

University of North Texas at Dallas  
Spring 2015  
SYLLABUS

<b>EDCI 5340 Innovation in Earth and Space Science /3Hrs</b>			
<b>Department of</b>	<b>Teacher Education and Administration</b>	<b>Division of</b>	<b>Education and Human Services</b>
<b>Instructor Name:</b>	<b>Dr. Ratna Narayan</b>		
<b>Office Location:</b>	<b>201 N Dallas 1</b>		
<b>Office Phone:</b>	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		
<b>Email Address:</b>	<b>Ratna.narayan@untdallas.edu</b>		
<b>Office Hours:</b>	<b>Monday 1-5pm Wednesday 2:30 - 4:30 pm, Thursday 2:30 – 5:30 pm, or by appointment or By appointment M-F</b>		
<b>Virtual Office Hours:</b>	Call or email		
<b>Classroom Location:</b>	Dallas 1 343/ online		
<b>Class Meeting Days &amp; Times:</b>	Saturday 12:30 pm – 3:20 pm		
<b>Course Catalog Description:</b>	This course is designed to introduce students to innovations in earth and space science at the K-8 level and how to implement these in their classes.		
<b>Prerequisites :</b>	Admitted to Graduate School		
<b>Co-requisites:</b>	None		
<b>Required Text:</b>	There is no required text and articles will be uploaded on blackboard as required.		
Participants will need to have access to a laptop they will use during class time.			
<b>Recommended Text and References:</b>	Inquiry and the National Science Education Standards A guide for Teaching and Learning.		
<b>Access to Learning Resources:</b>	<p><b>UNT Dallas Library:</b> phone: (972) 780-3625; web: <a href="http://www.unt.edu/unt-dallas/library.htm">http://www.unt.edu/unt-dallas/library.htm</a></p> <p><b>UNT Dallas Bookstore:</b> phone: (972) 780-3652; e-mail: <a href="mailto:1012mgr@fhcg.follett.com">1012mgr@fhcg.follett.com</a></p>		

**Course Goals or Overview:** Participants will become familiar with innovations in earth and space science and explore the relevant content and pedagogical strategies to implement these innovations into their classroom

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

1	To become familiar with current national and state educational reform efforts those include the National Science Education Standards, 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 and implement innovative Earth and Space Science lessons that use student-centered forms of instruction such as cooperative group work, inquiry, the use of writing in science, and methods of teaching for conceptual change.
3	To develop an understanding and appreciation of innovations in earth and space science content and pedagogical content knowledge at the K 8 level.

Course Outline

Jan 24th	Meet at the Perot Museum. Game development	SLO's 1-3
Jan 31st	Face to face. Introductions, syllabus expectations and assignments	1 - 3
Feb 7th	Online. Seasons, moon phases, earth and moon	2 - 3
Feb 14th	Online. Project based on seasons, moon phases, earth and moon	2 - 3
Feb 21st	Face to face. Game day. Please bring your game and relevant documentation to class to test on your peers.	1 - 3
Feb 28th	Online. ExploraVision Challenge	2 - 3
Mar 7th	Online. Global carbon project, carbon cycle and carbon footprints	2 - 3
Mar 14th	Online. Design a PBL	1 - 3
Mar 21st	Spring Break. No class	
Mar 28th	Face to face. Student presentations of Project based on seasons, moon phases, earth and moon	1 - 3
April 4th	Online. Innovations project research	2 - 3
April 11th	Online. Innovations project research	2 - 3
April 18th	face to face Innovations project presentation	2 - 3
April 25th	Student presentations face to face Global Carbon Project presentation	1 - 3
May 2nd	Student presentations face to face Exploravision Presentation	1 - 3
May 9th	Presentations and Potluck Finals	1 - 3

## COURSE EVALUATION METHODS

### GRADING MATRIX

Instrument	SLO's Weight	Notes
Exploravision	1 - 3 100	This is a science competition in which pairs of students imagine future technology. The student group selects a piece of technology that affects everyday life. The team then explores how the technology currently works, how and why it was invented, and the history of the particular technology. Based on the current state of the technology, the team envisions what it will look like in twenty years. Using this vision and their research, the team creates a detailed written entry on their technology.
Game	1 – 3 100	You will design a hands-on game based on a concept in the Expanding Universe Exhibit Hall of the Perot Museum. It will have two levels, easy and difficult and will cater to K-8 students. You will also design a 5E lesson plan incorporating your game as one of the E's. Documentation about the game such as the purpose, materials used to create the game, the purpose of the game and how to play it are also required.
Moon, earth, phases, distance Project.	1-3 100	You will carry out this project and write up and present the results just like a conference presentation. Details to follow
PBL	1-3 50	Design a PBL using the Lancaster format that incorporates an innovation or engineering design element.
Global Carbon Project presentation	2=3 50	This is the Global Carbon Project presentation using a trifold.
Innovations project research	2-3 100	You will pick 2 innovations, one in earth, and one in space science, explain why they are innovations and prepare a detailed brochure on them to present to your peers. Explain their importance and their historical development! Get ideas for these from the Perot Museum

#### Grading Scheme:

500 - 450 = A

449 – 400 = B

399 – 350 = C

349 – 300 = D

Below 299 = 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)
  - 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. 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 May 11<sup>th</sup> 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](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](http://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.