



**UTTyler** COLLEGE OF  
**EDUCATION & PSYCHOLOGY**  
SCHOOL OF EDUCATION

**EDUC 4383 - Science Curriculum in the Elementary Classroom**

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<b>Term</b>	Fall 2023
<b>Location of Course</b>	Online
<b>Office Hours:</b>	Tuesdays 5:30-6:30 or email for appointment.

**Course Description**

This course provides a foundation for the teaching of science as it relates to the EC-6 standards as set by the State of Texas.

**Student Learning Outcomes**

This course is designed to prepare you to be successful in passing the EC-6 science content test as set by the state of Texas. To achieve this goal, you will have the opportunity to explore science as a way of knowing the world and as a tool for problem solving. We will be actively engaged in doing science as well as talking and reading about science. We will be exploring science as it relates to the formal classroom setting and the informal settings outside the classroom. We will be examining science as it relates to and can be integrated with, other subject areas. We will engage in multiple test taking strategies as well as a number of practice tests. While teaching methods may be discussed from time to time, the goal of this class is test preparation.

**Competency 001** (Lab Processes, Equipment and Safety): *The teacher understands how to manage learning activities, tools, materials, equipment, and technologies to ensure the safety of all students.*

**Competency 002** (History and Nature of Science): *The teacher understands the history and nature of science, the process and role of scientific inquiry and the role of inquiry in science instruction.*

**Competency 003** (Impact of Science): *The teacher understands how science impacts the daily lives of students and interacts with and influences personal and societal decisions.*

**Competency 004** (Concepts and Processes): *The teacher knows and understands the unifying concepts and processes that are common to all sciences.*

**Competency 005** (Students as Learners and Science Instruction): *The teacher has theoretical and practical knowledge about teaching science and about how students learn science.*

**Competency 006** (Science Assessment): *The teacher knows the varied and appropriate assessments and assessment practices for monitoring science learning in laboratory, field and*

*classroom settings.*

**Competency 007** (Forces and Motion): *The teacher understands forces and motion and their relationships.*

**Competency 008** (Physical and Chemical Properties): *The teacher understands the physical chemical properties of and changes in matter.*

**Competency 009** (Energy and Interactions): *The teacher understands energy and interactions between matter and energy.*

**Competency 010** (Energy Transformations and Conservation): *The teacher understands energy transformations and the conservation of matter and energy.*

**Competency 011** (Structure and Function of Living Things): *The teacher understands the structure and function of living things.*

**Competency 012** (Reproduction and the Mechanisms of Heredity): *The teacher understands reproduction and the mechanisms of heredity.*

**Competency 013** (Adaptations and Evolution): *The teacher understands adaptations of organisms and the theory of evolution.*

**Competency 014** (Organisms and the Environment): *The teacher understands the relationships between organisms and the environment.*

**Competency 015** (Structure and Function of Earth Systems): *The teacher understands structure and function of earth systems.*

**Competency 016** (Cycles in Earth Systems): *The teacher understands cycles in Earth systems.*

**Competency 017** (Energy and Weather and Climate): *The teacher understands the role of energy in weather and climate.*

**Competency 018** (Solar System and the Universe): *The teacher understands the characteristics of the solar system and the universe.*

## **COURSE ASSIGNMENTS & EVALUATION**

**Class Attendance/Participation (25%)**

**Class Discussion Boards (25%)**

**Science Content Teaching Quiz Checks (25%)**

**Final Exam (25%)**

Detailed schedule assignment information and expectations, and assignment schedule, and expectations will be posted on Canvas.

**Grading Criteria**

- A 90-100% of points
- B 80-89% of points
- C 70-79% of points
- D 60-69% of points
- F below 59.9% of total points

## **COURSE POLICIES**

It is my goal for each of you to benefit and grow professionally throughout this course. I believe in open communication so we can all learn from each other. You are expected to actively participate in our course activities so we may practice open dialogue. I also welcome you to visit with me in email, phone, or we can schedule a Zoom session. We can discuss the concept being discussed, your course performance, or anything else you would like.

### **Participation Expectations**

This course is designed for online delivery. You should assume we have material to discuss/digest every week unless you are notified by your instructor. This course utilizes individual/small-group learning activities, whole-class discussions, demonstrations, and possibly outside-of-school activities to present science content will assist in successful passing of the EC-6 content test. Regular attendance is very important since much of what we have to learn will be experienced in the college classroom.

