



EDU 365 Science in the Elementary Classroom

Brenda Rhone

UNITED TRIBES TECHNICAL COLLEGE

COURSE INFORMATION

This course prepares elementary education teacher candidates to teach science integrated with technology. This course has four components: earth science, space science, physical science, and life science. The focus of this course is on increasing content knowledge and on planning and implementing developmentally appropriate, integrated science units. This course includes inquiry-based and computer laboratory experiences. Field experience is required.

Credits: 2

CLASS INFORMATION

Section Number:

Term: Spring Year: 2022 Start Date: 1/11/2022 End Date: 5/6/2022

Meeting Times: Monday and Wednesday 2:00-2:50

Meeting Location: Education Building Room 104

Delivery Mode: Face to Face

INSTRUCTOR

Brenda Rhone

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Office Phone: 701-221-1788

Office Location: Education Building - Office 121

Office Hours: M & W - 10:00-12:00 & 1:00-2:00 T- 2:00-3:00 Th - 9:00-10:30 & 1:00-2:30

TEXTBOOKS

Koch, J. (2017) Science Stories: Science Methods for Elementary and Middle School Teachers. 6th Edition. Cengage. ISBN-13: 9781305960725

INSTITUTIONAL LEARNER OUTCOMES

Critical Thinking: Employ critical thinking skills in the processes used to identify and solve problems.

Quantitative & Scientific Reasoning: Develop solutions to mathematical and scientific problems.

PROGRAM OUTCOMES

Demonstrate understanding of content knowledge.

Utilize differing perspectives for the application of content.

Plan for instruction that supports every learner.

COURSE OBJECTIVES

1. Participate in and develop inquiry-based lessons that develop an understanding of broad topics in science (earth, space, life, and physical).
2. Develop science activities that are aligned to the ND Elementary Science standards, use an interdisciplinary approach, and use multiple methods of instruction.
3. Develop science activities that use inquiry in teaching science and that focus on science process skills, using commonly available science materials.
4. Develop relevant and authentic applications of science that interest a diverse population.
5. Understand safety and liability issues related to science teaching in the elementary school.
6. Understand how technology can be used as a tool in the science classroom.
7. Demonstrate understanding of the connection of state and national science standards and inquiry processes to the entire elementary school curriculum.

GRADING INFORMATION

The Teacher Education Department expects all assignments to be completed on the due date and time. Assignments will be accepted for half credit five instructional days after the due date. After this, assignments will receive a zero. Presentations are considered formal assessments and follow UTTC formal assessment policy.

A. GRADING SCALE

Grade	Percentage
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	Below 60%

B. COMMUNICATION

Email is the official means of communication at UTTC. Information Technology (IT) will assign all students an official UTTC email address. All correspondence from the College to the student will be sent to the student's UTTC email address. Students are expected to check their email regularly and are responsible for all information sent to them via their UTTC email address. Faculty expect students to use their official email address for all instructional purposes, including communicating with the faculty.

C. ATTENDANCE

Students at UTTC are expected to participate in all of their class sessions and are expected to communicate with their instructors regarding any emergencies that cause them to miss class. Regardless of the circumstances, the student is responsible for obtaining any information missed because of the absence and completing any outstanding assignments. The student may refer to the course assignments in My.UTTC.edu, contact another student enrolled in the course, or meet with the course instructor during office hours to get the missing information. Attendance is entered as “Present”, “Absent-Unexcused”, or “Excused” (college-sanctioned absences).

ZOOM Attendance Policy

UTTC students are expected to attend all of their classes in person. Students can attend a class virtually using Zoom only if the student is sick and unable to attend class or quarantined due to a contagious illness (confirmed by a medical professional) but on a limited basis. If the student is going to use Zoom under these circumstances, the following conditions must apply:

1. The student must have a computer and a reliable internet connection (phones are not allowable).
2. The computer must have a working microphone and camera and the camera must be turned on.
3. The student’s face must be present in full frame. No background noise is allowed as this is distracting to the students in the classroom.
4. The student is responsible for contacting the instructor prior to class starting if they are sick or quarantined and need to use the Zoom option. This must be done with enough notice so the student using Zoom is ready for class when class starts.
5. If these conditions cannot be met, the student will be marked absent from class for the class period(s) missed.

*The only exception to not physically being in class is for students who are registered for online courses that are designated by OL (e.g. CSC 101 OL, PSY 111 OL, ENG 120 OL).

