Instructor Information

**Instructor:** Dr. Tonya D. Jeffery (She/Her/Hers)

**Office Location:** ECRC 209J

**Email:** Tonya.Jeffery@sfasu.edu

**Office Phone:** 936-468-1247

**Office Hours:** Monday & Wednesdays: 4-6PM

This course utilizes PDF files. In order to access these files, please make sure that you have downloaded Adobe Reader to your computer. Adobe Reader is free.

Finally, this course will utilize various Google applications in which having a Gmail account will facilitate ease in using these applications. Therefore, please consider creating a Gmail account if you do not currently have one. More information about the use of these applications will be provided during class.

### I. Course Description:

Teaching Science in EC-6 (3 credits; fully-online and asynchronous) spans eight (8) weeks. The course contains extensive written content that includes the same information students in a face-to-face lecture course receive, requiring students to engage in the online modules for at least 5-7 hours per week, outside of our class time. This ELED 4310 course is designed to provide pre-service teachers with an understanding of teaching science in the EC-6 school setting. In an effort to create and promote a diverse, all-inclusive, equitable and safe environment for ALL students, pre-service teachers will explore methods of teaching science through the critical lens of social justice at the intersectionality of race, gender, and class. Students are unable to learn if they feel their classroom is not a socially, emotionally, and physically safe space for all.

The major goal of the course is to prepare teachers who can educate students to become scientifically literate. This aim requires pre-service teachers to learn about the nature of science, to engage in science investigations, and to construct understanding of natural phenomena, forming an elaborate cognitive framework of scientific concepts. Students’ prior knowledge from previous courses will be essential to their performance in this course, namely: technology in the classroom, lesson planning, curriculum organization, and student assessment. Primary source readings are woven into the content to support key concepts or provide perspective on science content.

**Prerequisites:** Admitted to Educator Preparation; enrolled in ELED 4330.

ELED 4310 uses Brightspace as its learning management system for the teaching and learning environment. All ELED 4310 students must have access to Brightspace to be successful in this course. You may log into the Brightspace portal by visiting [http://d2l.sfasu.edu](http://d2l.sfasu.edu). Log in with your mySFA username and password. You are encouraged to check your Brightspace account every day for announcements, assignment due dates, and/or assignment directions. If you have questions about Brightspace, please contact the Brightspace D2L support team at 936-468-1919, visit the virtual lab, or email at d2l@sfasu.edu.

This ELED 4310-503 course is a fully-online and asynchronous course, which means this is a self-guided course in which you will complete the course assignments at your own pace and you do not “attend” class at a set time during the 8-weeks. However, as a way to create a sense of community and interact with you in 'real time', I will be hosting a weekly check-in meeting via Zoom on Mondays at 6pm! Attendance is optional for this weekly meeting. If you are not available to attend this weekly meeting, please feel free to send me an email with any inquiries and/or to schedule an appt. to meet with me to address any concerns you may have about the course.

This course uses Brightspace as its learning management system for teaching and learning environment. All ELED 4310 students must have access to Brightspace to be successful in this course. You may log into the Brightspace portal by visiting [http://d2l.sfasu.edu](http://d2l.sfasu.edu). Log in with your mySFA username and password. You are encouraged to check your Brightspace account every day for announcements, assignment due dates, and/or assignment directions. If you have questions about Brightspace, please contact the Brightspace D2L support team at 936-468-1919, visit the virtual lab, or email at d2l@sfasu.edu.

This ELED 4310-503 course is a fully-online and asynchronous course, which means this is a self-guided course in which you will complete the course assignments at your own pace and you do not “attend” class at a set time during the 8-weeks. However, as a way to create a sense of community and interact with you in 'real time', I will be hosting a weekly check-in meeting via Zoom on Mondays at 6pm! Attendance is optional for this weekly meeting. If you are not available to attend this weekly meeting, please feel free to send me an email with any inquiries and/or to schedule an appt. to meet with me to address any concerns you may have about the course.

This course utilizes PDF files. In order to access these files, please make sure that you have downloaded Adobe Reader to your computer. Adobe Reader is free.

Finally, this course will utilize various Google applications in which having a Gmail account will facilitate ease in using these applications. Therefore, please consider creating a Gmail account if you do not currently have one. More information about the use of these applications will be provided during class.

