

University of North Texas at Dallas
Fall 2014
SYLLABUS

EDEE 4330 D 090 : 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 Wednesday 2:30 - 4:30 pm, Thursday 2:30 – 5:30 pm, or by appointment	
Classroom Location:	Dallas 1 room 344	
Class Meeting Days & Times:	Thursday 11:30 pm – 2:20 pm	
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.	
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 log submitted in a timely manner in order to get a grade for the course. Failure to complete the field experience will result in failing the class.		
Course Goals or Overview:		
	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.	
	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.
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 Standard 2 – Nature of Science INTASC: Standard 2 - Student development, Standard 4- Multiple Instructional Strategies INTASC: Standard 1 – Content Pedagogy	August 28th DAST drawing Science process skills Homework 1 for Sept 4th Complete the 5th grade science TAKS test and bring the results to class.	1,2,3, & 7
The Scientific Method, Inquiry-based Science teaching and Learning.	Sept 4th Scientific method	1,2,3, & 7

<p>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>Sept 6th Orientation at the Museum Phase 1 reflection due Sept 11 on BB</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>Sept 11th Safety contract Safety contracts, poster due Sept 18th Sept 13th Project Wild certification</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>Sept 18th 5E lesson, subject integration Life Science lesson plan due Sept 25th using Project Wild resources.</p>	<p>1-7</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 INTASC: Standard 2: Planning</p>	<p>Sept 25th Scientific inquiry Sept 28th Phase 2 reflection and assignments due on BB Oct 1st List of items to be purchased for cart activities sent 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>October 2nd Assessments Due October 9th: Road runner and Willie Coyote</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>October 9th Oct 9th : Physical Science lesson plan due Due October 16th: Draft of section 2 of TK 20 assignment</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 INTASC: Standard 3 – diverse learners</p>	<p>October 16th Multicultural scientist Due Oct 20th Phase 3 reflections</p>	<p>2, 6,7</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>October 23rd Models, FOSS Oct 23rd: Earth Science lesson plan due</p>	<p>1-3,7</p>
<p>Science Fair project student presentations</p>	<p>October 30th Due October 30th: Phase 4 reflection</p>	<p>1-3,7</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	Nov 6th Issues Due Nov 13th: Pinterest assignment Complete your 5 hours observation at a school by Nov 6th	1-3,7
Scientific Literacy, reading and writing science, science notebooks TEKS: K-6 (0.3) Science Process NSES / NSTA: National Science Education Standards, an overview Standard 3 - Inquiry Standard 5 – General skills of teaching INTASC: Standard 1: Content Pedagogy	Nov 13th Literacy science integration Due Nov 20th: informal vs school science assignment	1-3,7
Nov 20th CAST Night at the Museum	Both sections of the class will meet at the Perot Museum from 5-11pm. Due Phase 5 reflection	1-3, 5-7
Thanksgiving break	No class Nov 27th - 30th	
Final presentations	Dec 4th Last class Due Phase 6 evaluation and reflection	
Final Presentations	Dec 11th	
All assignments due /submitted / uploaded by Dec 12th 5pm		

Schedule for Field Experiences at the Perot

Phase	Tentative dates for each phase	What you will be doing in each phase	Assignment due dates
P1	Sept 6 th	Orientation to the museum, explore exhibit halls, examples of games, cart activities, pick books to be read	Sept 11 th Phase 1 reflection due on BB
P2p1	Sept 7 th - 20th	3 hrs of exploring the assigned exhibit hall, TEKS mapping, vocab list, 2 activities	Sept 28 th Phase 2 reflection and assignments due on BB
P2p2	Sept 13 th – 28th	Shadow a gallery experience presenter in assigned exhibit hall. You will sign up for times the museum will provide	
October 1st the materials list with prices and websites for the cart activities will be emailed to Thomas.			
P3p1	Sept 28 th – Oct 12th	You and a partner will interact with the museum visitors in your assigned exhibit hall.	Oct 20 th Phase 3 reflections
P3p2	Anytime in	1 hour story time with a partner (this can be broken	

	October	up into 2 half hour sessions on 2 different days, students will choose and sign out books on Orientation day. Bilingual students will read in Spanish	
P4	Oct 12 th – 30 th	3 hours when they interact with the museum visitors with their game	Oct 30 th Phase 3 reflection
P5p1	Nov 1 st – 19 th	Cart activities. Both parts occur in consecutive weeks to give you time to fix what needs to be.	Nov 20 th Phase 5 reflection
P5p2			
November 20 th CAST night at the Museum. Both sections will meet at the museum in the evening.			
P6	Nov 24 th – Dec 4 th	Evaluation of another hall 2 hours (this will be 2 1 hr sections, students from 1 hall will visit another hall and evaluate how students in those halls are doing	Dec 4 th Evaluation and reflection for Phase 6

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. Your 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 6th Sept: 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

On Nov 20th: UNT Dallas tee shirt and black pants

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 such as the science story 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. Science Fair Project
4. Perot museum assignments
5. Final Science Activity presentation

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. I am offering a Project Wild Professional Development opportunity on Sept 13th at UNT Dallas from 9 am – 3pm. Attendance is mandatory.
9. **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.**

Grading Matrix:

Instrument	Point Value	Total	SLO
Assignments		80	
5 th grade TAKS test	10		3
Safety contract/poster	10		1,6
Pinterest assignment	10		1,2
Section 2 checkpoint 2	20		1-3
Roadrunner and Willie Coyote	10		1,4
Informal vs school science paper	20		5-7
Science fair experiment,	40	40	1-3,6

develop, conduct and teach reflect			
Perot Museum assignments		170	1-7
Phase 1 reflection	10		
Phase 2 assignments	20		
Phase 2 Reflections	10		
Phase 3 Reflection	10		
Science literacy connections	40		
Phase 4 Science game & reflection	30		
Phase 5 Cart activity & reflection	30		
Phase 6 evaluation	20		
TK 20 EDEE 4330 Key assignment		50	1-3, 6
1 Physical science lesson plan	10		
1 Life Science lesson plan	10		
1 Earth science lesson plan	10		
Science concept demonstration	20		
Participation	10	10	1-3
Grand Total		350	

Grade Determination:

- A = 350 - 315 points
- B = 314 – 280 points
- C = 279 – 245 points
- D = 244 – 210 points
- F = below 209 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 or call **Rosemary Meredith** at 972-338-1777 or email at **Rosemary.Meredith@untdallas.edu**.

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. Late assignments will result in a 5 point reduction for each day late.

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 Dec 12th 2014 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.