

## Teaching Science EC-6\_EDEE-3330\_010

Welcome to the EDEE 3330 course! This syllabus is designed to help you become successful while in class and after taking the course.

### Instructor Information

<b>Course Name</b>	<b>Teaching Science EC-6</b>
<b>Instructors' Name</b>	<b><u>Dr. Mila Rosa L. Carden (she, her, hers)</u></b>
<b>Office Location</b>	<b>Matthews Hall 218-H</b>
<b>Office Hours</b>	<b>Tuesday: 2-4PM; Thursday: 1:00-2:00PM (Zoom)</b>
<b>Email:</b>	<b>mlarosa.carden@unt.edu</b>

### Course Description

Teaching Science EC-6. Introduces students to the scope and sequence of science education in an elementary school setting, to lesson plans and lesson design inside both formal and informal learning settings, and to the contributions of scientists of from various backgrounds, race, ethnicities. Focuses on ways to make science accessible for all and use scientific knowledge to make informed decisions. Must be taken in Block A. Prerequisite(s): Admission to teacher education program. Corequisite(s): EDRE 3350 and EDEE 3340.

### Course Structure

EDEE 3330-Teaching EC-6 a is a face-to-face, 15-week course, 2hrs and 50-minute long per session. All assignments have due dates; please refer to the course schedule included in this syllabus. All sessions will be at Matthews Hall, Rm 111 (change of venue will be promptly communicated). Each session includes one module with a focused topic that will last for a week. If there are meritorious reasons (e.g., suspension of classes), module coverage will be extended to the next session/s. All readings will be uploaded to Canvas.

### Course Objectives:

Throughout the course, we will address an enduring goal of science education to develop an understanding of the nature of science through readings, research-based instructional activities such as the use of picture books, and participation in scientists' works (e.g., citizen science). These activities will help answer the question, **how is scientific knowledge constructed?** Each course requirement aims to expand students' own definition and ideas of science to make science more relevant and meaningful for them, thus answering, **who is science for?** You will have microteaching sessions to help you design and implement a 5E lesson plan emphasizing inquiry in science and teaching the nature of science (NOS). The 5E learning framework is a constructivist, inquiry approach where you are supported to enhance your curiosity (*engage*), design your investigations (*explore*), create, and analyze your own evidence/scientific ideas (*explain*), communicate, and challenge your ideas with others (*elaborate*), and assess your understanding (*evaluate*) (Bybee, 2015). After your microteaching, your peers and I will provide feedback to help you reflect on **why and how you teach science**.

**Important:** This course is meant to teach you pedagogy to teach science to elementary students. It is expected that you have the science content knowledge prior to this course. Your science content knowledge is important to be able to teach science. Therefore, we will review science content through activities that we will have in class.

### **Learning Outcomes**

By the end of this course, and with the support of your instructor, you will:

1. demonstrate professional skills, knowledge, and attitudes as outlined in the Texas Teachers Proficiencies
2. identify appropriate science materials, lessons, and strategies for your selected grade level to plan and teach Science Content in the Texas Essential Knowledge and Skills.
3. incorporate evidence-based science practices and safe science practices in lesson plans and implementations.
4. design/modify activities to support equitable and inclusive science learning.
5. demonstrate understanding of the nature of science through your 5E lesson plans and microteaching.

### **For laboratory activities, please be informed of the following safety procedures and guidelines:**

While working in laboratory sessions, you are required to follow proper safety procedures and guidelines in all activities requiring lifting, climbing, walking on slippery surfaces, using equipment and tools, handling chemical solutions and hot and cold products. Students should be aware that UNT is not liable for injuries incurred while students are participating in class activities. All students are encouraged to secure adequate insurance coverage in the event of accidental injury. Students who do not have insurance coverage should consider obtaining Student Health Insurance. Brochures for student insurance are available in the UNT Student Health and Wellness Center. Students who are injured during class activities may seek medical attention at the Student Health and Wellness Center at rates that are reduced compared to other medical facilities. If students have an insurance plan other than Student Health Insurance at UNT, they should be sure that the plan covers treatment at this facility. If students choose not to go to the UNT Student Health and Wellness Center, they may be transported to an emergency room at a local hospital. Students are responsible for expenses incurred there.