I. Course Description:

Teaching Science in EC-6 (3 credits; fully-online and asynchronous) spans eight (8) weeks. The course contains extensive written content that includes the same information students in a face-to-face lecture course receive, requiring students to engage in the online modules for at least 5-7 hours per week, outside of our class time. This ELED 4310 course is designed to provide pre-service teachers with an understanding of teaching science in the EC-6 school setting. In an effort to create and promote a diverse, all-inclusive, equitable and safe environment for ALL students, pre-service teachers will explore methods of teaching science through the critical lens of social justice at the intersectionality of race, gender, and class. Students are unable to learn if they feel their classroom is not a socially, emotionally, and physically safe space for all.

The major goal of the course is to prepare teachers who can educate students to become scientifically literate. This aim requires pre-service teachers to learn about the nature of science, to engage in science investigations, and to construct understanding of natural phenomena, forming an elaborate cognitive framework of scientific concepts. Students’ prior knowledge from previous courses will be essential to their performance in this course, namely: technology in the classroom, lesson planning, curriculum organization, and student assessment. Primary source readings are woven into the content to support key concepts or provide perspective on science content.

**Dr. Jeffery, Fall 2021**
and methods of teaching science in the EC-6 classroom. In addition, students are required to complete quizzes/exams over course content and complete multiple writing assignments that evaluate their ability to communicate science standards to students, identify and distinguish inquiry-based instruction, and compare/contrast appropriate science learning environments for EC-6 students. For every hour a student spends engaging with the content, he/she spends at least two hours completing associated activities and written assignments.

Examination of the science curriculum for grades EC-6 with emphasis on current practices, trends and research on effective practices for teaching science. Includes investigation of activities and materials appropriate for achieving science objectives. There are no course fees associated with ELED 4310.

**Course Rationale:**
Through the past decade, elementary science education has taken on a “new” direction. Two factors that have given direction to the new elementary education curriculum are: (1) studies of the intellectual development of the young child, and (2) a shift from the lecture-demonstration teaching method to a discovery inquiry learning method. Science is a methodology (process) as well as a body of knowledge (content). Process and content are closely interrelated and both are essential in the science curriculum. It also encompasses a set of personal characteristics (attitudes), which reflects certain behavioral traits of a scientist/problem solver. Coverage of a fixed body of information is not to be regarded as an end in itself, but rather we should focus upon helping children develop an understanding of significant conceptual relationships. Students of science must develop proficiency in collecting, analyzing, synthesizing, and evaluating data, and in making application of this data to new problems. They must also be able to use basic scientific terminology and express simple basic number relationships in mathematical terms. Special consideration should be given to the ways in which scientific theories and laws are discovered, refined and tested. An understanding that theories and laws are regarded as tentative and open to revision should be developed. These ideas furnish this course with its objectives.

Pre-service teachers are immersed in science education to enhance their science content knowledge and pedagogical skills. This science methods course aims to lay a foundation of professional knowledge, skills, attitudes, behaviors and dispositions necessary for the teaching profession. This course will span the history of science education, explore the nature of science, and inform the practice of teaching science through inquiry and investigation. In addition, the student will become knowledgeable of the state adopted proficiencies for teachers (science emphasis), state standards for science (science TEKS), as well as, the Next Generation Science Standards (NGSS), the national science education standards. This will be supported by readings and discussions of how children learn and how to teach so children learn science and are actively engaged in investigations and inquiry-based learning.

According to Chiappetta (2011), the challenge has never been greater to educate a society for the electronic/communication/information age of the 21st century. This is especially challenging in a highly multiethnic society with students coming from a variety of cultures and a range of economic backgrounds. Teachers cannot be too well prepared. They must be very knowledgeable about science and technology, expert in pedagogy, and highly motivated to elevate the scientific and technological literacy of society and to help their students succeed academically.

The importance for EC-6 teachers to understand the nature of science cannot be overstated. After all, science is what they are teaching and it is critical to know about this discipline – a clear definition of science; about pseudoscience, junk and corrupted sciences; skepticism; the various methods of science; science facts, laws, and theories; and how science is related to engineering, technology and society. Many practicing teachers, as well as beginning teachers, lack an understanding of many of these ideas. Also, most science courses at the K-16 levels teach very little “about” the nature of science, devoting most of the instruction to the content of science. Where is the subject matter balance in these courses?

