

**University of North Texas at Dallas
Spring 2016
SYLLABUS**

EDEE 4330 D 001 : Science Grades EC-6		3Hrs
Department of Teacher Education		Division of Education and Human Services
Instructor Name:	Dr. Ratna Narayan	
Office Location:	201 N Dallas 1	
Office Phone:	972 780 1340, Cell: 806 252 5277 Phone calls/texts to my cell are welcome between 9AM and 10 PM daily and replies can be expected within no more than 24 hours.	
Email Address:	Ratna.narayan@unt.edu	
Office Hours:	Monday 1-5pm, Thursday 2:30 – 5:30 pm, or by appointment	
Classroom Location:	Dallas 1 room 344	
Class Meeting Days & Times:	Thursday 5:30 pm – 8:20 pm	
Important dates: Jan 23rd Orientation at the Perot, Attendance is mandatory March 6th Materials list due to Thomas		
Course Catalog Description:	The purpose of this course is to provide teacher candidates with the subject matter, background, and material organization for an integrated science program in the primary/elementary school. Students experience first-hand the scope and sequence of science education in a primary/elementary/middle school setting.	
Recommended Text and References:	Articles will be uploaded on Blackboard as and when required.	
You Need: A print out of the science TEKS EC-6 Access to a scanner A positive attitude towards the course activities and field experiences		
Access to Learning Resources:	UNT Dallas Library: phone: (972) 780-3625; web: http://www.unt.edu/unt-dallas/library.htm UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: 1012mgr@fhg.follett.com	
Field Experience: This course has a 25 hour field experience component that must be completed with the field experience logs submitted in a timely manner in order to get a grade for the course. 20 hours will be completed at the Perot while 5 hours will be spent observing in an elementary science classroom. Failure to complete the field experience will result in failing the class.		

Course Goals or Overview:	
	<p>The goal of this course is provide teacher candidates with the knowledge, skills and dispositions as a basis for making decisions in respect to teaching elementary school science.</p> <p>The knowledge, skills and dispositions developed in this course are delineated in a variety of ways, including student learning outcomes, assessments, assignments, and various course activities. They are also developed in a manner consistent with recommendations of the National Research Council’s National Science Education (NSES) and National Science Teachers Association (NSTA) Standards, requirements of the Texas State Board for Educator Certification (TEKS) and Interstate New Teacher Assessment and Support Consortium (INTASC) standards.</p>
Learning Objectives/Outcomes: At the end of this course, the student will	
1	Be able to demonstrate the use of instructional strategies and teaching activities to teach the science content knowledge included in Texas’ Essential Knowledge and Skills (The TEKS). TEKS
2	Learn to teach science activities or lessons at the elementary level by a variety of approaches (discovery, inquiry, decision-making, and problem solving) and in a variety of grouping arrangements. TEKS, NSES & INTASC standards
3	Develop a deeper understanding and appreciation of the science content covered in K-6 schools.
4	Learn to apply technology to elementary school science by identifying, describing, and using instructional software, Internet and other computer applications than would enhance instruction. TEKS, NSES & INTASC standards
5	Complete classroom observations and related tasks in field-based settings. TEKS, NSES & INTASC standards
6	Plan science activities and lessons and teach them to students in school and field-based settings TEKS, NSES & INTASC standards
7	Use reflective analysis to improve their teaching. TEKS, NSES & INTASC standards

Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated both verbally in class as well as through Blackboard

Please Note: assignments include both those completed in class as well as for homework.