To ensure that you understand safety measures, you will have to complete the Texas Education Agency Safety Training Course. See [Canvas](#) for details. In addition, you will read and sign the safety contract found in this [link](#).

### **How to Succeed in this Course**

I always start my class with “science and me” storytelling. Your stories provide me a window to your past and present science learning experiences, including negative and positive attitudes toward science and apprehensions about teaching science. Knowing your stories will help me get to know you, thus helping me better support your learning. As future science teachers, it is important that you are confident in how to teach science. To help you gain this confidence, you will be “lead learners” in class. My hope is that you will have a sense of self-value as a source of

scientific knowledge in and out of the classroom. Throughout the course, I want you to not just learn and do science but learn *about* science. After the course, you should be able to address these questions: *How is scientific knowledge constructed? Why do we teach science?*

One of the critical indicators of your success in this class is **communication**. I prefer to address your concerns about the class (e.g., assignments, readings) and/or personal concerns about this class during my consultation hours: **Monday: 8:00AM-10:00 AM; Thursday: 1:00-2:00PM (Zoom)**. I will also allot the last 15-20 minutes of the class as Q and A session.

If these days and times do not fit with your schedule, please email me and I will respond within 48 hours. If it is urgent, please indicate it in the SUBJECT of your email. I prefer in-person meetings, but if unforeseen events happen and you cannot come for in-person consultation hours, you can arrange a Zoom meeting with me. For Zoom meetings, **make an appointment two days before your desired meeting**. Please come on time during in-person and Zoom consultation/meetings.

**Your success is important to me, so I HIGHLY encourage you to use these consultation hours for all your class-related concerns.**

Guidelines for communicating online or face-to-face: Remember these tips when interacting with your peers and me.

- Treat your instructor and classmates with respect in email or any other communication.
- Always use your professors' proper title: Dr. or Prof., or if in doubt, use Mr. or Ms.
- Unless specifically invited, do not refer to your instructor by the first name.
- Use clear and concise language.
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as “wassup?” and texting abbreviations such as “u” instead of “you.”
- Use standard fonts such as Ariel, Calibri or Times New Roman and use a size 10- or 12-point font.
- Avoid using the caps lock feature AS IT CAN BE INTERPRETED AS YELLING.
- Limit and possibly avoid the use of emoticons like :)
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound offensive.
- Be careful with personal information (both yours and other’s).
- Do not send confidential information via email.

Source: Online Communication Tips (<https://clear.unt.edu/online-communication-tips>)

**Attendance:** This course is designed and organized to be highly collaborative and interactive. Our sessions will involve small and whole group activities and discussions. Therefore, your attendance and participation are essential to the learning of everyone on our course. It is very difficult to be enriched by discussions and collaborations if you are not physically present or prepared for class. Per university policy 06.039, an excused absence falls under the following categories:

- religious holy day, including travel for that purpose;
- active military service, including travel for that purpose;
- participation in an official university function;
- illness or other extenuating circumstances;
- pregnancy and parenting under Title IX; and
- when the University is officially closed.

**Examples of absences considered extenuating circumstances include:**

- Temporary disability or injury
- Extended medical absence or hospitalization
- Illness of a dependent family member
- Major illness or death of a loved one, which may include immediate family members of the student, spouses/partners, and others as deemed appropriate by the Dean of Students office
- Car accident that takes away transportation
- Housing emergencies
- Significant mental health concerns

**For absences related to significant illness or extenuating circumstances, faculty can request that verification/documentation of absence go through the Dean of Students office.**

If you cannot attend a class for any reason (including those not listed above), please notify me **as soon as possible**. Likewise, for reasons not listed above where a missing class is unavoidable, please let me know so we can devise an alternate plan. ***It is my discretion to excuse absences for reasons not listed above***, and you must communicate with me.