***Some courses are not available through Zoom, such as Tribal Arts, Heavy Equipment, Welding Technology, and others. Students in these classes must be physically present or will be counted absent.*

D. LATE ASSIGNMENT SUBMISSIONS

UTTC supports and fosters the student’s responsibility for completing and submitting assignments on or before scheduled due dates and times. If an assignment is due, the student should make every effort to submit the assignment on time. Occasionally, a student may experience an unexpected life event that results in the submission of late work. Communication is the key. Instructors are more than willing to work with students in the event of an emergency if the student communicates with them before the date and time the assignment is due to make other arrangements.

Late assignment deadlines will vary among departments but will not exceed more than five (5) business days after which the assignment was initially due. Assignment due dates, late assignment deadlines, and late assignment penalties are outlined in course syllabi. Assignments not submitted by the initial deadline date will be reflected in the course gradebook as a zero (0) until the assignment has been submitted. The amount of points deducted for late work is at the discretion of the instructor. Assignments submitted via E-mail will not be accepted under any circumstances and will receive a grade of zero.

E. MISSED TEST, EXAMS AND QUIZZES (FORMAL ASSESSMENTS)

Students may not make up a missed test, exam or quiz without a valid reason for their absence (illness, family emergency). It is the student's responsibility to contact their instructors before the absence, or within 24 hours after missing the formal assessment. The instructor will review the reason the student missed and determine if the circumstance justifies the student being allowed to take the formal assessment. Approved make-up assessments must be taken outside of the student's regular class schedule and during a time and location agreed upon between the student and instructor. Students are not to miss another class in order to make-up an assessment for another course. If the student fails to show on the date and time of the makeup assessment, the student will not be permitted to reschedule the makeup and the assessment and will earn a 0% grade.

F. EARLY ALERT SYSTEM

UTTC's Early Alert System (EAS) is a proactive, communication driven support system that provides timely identification and interventions to work with individual students to assist in generating plans to overcome challenges to college success. The system assists UTTC students by linking them to faculty and staff who can provide and connect students to available resources and strategies. The early alert serves as an opportunity for students to take ownership of their success and empower them to accomplish academic and personal goals. The system helps faculty and academic advisors connect and communicate with students as issues arise. The additional cross-wide partnerships create a culture of collaboration focused upon the best interest of UTTC students.

Academic related concerns such as attendance, missing assignments, or classroom behavior will result in an early alert being issued by faculty. When an early alert is issued, the student will receive an email requesting them to make arrangement to follow up with the instructor and/or their academic advisor. Students receiving an early alert should make the necessary arrangements to set up and meet with faculty as soon as possible to generate a plan of success.

G. ACADEMIC HONESTY

Students are expected to complete their own work. Academic dishonesty includes plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using course materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to dishonestly obtain grades, honors, awards, or professional endorsement; altering, forging, misrepresenting, or misusing an academic record; or fabricating or falsifying data, research procedures, or data analysis. Refer to [Academic Affairs](#) policies and procedures handbook for further information.

H. STUDENTS WITH DISABILITIES

United Tribes Technical College recognizes its responsibility for making reasonable accommodations to ensure there is no discrimination on the basis of a disability. The Disabilities Services Office coordinates reasonable accommodations, support services, and appropriate referrals for the purpose of removing barriers and providing an equitable learning environment. If you have a disability, please contact the [Disabilities Services](#) (DS) office at (701) 221-1516 or email at dss@uttc.edu.

I. TITLE IX STATEMENT

Title IX is a federal civil rights law that prohibits discrimination on the basis of sex, including sexual harassment, rape and sexual assault. United Tribes Technical College is committed to upholding the law and standards that promote respect and human dignity in a safe environment. Sexual misconduct and relationship violence in any form violates UTTC's mission, cultural values, Student Code of Conduct, and may also violate federal and state law. If you or someone you know has been impacted by sexual assault, dating and domestic violence, stalking, or sexual exploitation, UTTC has resources available on the [Title IX website](#). you can find the appropriate resources on the UTTC campus and in the community

J. SOCIAL DISTANCING AND FACE MASKS

United Tribes Technical College understands the importance of the health and safety of our campus community. In an effort to serve our students and community members, we are taking continual efforts to reduce risk and increase cleanliness of our campus locations. As part of our effort to protect the campus community, all students, staff, and instructors are required to observe social distancing and wear face masks at all times while in the classrooms. Face masks will be available at the entrances of buildings and hand sanitizer will be available throughout each building.

Students who require accommodations should contact the Disability Services Office at dss@uttc.edu, or (701) 221-1516 to submit the appropriate documentation. Should you become sick or be required to quarantine during the semester, notify the instructor immediately using the contact method described in the syllabus. Students who require accommodations should contact the Disability Services Office to implement the appropriate accommodations required to submit course work during an extended absence.

K. TECHNOLOGY REQUIREMENTS

To ensure that you are using the recommended personal computer configurations, please refer to the [minimal technology requirements](#).