TOPICS	TIMELINE	SLO
Nature of Science and Science Process skills Introduction to Field-Based Experiences and Teaching Science in the Elementary School, examining TEKS, TAKS and NSES standards. Content integration in the EC-6 classroom TEKS: K-6 (a) Nature of Science NSES / NSTA: Standards for Science Teaching EC-6, Chapter 3	Jan 21st Pre-survey due Jan 21st DAST drawing Science process skills Jan 23rd orientation at the Perot	1,2,3, & 7

<p>Standard 2 – Nature of Science INTASC: Standard 2 - Student development, Standard 4- Multiple Instructional Strategies INTASC: Standard 1 – Content Pedagogy</p>	<p>Homework 1 for Jan 28th Complete the 5th grade science STARR test and bring the results to class. Please check BB discussion thread for more directions on this assignment</p>	
<p>The Scientific Method, Inquiry-based Science teaching and Learning. TEKS: K-6 (0.1-0.4) Science Process / Inquiry NSES / NSTA: Inquiry and the National Science Education Standards Standard 3 - Inquiry INTASC: Standard 1 – Content Pedagogy</p>	<p>Jan 28th Scientific method Orientation reflection due Jan 28th on BB. Please refer to the discussion section on BB for prompts for this reflection.</p>	<p>1,2,3, & 7</p>
<p>Science Safety in the Elementary Classroom, MSDS sheets, safety contracts TEKS: K-6 (0.1) The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. NSES / NSTA: Safety and School Science Instruction Standard 9 – Safety & Welfare INTASC: Standard 6 – Communication & Technology, Standard 7 - Planning</p>	<p>Feb 4th Safety contract Science Concepts, activity and vocab words and strategies due on BB</p>	<p>2, 6 & 7</p>
<p>Constructivism in the Elementary Classroom Planning and Teaching Science: Activities, Lessons, and Units, 5E model, Hands-on activity, Visual Organizer, Extension activity, Formative and Summative Assessments, Administration and Arts Integration (e.g., scientific illustration, using science trade books [language arts literacy]), dramatic performance [skits/historical science leader role play], and music. TEKS: K-6 (0.5 – 0.14) Science concepts NSES /NSTA: Standards for Science Teaching EC-6 Chapter 3, Standards for Science Content EC-6 Chapter 6 Standard 5 – General Teaching Strategies INTASC: Standard 2: Planning Standard 7- Planning</p>	<p>Feb 11th 5E lesson, subject integration Feb 18th Draft of TK 20 section 2, standards 4, 5 and section reflection due on BB. Please check BB discussion thread for more directions on this assignment. All section 2 reflections and artifacts must be uploaded to TK 20 by Mar 1st.</p>	<p>1-7</p>

<p>Feb 18th work day. You will work on your cart activities as a group in class.</p>	<p>Feb 18th I Must get a draft of your cart activity by Feb 28th and approve it.</p>	
<p>Scientific inquiry in the elementary class Definition, types, examples , expectations of teachers, students TEKS: K-6 (0.1-0.4) Science Process / Inquiry NSES / NSTA: National Science Education Standards, an overview Standard 3 - Inquiry NTASC: Standard 2: Planning</p>	<p>Feb 25th Scientific inquiry Feb 28th P2 reflection due on BB. Please refer to the discussion section on BB for prompts for this reflection. March 6th the materials list with activity prices and websites for the cart activities will be emailed to Thomas.</p>	<p>1-3,7</p>
<p>Assessment in the Science Classroom TeXes, PPR, Content exams TEKS: The TEKS and the TAKS tests NSES / NSTA: Assessment in Science Education, Chapter 5 Standard 8 - Assessment INTASC: Standard 8 - Assessment</p>	<p>March 3rd March 3rd 5E Cart activity lesson plan due on BB</p>	<p>1, 6,7</p>
<p>Professional development opportunities for elementary science teachers TEKS: K-6 (0.5 – 0.14) Science concepts NSES /NSTA: Standards for Professional Development of Teachers of Science, Chapter 4 Standard 10 – Professional growth INTASC: Standard 9 – Reflective Practice, Professional development</p>	<p>March 10th Game Day. Test out the Museum game you designed in class. Please bring the game and relevant materials to class to test on your peers. March 10th Game lesson plan, documents due on BB (March 14-20th UNT Dallas spring break)</p>	<p>1-3,7</p>
<p>Multicultural Science Education TEKS: K – 6 (0.3) Science Process, connect science concepts with the history of science and contributions of scientists NSES / NSTA: Diversity and the National Science Education Standard 5 – General skills of teaching</p>	<p>March 24th 1 hour exchange of game documents and lesson plan with partner in preparation for P3P3 at the museum. Please bring a hard copy of your game</p>	<p>2, 6,7</p>