**Examples of extenuating circumstances considered to be a matter between the faculty member and student include:**

- Professional school interviews
- Conference attendance
- Receiving academic awards such as scholarships or other academic honors
- Missing class due to being waitlisted (only applicable prior to census date)
- Personal travel
- Short-term illnesses and doctor appointments (Flu, covid, strep, cold, etc.)

**Attendance and participation in this class are required.** Our class time will consist of many small groups and a whole class discussion. You are a vital part of a learning community, and your contributions are part of the knowledge that we create in our classroom. Therefore, we need you here as often as you are able.

If you are unable to attend the class, I expect you to inform me in advance whenever possible. If you miss more than two classes or missing any class without contacting the instructor will affect your participation grade and may warrant further administrative action. **You are still**

**responsible for turning in assigned work if you are absent. If you are absent for more than 4 consecutive or accumulated excused absences, I will refer your case to the Dean of Student affairs to assess your attendance. In other words, 4 excused absences can affect passing and failing the class if deemed appropriate. Additionally, you will provide valid documentation such as medical certificate.**

0 – 1 unexcused absence 10 points
2 unexcused absences 7 points
3 unexcused absences 3 points
4 unexcused absences F in the course

You are also expected to arrive at class on time and not leave before the end of the course. **Three instances of arriving more than 15 minutes late or leaving 15 minutes early will result in one unexcused absence.** Coming to class late or leaving early for the reasons listed above for excused absences will be counted as excused. Again, be sure to communicate with me in those instances.

“A student is responsible for requesting an excused absence in writing, providing satisfactory evidence to the faculty member to substantiate excused absence, and delivering the request personally to the faculty member assigned to the course for which the student will be absent. (Reference: 06.039 Student Attendance and Authorized Absences, p. 2)

“When an absence is excused, the faculty member will provide a reasonable time after the absence for the student to complete an assignment or examination missed.” (Reference: 06.039 Student Attendance and Authorized Absences, p. 2) NOTE: Reasonable time means at least 10 days.

### **Accommodation**

Together with UNT, I am here to provide you with accommodation you may need. Please reach out.

“The University of North Texas makes reasonable academic accommodation for students with disabilities. Students seeking reasonable accommodation must first register with the Office of Disability Access (ODA) to verify their eligibility. If a disability is verified, the ODA will provide you with a reasonable accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request reasonable accommodation at any time; however, ODA notices of reasonable accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of reasonable accommodation for every semester and must meet with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver letters of reasonable accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information,

refer to the [Office of Disability Access](http://www.unt.edu/oda) website (<http://www.unt.edu/oda>). You may also contact ODA by phone at (940) 565-4323.”

### Supporting Your Success and Creating an Inclusive Learning Environment

We all come to this course with different perspectives influenced by our personal cultural background and diverse learning styles and level of abilities. Therefore, I expect each of you and including me to be respectful all the time. Below are my expectations and non-negotiable rules in class.

#### Use of Digital Devices (e.g., Laptop, cell phone, iPad)

- As a matter of professional courtesy, I require that *any cell phone(s) be set in silent mode* before class begins and keep them in this mode until class is over, no texting. If you need to take an emergency call, please step out of the room to take the call, and let me know about it.
- The use of laptops may take your attention away from meaningful classroom experiences. Please be responsible when using your laptops and iPads.
- For your reference: I will use the traffic lights to indicate use of devices:  
**GREEN:** You can use your laptops/devices during class for online resources/technology-based activities.  
**RED:** no device needed

*“UNT strives to offer you a high-quality education and a supportive environment, so you learn and grow. As a faculty member, I am committed to helping you be successful as a student. To learn more about campus resources and information on how you can be successful at UNT, go to [unt.edu/success](http://unt.edu/success) and explore [unt.edu/wellness](http://unt.edu/wellness). To get all your enrollment and student financial-related questions answered, go to [scrappysays.unt.edu](http://scrappysays.unt.edu).”*

### Course Requirements/Schedule

#### Course Requirements:

There are two major requirements in this course: Writing a nature of science (NOS) lesson plan within an inquiry approach and a microteaching (teaching your lesson to your peers). To successfully accomplish these requirements, you will have to complete in-class assignments (IA) and home-based assignments (homework).

