICAL BEHAVIOR AND CODE OF ETHICS**

The Teacher Education & Administration Department expects that its students will abide by the Code of Ethics and Standard Practices for Texas Educators (Chapter 247 of the Texas Administrative Code [www.sbec.state.tx.us](http://www.sbec.state.tx.us)) and as outlined in Domain IV: Fulfilling Professional Roles and Responsibilities of the Pedagogy and Professional Responsibilities (PPR) Texas Examination of Educator Standards (TExES); and as also addressed in codes of ethics adopted by professionals in the education field such as the National Education Association (NEA) and the American Federation of Teachers (AFT).

### **COLLECTION OF STUDENT WORK SAMPLES POLICY**

In order to monitor students’ achievement and improve its instructional programs, the Department of Teacher Education and Administration collects random, anonymous student work samples to be analyzed by internal and external reviewers.

### **COMPREHENSIVE ARTS PROGRAM POLICY**

The Elementary Education program area supports a comprehensive arts program to assist pre-service and in-service 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.

### **EAGLE CONNECT**

All students should activate and regularly check their Eagle Connect (e-mail) account. Eagle Connect is used for official communication from the University to students. For information about Eagle Connect, visit <https://eagleconnect.unt.edu/>.

### **NATIONAL COUNCIL FOR THE ACCREDITATION OF TEACHER EDUCATION (NCATE)**

UNT is an NCATE-accredited institution. The educator as an agent of engaged learning” summarizes the conceptual framework of UNT’s basic and advanced programs. The program of educator preparation at UNT is based on the following key concepts: (1) content and curricular knowledge, (2) knowledge of teaching and assessment, (3) promotion of equity for all learners, (4) encouragement of diversity, (5) professional communication, and (6) engaged professional learning.

### **TECHNOLOGY INTEGRATION POLICY**

The Elementary Education program area supports technology integration to assist pre-service and in-service teachers to design and implement curricular and instruction activities which infuse technology throughout the elementary and middle school curriculum.

*All students must purchase access to TK20 for assessment purposes for other courses. Please go to the following link for directions on how to purchase TK20. Announcements regarding training on use of the TK20 system will also be posted on this website. <http://www.coe.unt.edu/tk20>*



### **Conceptual Framework:**

### **The Educator as Agent of Engaged Learning**

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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.

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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.

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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.

**This course syllabus is intended to be a guide and may be amended at any time by the instructor.**