### **Mobile Devices (e.g. iPads, Cell Phones)/Laptops:**

All electronic devices need to be set to silent mode during class time. Devices may be used for class activities ONLY. Laptops will enhance your class experience but should be closed unless needed during the activity.

### **Assignment Submission:**

For discussion assignments:

Responses must contain depth of content. Make sure to include explanations. For example, not just "I struggled with the graphing question as well," but "I struggled with the graphing question as well. I had trouble calculating  $S=D/T$ . I did not understand at first that distance was over a range of time. "

When responding to your classmates, make sure you include the name of the classmate you are addressing at the beginning of your response. It is very helpful to know who you are responding to when grading.

### **Late Work:**

Assignments are expected to be handed in on time. An assignment will be considered late if it is not turned in the day and time it is due. Assignments are posted with due dates and expected to be submitted on Canvas.

### **Attendance:**

This course is part of your professional practice. You are expected to complete all modules as your class attendance. Course objectives and performance outcomes cannot be met unless you

attend class and participate in class activities. If you are absent for an extended period of time, you should make arrangements to explore options such as retaking the course or taking an incomplete grade. If you are missing more than two assignments, you will need to make an appointment with the instructor to discuss your options. You are responsible for all information given in class, online, and in the syllabus. Criteria for all assignments will be available in Canvas.

### **Canvas:**

You are responsible for enrolling on Canvas and monitoring the course site regularly for course information. Assignments will be turned in through the modules in Canvas. A link to the NSTA Learning Center will be available within the Canvas environment. All written assignments as well as all quizzes and exams are individual assignments. Students may not collaborate on the individual assignments. Unauthorized collaboration is considered cheating and will be handled according to University Policies and the Students Standards of Academic Conduct.

### **Required Resources**

Bauer, D., Cezeaux, K, & Scott, J. (2016). *Ultimate guide to the TExES core subjects EC-6*. San Antonio, TX: Ultimate TExES Guide.

### **Digital Resources**

**Texas Education Agency (TEKS) –**

<http://ritter.tea.state.tx.us/rules/tac/chapter112/ch112a.html>

**The Texas Higher Education Coordinating Board College and Career Readiness Standards –  
College and Career Readiness Standards**

<http://reportcenter.highered.texas.gov/agency-publication/miscellaneous/crs-tx-ccrs-final-2009/>

**Class Web Sites**

<https://www.texasgateway.org/>

<https://lead4ward.com/resources/>

<https://www.eie.org/>

<https://www.nisenet.org/>

<http://www.BIE.org>

<http://www.Learner.org>

<http://www.edutopia.org>

<http://essea.strategies.org/>

<http://www.globe.gov>

<https://www.teachingchannel.org/>

<http://www.teachertube.com/>

Additional selected readings will be provided by the instructor or through the NSTA Learning Center and other sources.

## UNIVERSITY POLICIES

### UT Tyler Honor Code

Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

For a full list of university policies including information related to the topics listed below, click [here](#).

- Students Rights and Responsibilities
- Campus Carry
- Tobacco-Free University
- Grade Replacement/Forgiveness and Census Date Policies
- State-Mandated Course Drop Policy
- Disability Services
- Student Absence due to Religious Observance
- Student Absence for University-Sponsored Events and Activities
- Social Security and FERPA Statement
- Emergency Exits and Evacuation
- Student Standards of Academic Conduct

### UT Tyler Resources for Students

- UT Tyler Writing Center (903.565.5995), [writingcenter@uttyler.edu](mailto:writingcenter@uttyler.edu), <http://www.uttyler.edu/writingcenter/>
- UT Tyler Tutoring Center (903.565.5964), [tutoring@uttyler.edu](mailto:tutoring@uttyler.edu), <https://www.uttyler.edu/tutoring/>
- The Mathematics Learning Center, RBN 4021, This is the open access computer lab for math students, with tutors on duty to assist students who are enrolled in early-career courses.
- UT Tyler Counseling Center (903.566.7254) <https://www.uttyler.edu/counseling/>
- [University Guidelines, Links and Policies](#)