Teaching science as a body of knowledge results in conveying the abstracted, distilled, polished, and pristine outcomes of the learning process that others have gone through to construct new knowledge. As a consequence, this approach often produces learning outcomes that have little meaning to students, resulting in the “rote” memorization of ideas that are learned poorly. Content with little or no process is not the recommended approach for science education. For these and many other reasons, teachers should learn a great deal about teaching “science as inquiry” philosophy and related instructional approaches.

**II. Intended Learning Outcomes/Goals/Objectives (Program/Student Learning Outcomes):**
Teaching Science in EC-6 is designed to be a hands-on /minds-on learning opportunity providing teacher candidates at SFASU with a foundation for success, a passion for learning and a commitment to responsible global citizenship in a community dedicated to teaching, research, creativity and service. Student learning is a process of continuous transformation, discovery, hands-on experiences and problem solving. It should be grounded in rich first hand, field based experiences, scientific research, and best practices. In this class it will be important to promote a safe and productive physical learning environment that is supportive of individual differences. In summary, it is our objective to create a community of learners engaged in active inquiry, collaborative exploration, and supportive interactions.

Teaching Science in EC-6 supports the mission of the College of Education by providing teacher candidates an opportunity to work with P-12 public school students as we prepare them to become competent, successful, caring and enthusiastic professionals who positively impact learning for all students. One of the goals of the College of Education is to provide a variety of teaching venues incorporating the latest technologies and instructional strategies to a range of diverse student interests, backgrounds, and aspirations and through this science course, candidates work in a variety of teaching venues utilizing a variety of instructional strategies. Through Teaching Science in EC-6, teacher candidates also have opportunities to collaborate with external partners to enhance students’ knowledge, skills, and dispositions, and to influence the ongoing exchange of ideas for mutual benefit. The CAEP standards require that teacher candidates have opportunities to work with students and parents and through the external projects connected to this course, candidates have multiple opportunities to do both. Through this course, teacher candidates learn to assess, plan, and implement instruction at appropriate levels. They also learn to use on-going assessment to reflect on student learning and teaching strategies to plan for future instruction. Through this course, the teacher candidates at SFASU become reflective professionals who have experience planning appropriate instruction for diverse student learners.

Please follow this link to visit the SFASU College of Education Conceptual Framework: http://www.sfasu.edu/education/about/accreditations/ncate/conceptual/

Program Learning Outcomes:

PLO 1 Candidates know, understand, and use the major concepts, principles, theories, and research related to development of children and young adolescents to construct learning opportunities that support individual students’ development, acquisition of knowledge, and motivation.

- SLO 1.1 Candidates will know and understand the history and nature of science.
  - SLO 1.1.1 Assessment – Chapter 1 Science and Science Education Quiz (SCIENCE 6.2k, 6.3k, 6.7k, 6.10k, 6.3s).
  - SLO 1.1.2 Assessment - NSTA Position Statement Discussion Board ( SCIENCE 6.2k, 6.3k, 6.7k, 6.10k, 6.3s).
- SLO 1.2 – Candidates will understand how students learn in science and how science interacts with and influences personal and societal decisions.
  - SLO 1.2.1 Assessment – Chapter 4 Learning Science with Understanding Quiz (SCIENCE 4.2k, 7.1k, 7.3k, 7.4k, 7.5k, 7.7k, 7.1s, 7.4s, 7.6s).

PLO 2 Candidates know, understand, and demonstrate a high level of competence in their content in the areas of English language arts, mathematics, science, and social studies.

- SLO 2.1 Candidates will understand use of tools, materials, equipment, and technologies and manage classroom, field, and laboratory activities to ensure the safety of all students and ethical care and treatment of organisms and specimens.
  - SLO 2.1.1 Assessment – Chapter 3 Creating a Positive Classroom Environment Quiz – (SCIENCE 1.1k, 1.2k, 1.4k, 1.5k, 1.6k, 1.7k, 1.8k, 1.9k, 1.5s, 4.12k, PPR 2.10k, 2.17k, InTASC 3d, 3k, 3o, 10o).
  - SLO 2.1.2 Assessment – Chapter 10 Making Science Accessible for All Learners Quiz (SCIENCE 2.3s, 4.8k, 4.9k, 4.10k; PPR 2.10k; InTASC 3d, 3k, 10o).
  - SLO 2.1.3 Assessment – Science Safety Scavenger Hunt and Powerpoint (SCIENCE 1.1k, 1.2k, 1.4k, 1.5k, 1.6k, 1.7k, 1.8k, 1.9k, 1.5s).
- SLO 2.2 Candidates will know and understand theoretical and practical knowledge of science teaching including the process of scientific inquiry and its role in instruction.
  - SLO 2.2.1 Assessment – Chapter 5 Engaging in Inquiry-Based Instruction and Using the 5E Model Quiz (SCIENCE 3.1k, 3.2k, 3.4k, 3.5k, 3.5s, 3.6s, 3.7s, 3.8s; PPR 2.17k; InTASC 3o).
III. Course Assignments, Activities, Instructional Strategies, use of Technology:

1. Textbook chapter multiple-choice quizzes covering science content and pedagogy which will be assessed on the EC-6 core subjects state certification exam. (SCIENCE 1.1k, 1.2k, 1.4k, 1.5k, 1.6k, 1.7k, 1.8k, 1.9k, 1.5s, 2.5k, 2.6k, 2.3s, 3.1k, 3.2k, 3.4k, 3.5k, 3.2s, 3.5s, 3.6s, 3.7s, 3.8s, 3.9s, 3.11s, 4.12k, 4.13k, 4.2k, 4.3k, 4.4k, 4.6k, 4.7k, 4.8k, 4.9k, 4.10k, 4.12k, 4.13k, 4.14s, 4.16s, 5.1k, 5.3k, 5.4k, 5.5k, 5.6k, 5.7k, 5.8k, 5.9k, 5.10k, 5.11k, 6.2k, 6.3k, 6.7k, 6.10k, 6.3s, 7.1k, 7.3k, 7.4k, 7.5k, 7.7k, 7.1s, 7.4s, 7.6s, 9.1k, 9.2k, 9.4k, 9.5k, 9.6k, 9.7k, 9.11k; PPR 1.18k, 1.21k, 1.28k, 2.10k, 2.17k, InTASC 3d, 3k, 3o, 5l, 5o, 5p, 7c, 8r, 10o; Technology 4.1s [ISTE 1c])

2. Science Diagnostic Assessment (LIVETEXT ASSESSMENT) assesses the content understanding of EC-6 candidates. This content will be assessed on the EC-6 core subjects state certification exam. (SCIENCE 2.5k, 2.6k, 4.3k, 4.7k, 4.8k, 4.10k, 4.12k, 4.13k, 9.1k, 9.2k, 9.4k, 9.5k, 9.6k, 9.7k, 9.11k, 9.1s, 9.2s, 9.3s, 9.7s, 9.8s, 9.9s, 9.16s, 9.17s, 9.18s, 9.21s, 9.22s; Technology 1.3s [ISTE 7c], 3.6s [ISTE 3b], 4.1s [ISTE 7b, 7c], 7.11s [ISTE 3d])

3. Safety Scavenger Hunt and PowerPoint - EC-6 candidates will investigate and learn about the state safety standards for science instruction. (SCIENCE 1.1k, 1.2k, 1.4k, 1.5k, 1.6k, 1.7k, 1.8k, 1.9k, 1.5s)

4. Discussion Board Postings - EC-6 candidates will participate in 5 discussions involving science dispositions, science technology, best practices in science instruction, standards, and curriculum. (SCIENCE 2.6k, 6.2k, 6.3k, 6.7k, 6.10k, 6.3s; PPR 1.28, 2.10k, InTASC 3d, 5l, 8r, 10o; Technology 4.1s [ISTE 1c])

5. Science Process Skills Integration - EC-6 candidates will analyze the use of science process skills across the inquiry-based teaching of Earth & Space, Life, and Physical Sciences (SCIENCE 3.4k, 3.5k, 3.5s, 3.6s, 3.7s, 3.8s, 4.9k, 4.7k, 4.12k, 4.2s, 4.5s)

6. Raising Butterflies - EC-6 Candidates will conduct a field investigation involving butterflies, simulating the process that could be replicated in the EC-6 science classroom. (SCIENCE 1.5k, 9.1k, 9.2k, 9.4k, 9.5k, 9.6k, 9.7k, 9.11k, 9.1s, 9.2s, 9.3s, 9.7s, 9.8s, 9.9s, 9.16s, 9.17s, 9.18s, 9.21s, 9.22s; Technology 1.3s [ISTE 7c], 3.6s [ISTE 3b], 4.11s [ISTE 7b, 7c], 7.11s [ISTE 3d])