<p>INTASC: Standard 3 – diverse learners</p>	<p>documents and lesson plans with you.</p>	
<p>Use of Models in the elementary science classroom TEKS: K-6 (a) Use of models of objects and events as tools for understanding the natural world and to show how systems work NSES / NSTA: Standards for Science Teaching EC-6 Chapter 3, Standard 5 – General skills of teaching INTASC: Standard 4- Multiple Instructional Strategies</p>	<p>March 31st STEM poster / book due</p>	<p>1-3,7</p>
	<p>April 7th April 7th If Thomas has all the materials, we will have class at the Museum to practice with the cart activity materials. Please bring cart activity documents and lesson plans with you. April 10th P3 reflection due on BB. Please refer to the discussion section on BB for prompts for this reflection.</p>	<p>1-3,7</p>
<p>Controversial issues in science and science teaching TEKS: K-6 (0.4,0.5) Science Process NSES / NSTA: National Science Education Standards, an overview Standard 4 – Issues INTASC: Standard 1: Content Pedagogy Standard 10 – School and community involvement</p>	<p>April 14th 1 hour in class interaction with partner regarding cart activity (exchange of lesson plans) in preparation for P4P2). Please bring a hard copy of your cart activity documents and lesson plans with you.</p>	<p>1-3,7</p>
<p>Scientific Literacy, reading and writing science, science notebooks TEKS: K-6 (0.3) Science Process NSES / NSTA: National Science Education Standards, an overview</p>	<p>April 21st Draft of Key assignment uploaded to BB/ TK 20 Nov 30th</p>	

Standard 3 - Inquiry Standard 5 – General skills of teaching INTASC: Standard 1: Content Pedagogy		
Student science activity –vocab strategy presentations	April 28th	
Last Class day Student science activity –vocab strategy presentations Pot luck	May 5th Key assignment narrative due on BB May 5th and on TK20 by May 7th May 6th P4 reflection due on BB. Please refer to the discussion section on BB for prompts for this reflection. May 8th Post survey completed.	1-3, 5-7
All assignments due /submitted / uploaded by 5pm May 9th.		

Tentative Schedule for the Perot spring 2016

This is a tentative schedule subject to change. You will be notified of any changes that might occur.

Phase	Tentative dates for each phase	What you will be doing in each phase	Assignment
P1	Jan 23 rd 9 am - 3pm	Orientation to the museum, explore exhibit halls, examples of games, cart activities	P1 Reflection due on BB Jan 28th
P2P1	Jan 26 th – Feb 11th	3 hours. In Hall 1 (Cart activity hall). Explore the hall; jointly work on Cart activity hall vocabulary. Shadow a GEP for 2 hours. For this phase you will sign up for times provided by the museum on google docs	P2 Reflection due on BB Feb 28th
P2p2	Feb 12 th – Feb 24th	2 hours. In hall 1. Interact with visitors in hall 1. For this phase you will sign up for times as per your schedule on google docs	
March 6th	the materials list with prices and websites for the cart activities will be emailed to Thomas.		
P3p1	Feb 26 th – March 8th	3 hours. Explore exhibit hall 2 (game hall) Shadow GEP in Game Hall for 2 hours. For this	

		phase you will sign up for times provided by the museum on google docs	
March 10th	Test game out in class. Submit game details in BB in required format and game lesson plan		
P3p2	March 12 th – March 27 th	2 hours. Interact with museum visitors using your game in the Game exhibit hall For this phase you will sign up for times as per your schedule on google docs (March 14-20th UNT Dallas spring break	P3 Reflection due on BB April 10th
P3P3	March 28 th - April 10 th 3 hours partner up with someone in another game hall and play their game (1.5 hours in your hall, 1.5 hours in their hall) For this phase you will sign up for times as per your schedule on google docs		
April 7th	If Thomas has all the materials then have class at the museum, let them test out cart activities		
P4P1	April 11 th – April 24 th	3 hrs. Interact with visitors with the cart activity in hall 1 For this phase you will sign up for times as per your schedule on google docs	P4 Reflection due on BB May 6th
P4P2	April 24 th – May 5 th	4 hours You will sign up with a partner in another cart activity hall. You will spend 2 hours in your hall teaching them your cart activity and spend 2 hours in their hall interacting with their cart activity. For this phase you will sign up for times as per your schedule on google docs	
Post survey to be completed by May 8 th 2016			

