

**University of North Texas at Dallas
Summer 2015
SYLLABUS**

EDCI 5350 Advanced Pedagogical content knowledge for teachers of K-8 science /3Hrs			
Department of	Teacher Education and Administration	Division of	Education and Human Services
Instructor Name:	Dr. Ratna Narayan		
Office Location:	201 N Dallas 1		
Office Phone:	972 780 1340 Cell Phone: 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@untDallas.edu		
Office Hours:	By appointment		
Virtual Office Hours:	Call or email		
Classroom Location:	Dallas 1 343		
Class Meeting Days & Times:	6/9/15 – 7/9/15 Tue, Wed, Thur 9 am – 11:50 pm There will be no class on June 18 th , however in lieu of that class will meet on Monday July 6 th from 8:30 am – 12:30 pm. Class times on Wednesday July 8 th will be duly adjusted from 10:45 am – 12 noon to compensate for the extra hour of class time on Monday July 6 th .		
Course Catalog Description:	This course is designed to introduce advanced pedagogical techniques relevant to teaching science in the K-8 classrooms		
Prerequisites:	Admitted to Graduate School		
Co-requisites:	None		
Required Text:	Inquiry and the National Science Education Standards A guide for Teaching and Learning.		
Participants will need to have access to a laptop they will use during class time.			
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@fheg.follett.com

Course Goals or Overview: Participants will become familiar with relevant content and pedagogical strategies to effectively teach science in the K-8 classrooms.

Learning Objectives/Outcomes: At the end of this course, the student will be able to:

1	To become familiar with the role of inquiry in current national and state educational reform efforts including the National Science Education Standards, the NGSS, the Benchmarks for Science Literacy, and the Texas Essential Knowledge and Skills and to use these standards in lesson and unit planning.
2	To develop quality K-8 science lessons through inquiry-based interdisciplinary approaches, integrated math/science curricula, and alternative instructional strategies for oral presentation, demonstration, and "hands-on" lessons;
3	View learning by inquiry as the cornerstone of effective science instruction.
4	To develop an understanding of science teaching and learning research for planning, delivering, and managing hands-on/minds-on science instruction with an emphasis on meeting the needs of diverse student populations.

Course Outline

Date	Topic	SLO
9 th June	First day of class STEM in everyday life Read Chapter 1 of NSES Inquiry book	1-4
10 th June	Inquiry in science, in classrooms and in informal contexts Read Chapter 2 of NSES Inquiry book	1-4
11 th June	Inquiry in NSES and NGSS/ Cross cutting concepts Read Chapter 4 of NSES Inquiry book	1-4
16 th June	Classroom assessment and Inquiry Read Chapter 5 of NSES Inquiry book	1-4
17 th June	Preparing Teachers for Inquiry Based teaching Read Chapter 6 of NSES Inquiry book	1-4
18 th June	No class 20 th June all article reviews to be submitted on BB	
23 rd June	Making the case for inquiry Student Article presentation Read Chapter 7 of NSES Inquiry book	1-4
24 th June	Frequently asked questions about inquiry Student Article presentation Read Chapter 8 of NSES Inquiry book	1-4
25 th June	Supporting inquiry-based teaching and learning Student Article presentation	1-4

30 th June	Technology and Science Teaching Student Article presentation	1-4
1 st July	Zoo assignment due Student Article presentation	1-4
2 nd July	Science activity presentation	1-4
6 th July	Stem Passport activities with Girls Inc	1-4
7 th July	Science activity presentation	1-4
8 th July	Stem in everyday life Presentation with Girls Inc	1-4
9 th July	Last day of class	1-4
10 th July	All assignments due by 5pm.	

COURSE EVALUATION METHODS

GRADING MATRIX

Instrument	SLO's Weight	Notes
Field trip at the zoo Field trip to the zoo 5 complete activities for students to participate in at the zoo.	1-4 50	Go visit the Dallas Zoo by yourself and design 5 activities for your students to complete on their field trip to the zoo. Provide a rationale for each activity. Each activity must be distinct and different from the others. Include materials you will need to conduct each activity and the procedure as to how the activity must be conducted. Make sure you mention the purpose of each activity.
Article review	1-4 50	<p>During the summer semester, each student is required to review one educational article that concern science education at the K-8 level. Each review will be typed and double spaced. You can determine the format, but I would like the following questions addressed in your reviews:</p> <ol style="list-style-type: none"> 1. Could you take the information in this article and instantly implement the project in your own classroom? 2. What age group and scientific concept is this article targeting? 3. Are there ways to improve this activity? 4. Be sure to give a brief description of the activity. <p>You can choose the articles from 2013-current issues of appropriate journals such as Science and Children, Science Scope, The Science Teacher to mention some.</p>

		I will make copies of your article review for your peers and you will be in charge of initiating and sustaining a 30 minute pedagogical discussion with your peers stemming from the article. Please be ready with 5 discussion questions. Two students will conduct a discussion per class day
Science activity Presentation	1-4 50	You will present a hands-on science activity to your peers. You will need an accompanying activity description (how to, materials etc.) (10 points), 5E lessons plan incorporating the activity (10 points), a trifold board (10 points) and a foldable (10 points). You will get 15 minutes to present and wrap up the activity. You must have an initiating question / activity, and a conclusion.
STEM in everyday life Presentation	1-4 50	You will be making a presentation to the girls who are at a STEM summer camp on our campus. The focus of the presentation is STEM in everyday life. You will select 10 everyday life items and spell out what the STEM aspect is in each of them. Please list the items on BB in the thread created for it so there will be no overlap with your peers. Make sure that 2 of the 10 specify science, 2 technology, 2 engineering and 2 math. The other 2 may be any of the 4 mentioned earlier. You will need a board for your presentation as well as bring in objects.

Grading Scheme:

250 – 225 = A
 224 – 200 = B
 199 – 175 = C
 174 – 150 = D
 Below 149 = F

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), you will lose 10 points for the first tardy, 20 points for the second and thirty points for the third and so on
- 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.**
9. **Late assignments will NOT be accepted. If an assignment is submitted late you will NOT get any points for it.**
10. **All preparations for a presentation MUST BE MADE BEFORE THE PRESENTATION AND NOT IN CLASS. INCOMPLETE PRESENTATIONS WILL LOSE HALF THE POINTS FOR THE ENTIRE ASSIGNMENT**

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. Late assignments will NOT BE ACCEPTED. YOU WILL NOT RECEIVE ANY POINTS FOR A LATE ASSIGNMENT.

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 July 10th 2015 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 assignments 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 medical circumstances.