7. Final Exam Project Candidates will develop a 5E lesson plan addressing curriculum standards/alignment, TEKS, learning objective, ELPS and language objective (TEKS system) exploring science content and implementing appropriate inquiry-based teaching and learning strategies. (SCIENCE 1.1s, 1.3s, 2.2s, 2.3s, 2.9s, 2.10s, 3.5k, 3.2s, 3.5s, 3.6s, 3.7s, 3.8s, 3.11s, 3.4k, 4.4k, 4.7k, 4.8k, 4.9k, 4.10k, 4.12k, 4.13k, 4.14s, 4.15s, 4.16s, 5.1s, 5.2s, 5.5s, 5.7s, 5.8s, 6.3s, 7.1k, 7.3k, 7.4k, 7.5k, 7.7k, 7.1s, 7.4s, 7.6s, 9.1k, 9.2k, 9.4k, 9.5k, 9.6k, 9.7k, 9.11k, 9.1s, 9.2s, 9.3s, 9.7s, 9.8s, 9.9s, 9.16s, 9.17s, 9.18s, 9.21s, 9.22s; PPR 1.18k, 1.21k, 1.18s, 2.10k, 2.17k, 4.14s, 4.15s; InTASC 3d, 3k, 3o, 5p, 7c, 9n, 10o; Technology 1.3s [ISTE 7c],

Dr. Jeffery, Fall 2021
IV. Evaluation and Assessments (Grading):

ELED 4310 is a 3-hour credit course. Students are expected to complete assignments on or before the due date shown on the Course Timeline. In order to receive an ‘A’ in the course, all assignments must be completed. Failure to complete any assignment will result in an automatic reduction of the course grade earned by one letter grade, regardless of the total number of points earned.

**GRADING**

Final grades are determined by a percentage of total possible points earned based on the scale below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 – 100%</td>
</tr>
<tr>
<td>B</td>
<td>80 – 89%</td>
</tr>
<tr>
<td>C</td>
<td>75 – 79%</td>
</tr>
<tr>
<td>D</td>
<td>70 – 74%</td>
</tr>
<tr>
<td>F</td>
<td>69% or below</td>
</tr>
</tbody>
</table>

Late work will not be accepted without prior approval. Prior approval may be granted on a case-by-case basis for 50% credit at the discretion of the ELED 4310 instructor.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting Started Quiz</td>
<td>2</td>
</tr>
<tr>
<td>Introductory Videos via FlipGrid</td>
<td>10</td>
</tr>
<tr>
<td><strong>Science Diagnostic Assessment Quiz [Module 1]</strong></td>
<td>42</td>
</tr>
<tr>
<td><strong>COURSE DISCUSSIONS [Module 2]</strong></td>
<td></td>
</tr>
<tr>
<td>Discussion Board Postings/Responses (5@ 5 points each)</td>
<td>25</td>
</tr>
<tr>
<td><strong>Teaching Science as Inquiry – Chapter Quizzes</strong></td>
<td>100</td>
</tr>
<tr>
<td>(10@ 10 points each) [Module 3]</td>
<td></td>
</tr>
<tr>
<td>Safety Standards PowerPoint [Module 4]</td>
<td>10</td>
</tr>
<tr>
<td><strong>BUTTERFLY LIFE CYCLE PROJECT - INQUIRY INVESTIGATION [Module 5]</strong></td>
<td></td>
</tr>
<tr>
<td>Butterfly Garden - Scientific Inquiry Investigation</td>
<td>100</td>
</tr>
<tr>
<td><strong>JOURNAL REFLECTIONS [Dropbox] (8@ 8 points each)</strong></td>
<td>64</td>
</tr>
<tr>
<td>Weekly Journal Reflections (6@ 5 points each)</td>
<td>30</td>
</tr>
<tr>
<td><strong>PROJECT LEARNING TREE (PLT) [Module 6]</strong></td>
<td></td>
</tr>
<tr>
<td>Project Learning Tree History &amp; Overview Quiz</td>
<td>2</td>
</tr>
<tr>
<td>Project Learning Tree Video Response Quiz</td>
<td>18</td>
</tr>
<tr>
<td>Project Learning Tree Survey</td>
<td>2</td>
</tr>
<tr>
<td>Project Learning Tree Hike Through the Guide</td>
<td>10</td>
</tr>
</tbody>
</table>

**LESSON PLANS**
VI. Instructional Methods and Activities

- Classroom Experiences (discussion threads, collaboration, peer review, group work, individual work, online deliveries and reflection).
- Field Experiences: Evaluate a PreK, elementary or middle school student and conduct science instruction for a minimum of 3 hours.