#### Lesson Planning and Microteaching

**Lesson Plan** is the teacher’s “blueprint” of classroom instruction. It provides information about your topic, how you will teach it, and how your students can effectively learn about your lesson. Therefore, your lesson plan must be carefully designed (inquiry-based with NOS integration) including appropriate and effective strategies to ensure meaningful student learning in your classroom. In this course, you must write a mini lesson plan you will implement during the microteaching session. We will use the “Instructional Sequence Matters: Explore Before Explain for Grades 3-5” reference as your guide. A lesson plan template will be provided to you.

**Microteaching** is a research-based strategy to help preservice teachers to prepare for actual classroom instruction. It consists of planning (lesson planning), implementation, and reflection. In this course, you will implement the lesson plan you designed for 20-30 minutes. Then, you will teach this lesson to your peers at a designated time. After your microteaching, you will receive immediate feedback from your instructor and peers. Then, you will submit individual reflections about your microteaching.

## Assignments

**In-Class Assignment (IA):** This assignment must be completed and submitted at the end of the class session. This assignment may be completed as an individual, a paired, or a small group work. Most of the in-class assignments are completion assignments. You get a perfect score if you address the questions completely and appropriately. Some will be graded based on rubric.

**Homework (HW):** This assignment will be mostly individual work. You will be given a week or longer (as appropriate) to complete the task, therefore, due dates will vary. Description of homework will be posted on Canvas a week before for HW that should be completed within a week. If HW requires more than a week, then the description will be posted at least two weeks before the due date.

## Late Assignments

You are expected to turn in quality work; therefore, if you need more time to work on your assignment, you can submit your work two (2) days after the due date. If you surpass the two-day extension, you can only receive a maximum passing grade of C. NO late submission for in-class assignments unless we ran out of time during our class session. Please be responsible for managing your time. Set priorities and plan well.

**Other UNT policies:** Please read and absorb these important documents:

### [Student Support Services & Policies](#)

Explore [Navigate's Study Buddy](https://navigate.unt.edu) (<https://navigate.unt.edu>) tool to join study groups. Maximize your learning with our coaching staff at the Learning Center.

**Academic Integrity:** *Students who use other people's work without citations will be violating UNT's Academic Integrity Policy. Please read and follow this important set of [guidelines for your academic success](https://policy.unt.edu/policy/06-003) (<https://policy.unt.edu/policy/06-003>). If you have questions about this, or any UNT policy, please email me or come discuss this with me during my office hours.*

**Honor Code:** *"I commit myself to honor, integrity, and responsibility as a student representing the University of North Texas community. I understand and pledge to uphold academic integrity as set forth by [UNT Student Academic Integrity Policy, 06.003](https://policy.unt.edu/policy/06-003) (<https://policy.unt.edu/policy/06-003>). I affirm that the work I submit will always be my own, and the support I provide and receive will always be honorable."*

## ***Generated AI Policy (GenAI)***

### ***What is GenAI?***

“Generative Artificial Intelligence (GenAI) refers to software systems and platforms that create new content, such as text, images, audio or video using generative models. These models identify patterns from large datasets, enabling them to generate data in response to specific prompts, which in many ways can resemble human-created content.” (UNT Academic Integrity Guidance on GenAI, 2021, p.1)

### **Limited Use**

Throughout the semester, you will or may use specific Generative AI (GenAI) tools for certain assignments, with guidance on responsible use. These assignments help build ethical resilience and GenAI literacy, preparing you for careers in a GenAI-oriented workforce.

In accordance with the UNT Honor Code, unauthorized use of GenAI tools is prohibited. Using GenAI content without proper credit or substituting your own work with GenAI undermines the learning process and violates UNT academic integrity

### **Declaration Statement (UNT)**

I use GenAI to [insert action(s) here, e.g., enhance materials, streamline tasks, generate prompts, create scenarios, draft syllabi, build study guides, analyze performance]. I will always disclose how I use GenAI, and I expect the same from you.