FACE-TO-FACE

PARTICIPATION / CLASS ENGAGEMENT

UTTC prepares students for the workforce by having high expectations for skills demonstrated in the classroom that transfer into future employment. This includes students' ability to be on time for class, to refrain from external distractions (cell phone usage, holding side conversations with other students), by providing positive contributions to class discussions, participating in individual or group activities, and being prepared for class. Students will be assessed during the semester on the ability to demonstrate these skills.

CELL PHONE

Out of respect for the other students and the instructor, it is advised that cell phones are turned off during class times. If the student is expecting an important phone call (e.g. case worker, Housing, clinic), the instructor must be informed ahead of time and the cell phone set to a silent ring. If such a phone call is received during class time, the student will answer the call by quietly removing him or herself from the classroom. This also includes texting during class; it is not acceptable. Students may not use class time to check social media accounts, voicemail, and/or personal emails.

STUDENT BEHAVIOR

UTTC students will conduct themselves in a responsible and respectful manner at all times in the classroom, in the hallways, in the Library, the Cafeteria, and any other location on campus. Student behavior that interferes with learning in the classroom will not be tolerated. This behavior includes chronic tardiness, threatening confrontations, intoxication, inappropriate physical contact, lewd or disrespectful language or gestures directed at the instructor or at fellow students, bullying, direct or indirect intimidation, and conversations with other students that are not related to classroom topics.

Faculty are expected to maintain professional management of classroom activities prior to, during and after class times. As such, if a student demonstrates behavior that disrupts or interferes with classroom activities, an instructor reserves the right to ask the student to leave the classroom, to contact campus security, to request mediation by the academic department chair or an academic/personal counselor, or to file a formal complaint subject to a student disciplinary hearing.

SCHEDULE

Module/Week	Academic Topic Instructional Strategy	Support Materials, Book chapters, etc.	Assessment (Formative – Summative)
0 Jan 11 - 14	Sign up for After-School Science/Overview	Chapter 1: The Scientist Within	Chapter 1 – Cengage Quiz & Video Case – Set up Cengage
1 Jan 17 - 21	*No School 1/17 MLK	AISES	Science Fair Board
	Scientific Process	Chapter 2: Teachers & Students as Science Learners	Chapter 2 – Cengage Quiz & Video Case
2 Jan 24 - 28	Sphero/ Ozobot/Sphero Rovers Activities/Lessons	Sphero.com Ozobot.com	Classroom Application Report Activities/Lesson Plans
3 Jan 31 – Feb 4	SEEC Conference (Feb. 3-5)	Spacecenter.org SEEC registration	Session Report and Application Sheet Lesson/Activity Plans for Family Night
4 Feb 7 - 11	Physical Science Explorations	Chapter 7	Chapter 7 – Cengage Quiz & Video Case
5 Feb 14 - 18	Using Models & Engineering Design for Teaching & Learning Science	Chapter 8	Chapter 8 – Cengage Quiz & Video Case
6 Feb. 21 - 25	*No School 2/21 President’s Day	Chapter 9	Lesson Plan/Activity Plan
	Beyond the “Science Kit”	Circuits – Ch. 10	
7 Feb 28 – Mar 4	Practice/Prep for Family Night		March 2 – Family Night: Space Science Reflection Paper/Lesson Plans

8	Midterm Grades Due 3/11		Science Fair Presentations
Mar 7 - 11	Scientific Process		
Mar 14 - 18	Spring Break – No Classes		
9	Plants and Animals and Extended Investigations	Chapter 6 – Plants & Animals	Ch. 6 Science Investigation Lab Report
Mar 21 - 25			
10	Science Exploration Inside and Outside the Classroom	Ch. 4 – Science Exploration	Ch. 4 – Cengage Quiz and Video Case Science Investigation Lab Report
Mar 28 – Apr 1			
11	Intro to Place-Based Education and Native STEM	Anna Bahnson	Handout
Apr 4 - 8			
Apr 11 - 15	*No School 4/15 Good Friday	UTTC TED Lesson Plan Template	Lesson Plan Rubric and Teacher feedback
	Collaborative Choice Science Lesson Plans		
Apr 18 - 22	*No School 4/18 Easter Monday	Ch. 12 (Planning) and 13 (Assessing)	Ch. 12 – Quiz & Video Case Ch. 13 – Quiz & Video Case
	Planning and Assessing Science		
Apr 25 - 29	Final Collaborative Lesson Plan/Literature Based		Lesson Plan with reflection
May 2 - 6	Finals Week		Teaching Science Reflection and Portfolio Artifacts
	Final Reflection		
GRADES DUE	May 9th		