Important Note: Dos and Don'ts at the Perot

DON'T BE LATE. DON'T CHEW GUM. DON'T BE RUDE.
 DON'T CHANGE THE TIME AND DATE YOU HAVE SCHEDULED YOURSELF FOR. This is important. Signing up for a particular date or time at the museum is a PROFESSIONAL COMMITMENT. I have to let the museum know when you are coming and if you don't show up that is unprofessional. **If you have signed up for a particular time and don't show up, you get zero on those related assignments plus you don't complete the required hours for the class which can fail you.** If you are sick please produce a doctor's note. Just saying I am not feeling well won't cut it sorry!
 DON'T SIGN UP FOR 3 HOURS AND STAY FOR 2. You will sign in and out each time you go to the Perot. I have access to these sign in times and I will check on these randomly.

Remember you are representing Dr. N and UNT Dallas. Be professional, positive, enthusiastic and engaging and always ready to learn.

Attire to be worn:

On the Jan 23rd: Comfortable shoes, you will be doing a lot of walking, comfortable, professional looking clothes.

For all the Phases: Black pants and a white top/ tee, shirt (no color showing at all), comfortable closed toe shoes

Parking and entry to the museum will be free each time you go to the museum for the field experiences for EDEE 4330

Course Evaluation Methods

The course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course

Assignments –

1. Weekly Activities– Readings and other activities that are assigned weekly throughout the semester.
2. Reflection Papers– Reflective writings that serve to integrate your experiences in the classroom and in the field during the semester.
3. Perot museum assignments
4. Science resource folio related assignments
5. Other Assignments

Assignments and grades:

Assignment	Brief Description	Points	SLOs	Due date
Museum Related Assignments				
Pre-Survey	A pre survey on survey monkey to be completed before you go to the Museum on the 24th	20	7	Jan 21st
Post-Survey	A post survey taken before finals on survey monkey	20	1-7	May 8th
P1 reflection	Orientation reflection at the Museum	20	1, 2, 3, 6, 7	Jan 28th
P2 reflection	Reflection after completing P2 at the Museum	20	1, 2, 3, 6, 7	Feb 28th
P3 reflection	Reflection after completing P3 at the Museum	30	1, 2, 3, 6, 7	April 10th
P4 reflection	Reflection after completing P4 at the Museum	30	1, 2, 3, 6, 7	May 6th
Museum Game	Description and lesson plan	20	1, 2, 3, 6, 7	March 10th
Museum Cart activity	Description, activity, materials list Cart activity Lesson plan	20	1, 2, 3, 6, 7	Feb 28th March 3rd

Other assignments				
5 th grade Starr test	Take the 5 th grade science STARR test and reflect on how you did	10	1, 3, 7	Jan 28 th
TK20 Section 2	Standards 4 & 5 reflections and artifacts, section reflection	20	1, 2, 3, 6, 7	Feb 18 th Mar 1 st
Key assignment	Upload key assignment narrative and documents to BB / TK20	10	1-7	May 5 th May 7 th
Science Activity –vocabulary assignment	Develop and present a EC-6 science concept with a) hands-on activity and b) relevant vocabulary strategy	100	1-7	April 28 th May 5 th
STEM Poster/book	STEM presentation	80	1-7	March 31 st
Grand total = 400 points				

Grade Distribution:

400 – 360 = A

359 – 320 = B

319 – 280 = C

279 – 240 = D

Below 239 = F

Please note: All the assignments are compulsory. All assignments will be submitted to a thread in Blackboard unless mentioned otherwise. I expect you to complete all the assignments in a timely fashion. There will be no substitutions unless I approve of them. Professional development opportunities will be offered; if you are unable to avail of these an alternate assignment will be provided.