### **AI Use Guidelines:**

- You can use this as reference but DO NOT submit generated AI work.
- UNT policies apply to any form of cheating and plagiarism.
- Declare use of AI.

### **Other example of Declaration Statement:**

**I am adopting declaration statement guidelines and sample statement from Monash University. All information on this section are from this source.**

“Very briefly explain the ways that you have used AI in the production of this assessment.

- Explain which AI tools you have used and for what purposes.
- If you have found and used tools on your own, explain why these tools were selected and provide a URL link to the tool.
- Note the number of iterations undertaken with each main AI collaborative tool.
- Describe what output from the tool/service has been included, and where.

- Summarise how you have altered, adopted, or built on the AI output.

In addition to using this summary to provide an overview of how AI has been used, it is strongly recommended that you also carefully document the processes undertaken in creating the assessment and to be able to present this process evidence upon request from educators or administrators.”

### **Suggested Format:**

I used [insert AI system(s) and link] to [specific use of generative artificial intelligence] [number of iterations/drafts]. The tool was used to provide [describe content used in task]. The output from this tool was modified by [explain use].

### How to Cite ChatGPT

APA Example: AI Response (with Citation)

Prompt: Was Sir John Monash a good man?

“Sir John Monash is widely regarded as one of Australia's greatest military leaders and is also considered a respected engineer and administrator. His contributions to the military and to society as a whole have been praised by many, so it can be said that he was a good man. However, as with any historical figure, opinions may vary....” (OpenAI, 2023)

### **Reference**

OpenAI. (2023). *ChatGPT* (Jan 9 version) [Large language model] <http://chat.openai.com/chat>

Online Resources/Courses to learn more about AI use:

AI FUNDAMENTALS PART 1: DEMYSTIFYING AI

AI FUNDAMENTALS PART 2: HOW YOU CAN USE AI

Table 2. **Course Assignments (next page)**

<b>Course Learning Outputs</b>	<b>Points Possible</b>	<b>% of Final Grade</b>
<b>Homework</b>		<b>5%</b>
Science and Me (HW and completion assignment)	20 (pre); 20 (post)	
Nature of Science Survey	20 (pre); 20 (post)	
Safety Training	50	
Science Learning Experience Survey	50	
Physical Science Diagnostic Assessment	40	
Session Reflections	TBD	
<b>In-Class assignments (IA)</b>		<b>5%</b>
Class activities	100	
<b>Major Requirements</b>		<b>70%</b>
5E Try it lesson plans Phases: Engage, Explore, Explain, Elaborate, Evaluate (20 pts each phase)	60	35%
Final Lesson Plan	60	
Microteaching	100	35%
Microteaching Reflection	25	
<b>FINAL EXAM</b>	100	10%
<i>Student evaluates</i>		<b>10 %</b>
Class Participation/Professionalism	10	
Attendance	10	
<b>Total Points Possible</b>	<b>720</b>	<b>100%</b>

**Course Schedule:** Please note that this schedule *may change* to meet students' needs and unprecedented circumstances.

Wk	Date	Topic	Assignments
1	Jan 14	Course Introduction: Syllabus Discussion including course requirements	<ul style="list-style-type: none"> <li>Getting to know you Form (Jan 17)</li> <li>Views of the Nature of Science (NOS) survey (Jan 15) completion HW</li> <li>In class Activity</li> </ul>
2	Jan 21	<b>Framework to teach Science:</b> <ul style="list-style-type: none"> <li>The Nature of Science (NOS)</li> <li>Scientific Inquiry</li> <li>Clarifying Science Terms</li> </ul>	<ul style="list-style-type: none"> <li>In class Activity</li> <li>NOS reflection (Jan 24)</li> <li>Physical Diagnostic Exam (Jan 25) (completion HW)</li> </ul>
3	Jan 28	<b>Strategies to Teach Science:</b> <ul style="list-style-type: none"> <li>5E Learning Cycle: Modeling lesson</li> <li>Getting to know TEKS and NGSS Standards</li> <li>Science Content: Life Science</li> </ul>	<ul style="list-style-type: none"> <li>Science and Me (pre) (Jan 28)</li> <li>Science Learning Survey (Jan 28)</li> <li>In-class activity</li> </ul>
4	Feb 4	<b>Strategies to Teach Science:</b> <ul style="list-style-type: none"> <li>5E Learning Cycle: Modeling lesson</li> <li>Three-Dimensional Learning</li> <li>Science Content: Physical Science</li> </ul>	<ul style="list-style-type: none"> <li>In class Activity</li> </ul>
5	Feb 11	<b>Strategies to Teach Science:</b> <ul style="list-style-type: none"> <li>5E Learning Cycle: Modeling Lesson</li> <li>Science Content: Physical Science</li> </ul>	<ul style="list-style-type: none"> <li>Safety Module (Feb 11)</li> <li>Initial Lesson Planning (Feb 17)</li> <li>In-class activity</li> </ul>
6	Feb 18	<b>Science and Literacy</b> <ul style="list-style-type: none"> <li>5E Learning Cycle: Modelling Lesson</li> <li>Writing Objectives</li> <li>Science Content: Physical science</li> </ul>	<ul style="list-style-type: none"> <li>Interview an elementary student (Feb 18)</li> <li>Try it #1 Engage (Feb 24)</li> <li>In-class activity</li> </ul>
7	Feb 25	<b>Science and Literacy</b> <ul style="list-style-type: none"> <li>Use of Picture Books to teach Science</li> <li>Science Content: History of Science</li> </ul>	<ul style="list-style-type: none"> <li>Try it # 2: Explore (March 3)</li> <li>In-class activity</li> </ul>
8	Mar 4	<b>Approaches to Assessment in Science</b> <ul style="list-style-type: none"> <li>Science Content: Physical Science</li> </ul>	<ul style="list-style-type: none"> <li>Try it # 3: Explain and Elaborate (March 21)</li> <li>In-class activity</li> </ul>

	Spring break		
9	Mar 18	<b>Approaches to Assessment in Science</b> <ul style="list-style-type: none"> <li>Accommodations and Modifications</li> </ul>	<ul style="list-style-type: none"> <li>Try it # 4 Accommodations and Modifications (March 24)</li> <li>In-class activity</li> </ul>
10	Mar 25	<ul style="list-style-type: none"> <li>Special Education Module</li> <li>Scientists with Disabilities</li> </ul>	<ul style="list-style-type: none"> <li>Discussion in Canvas (March 25)</li> </ul>
11	April 1	Science and Engineering Practices <ul style="list-style-type: none"> <li>Nature of Engineering</li> <li>Science Content: Physical Science</li> </ul>	<ul style="list-style-type: none"> <li>Lesson plan draft (April 5)</li> <li>In-class activity</li> </ul>
12	April 8	<ul style="list-style-type: none"> <li>Microteaching</li> <li>Teaching Science to ELL students</li> </ul>	<ul style="list-style-type: none"> <li>Lesson Plan revisions (April 16)</li> <li>In-class activity</li> </ul>
13	April 15	<ul style="list-style-type: none"> <li>Microteaching</li> <li>Special Topic: Validating evidence through Civic Online Reasoning</li> </ul>	<ul style="list-style-type: none"> <li>Online readings</li> <li>In-class activity</li> </ul>
14	April 22	<ul style="list-style-type: none"> <li>Microteaching</li> <li>NOS Views (Post)</li> </ul>	<ul style="list-style-type: none"> <li>Microteaching Reflection (Will vary)</li> <li>In-class activity</li> </ul>
15	April 29	<ul style="list-style-type: none"> <li>Science Learning Survey (Post)</li> <li>Microteaching</li> </ul>	<ul style="list-style-type: none"> <li>Science and Me (Post) (April 28)</li> <li>In-class activity</li> </ul>
16	May 6	<ul style="list-style-type: none"> <li>FINALS</li> </ul>	<ul style="list-style-type: none"> <li>Final Exam</li> <li>Final LESSON PLAN (May 2)</li> </ul>

### Grading

A = 90%-100%

B = 80-89

C = 70-79

D = 60-69

F = below 60%

### Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course.