Class Participation – Expectations

1. ATTENDANCE - Attend all classes, meetings, etc. arriving on time.
2. PREPARATION - Be prepared to discuss assigned readings and submit assignments according to established deadlines.
3. PARTICIPATION - Contribute constructively and respectfully to all discussions and activities.
4. RESPECT – Do not talk while the teacher or another presenter is speaking.
5. ACADEMIC HONESTY - Know and follow course, departmental, program and university policies on assignments and assessments.
6. PROFESSIONALISM - Know and follow departmental, program and university policies expected of PDS students.
7. Participation and Professionalism – CRITICAL!
 - a. Absences and tardies will count toward final grade reduction: 2 absences = one final grade reduction, 4 absences = two final grade reductions, 5 absences = three grade reduction, please make arrangements to retake the class another semester
 - b. Three tardies = 1 absence. (Tardy - must arrive within the first 10 minutes of class)
 - c. Completes assigned readings before coming to class

- d. Answers questions and participates in class discussions
 - e. Avoid social or unrelated conversation, working on other assignments, using cell phone, checking email, surfing web, playing video games during class time etc.
8. **You are expected to be present in class and on time especially on presentation dates. If you arrive late you will lose 25% of the assigned points.**

University Policies and Procedures

Students with Disabilities (ADA Compliance):

The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA).

"Any student requesting academic accommodations based on a disability are required to register with Disability Services each semester. A letter of verification for approved accommodations can be obtained from this office. Please be sure the letter is delivered to me as early in the semester as possible. Disability Services is located in DAL 2, Room 204 and is open 8:30-5:00p.m., Monday through Friday. The phone number is (972) 338-1777."

Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. For more information, you may visit the Office of Disability Accommodation/Student Development Office, Suite 115.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short 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.

Assignment Policy:

All assignments are compulsory. There are no exceptions to this rule. Please refer to the assignment expectations document for details about each assignment and its due dates. If an assignment is submitted after the due date and within 24 hours you could get 50% of the grade. Anything submitted after 24 hours of the due date , you get zero points!

If I am not satisfied with an assignment response, I reserve the right to deduct points and return it to you so you may improve on it and resubmit to get some of the deducted points back if the work is deemed satisfactory. All assignments are due by 5pm May 9th 2016 after which NO assignments will be accepted or graded.

Exam Policy:

Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook).

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of conduct and Academic Dishonesty policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Conduct at http://www.unt.edu/csrr/student_conduct/index.html for complete provisions of this code.

Please take the time to go through this link. If I find you have plagiarized from any source without giving them due credit I will give you a zero for that assignment.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Attendance and Participation Policy:

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. **Students are responsible to notify the instructor if they are missing class and for what reason. If I have not heard from you and receive supporting documentation for your absence, I shall consider it an unexplained absence. Two such absences will reduce your overall grade by a letter grade irrespective of the points you might make. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent. If you have missed a class, please make an appointment to meet me so we can determine what needs to be done to make up the lost time. If you are absent on a presentation day you will get zero points for that assignment.**

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Center for Student Rights and Responsibilities as the instructor deems appropriate.

Optional Policies:

Use of WebCT/Blackboard

I will expect you to use Blackboard to upload your reflection papers and I will give you feedback on those on Blackboard. Please monitor these for additional comments I give or information I require.

Use of Cell Phones & other Electronic Gadgets in the Classroom

Please do not use your cell phones in class. If it is an emergency, I will permit you to leave class and take the call. **If I see you texting or playing videogames or checking your email in class I will drop you a letter grade.**

Food & Drink in the Classroom

I do not mind food and drink in the classroom, however when we are conducting an activity, I will expect all food and drink to be put away immediately. All food and drinks must be properly disposed of.

Use of Laptops

If I need you to use a laptop during class I will take you to the computer lab.

Grade of Incomplete, "I"

A grade of incomplete, "I" will be given only under extenuating circumstances.