### EDUCATOR STANDARDS

In order to recommend a candidate to the Texas Education Agency, the UNT Educator Preparation Program curriculum includes alignment to standards identified by the State Board of Educator Certification (SBEC). These standards are assessed throughout your preparation and through the TExES Certification exams required for your teaching certificate. The Texas State Board for Educator Certification creates standards for beginning educators. These standards are focused upon the Texas Essential Knowledge and Skills, the required statewide school curriculum. Additionally, the Commissioner of TEA (Texas Education Agency) has adopted rules pertaining to Texas teaching standards:

## TEXAS TEACHING STANDARDS

Standards required for all Texas beginning teachers fall into the following 6 broad categories:

(1) Standard 1--Instructional Planning and Delivery.

a. Standard 1Ai, ii, iv

b. Standard 1Bi, ii (Lesson design)

(2) Standard 2--Knowledge of Students and Student Learning

(3) Standard 3--Content Knowledge and Expertise

(4) Standard 4--Learning Environment

(5) Standard 5--Data-Driven Practice

(6) Standard 6--Professional Practices and Responsibilities Full description of the standards and competencies can be accessed using this link: Texas Teaching Standards Adopted in Chapter 149

## EDUCATOR STANDARDS FOR EC-6 CORE SUBJECTS:

A full description of the standards and competencies can be accessed using this link:

<https://tea.texas.gov/texas-educators/preparation-and-continuing-education/approved-educator-standards>

## SCIENCE GENERALIST EC-6 STANDARDS

- Standard I. The science teacher manages classroom, field, and laboratory activities to ensure the safety of all students and the ethical care and treatment of organisms and specimens.

- Standard II. The science teacher understands the correct use of tools, materials, equipment, and technologies.

- Standard III. The science teacher understands the process of scientific inquiry and its role in science instruction.

- Standard IV. The science teacher has theoretical and practical knowledge about teaching science and about how students learn science.

- Standard V. The science teacher knows the varied and appropriate assessments and assessment practices to monitor science learning.
- Standard VI. The science teacher understands the history and nature of science.
- Standard VII. The science teacher understands how science affects the daily lives of students and how science interacts with and influences personal and societal decisions.
- Standard VIII. The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in physical science.
- Standard IX. The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in life science.
- Standard X. The science teacher knows and understands the science content appropriate to teach the statewide curriculum (Texas Essential Knowledge and Skills [TEKS]) in Earth and space science.
- Standard XI. The science teacher knows unifying concepts and processes that are common to all sciences.

## TEXAS ESSENTIAL KNOWLEDGE AND SKILLS

The following TEKS are addressed in this course. The Texas Essential Knowledge and Skills can be accessed on the Texas Education Agency Web site using the A-Z index at the following URL: <https://tea.texas.gov/academics/curriculum-standards> <https://tea.texas.gov/academics/subject-areas/science>

## ENGLISH LANGUAGE PROFICIENCY STANDARDS (ELPS)

This course incorporates the ELPS in lesson planning and instructional delivery to improve language acquisition and content area knowledge of students who are English learners. The ELPS will be implemented by teacher candidates during instruction of the subject area for students who are English learners. The ELPS can be accessed via the Texas Education Agency using the following link: <http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074a.html#74.4>.

## TEXAS COLLEGE AND CAREER READINESS STANDARDS

The Texas College and Career Readiness Standards can be accessed at the Texas Higher Education Coordinating Board Web site using the following link: <http://www.thecb.state.tx.us/index.cfm?objectid=EADF962E-0E3E-DA80-BAAD2496062F3CD8>

**WELCOME TO THE CLASS!**

DR.  
CARDEN