VII. Evaluation and Grade Assignment

The methods of evaluation and the criteria for grade assignment are:

I. Weekly Module Assignments

Students will complete weekly module assignments on the topics covered in the course outline. Module assignments include:

1. Meet & Greet; Butterfly Project - (1) Introduction/Science Autobiography and (2) You will conduct a Butterfly Life Cycle - Scientific Inquiry Investigations, explore the life cycle of a butterfly and discuss weekly in class.
2. 5E Lesson Plans - You will write two (2) 5E science lesson plans and teach individually or co-teach with your peers.
3. Discussion Board - You will read NSTA Position Statements and scholarly articles from science education journals, reflect on them with an initial posting, and respond to two peers’ postings.
4. Quizzes - You will take a Syllabus quiz after reading the syllabus, and chapter quizzes after reading PPTs and chapters in the course textbook.
5. Journal – You will practice being a reflective practitioner by writing weekly class reflections and a final reflection in Dropbox.

More specific details about these assignments are provided below:

1. Readings/Article Reviews on Discussion Board

You will be a part of a Professional Learning Community (PLC) by responding to various questions and posts on the discussion board via Brightspace. The promptness and initiative of participating in threaded discussions done in a timely fashion will demonstrate self-motivation. The delivery of your posts will address your attention to detail in terms of being grammatically correct with rare misspellings. You will make posts that are relevant to the original discussion by staying on topic. By contributing to the professional learning community, you will demonstrate an effort to further the development of a collaborative learning experience. You will write a one-paragraph reflection that addresses a given prompt. Then you will review two other students’ postings and post one response/comment to each student’s post (Total of two replies). Your replies to other students’ posts should be 3-5 sentences. You can feel free to provide/post responses to more than two classmates’ postings to enhance a discussion; however, you will only receive credit for replying to two classmates’ posts. Remember to be courteous and respectful to all peers and in your responses to postings. Professionalism is expected at ALL times.

2. Module Quizzes

Students will be assessed over instructional objectives related to: the nature of science, scientific
inquiry, science process skills, teaching for conceptual change, instructional models for inquiry science, designing inquiry lessons, managing inquiry lessons, and assessing inquiry lessons.

3. Journal Reflections
Teacher as a reflective practitioner. Students will keep a reflective journal of their weekly experiences in the course and of concepts learned during the week. You should make an entry into your journal at least once per week and reflect on something that “grabbed” you the most from our class interactions/videos/readings/scientific inquiry investigations/etc. and you fully intend to use in your class (present or future)!! For your Final reflection, you will post a reflection in your journal about Teaching Science.

5-E Lesson Plan
Students will analyze their current or future classroom practices as they relate to the research-based instructional approaches discussed in the course. They will develop a 5-E inquiry-based lesson plan for a specific grade level, utilizing science process and concept TEKS, and will incorporate the science concept/theory/law researched and make connections to the nature of science and other disciplines, as appropriate. A 5-E lesson template will be provided in Brightspace for the student.

V. Tentative Course Outline/Calendar:

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DUE DATE</th>
<th>MODULE</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sun., August 29</td>
<td>Modules A-D, Module 1 – Diagnostic Science Assessment</td>
<td>• Purchase Course Textbooks&lt;br&gt;• Introduction/Science Autobiography via FlipGrid&lt;br&gt;• Complete Modules A-D, (Welcome, Course Syllabus, Course Calendar, LiveText, Getting Started)&lt;br&gt;• Discussion Board #1 (Module D)&lt;br&gt;• Science Diagnostic Assessment (Module 1)&lt;br&gt;• Journal Reflection #1</td>
</tr>
<tr>
<td>2</td>
<td>Sun., September 5</td>
<td>Module 2 – Course Discussions Module 3 – Chapter Quizzes</td>
<td>• Order Butterfly Garden Kit&lt;br&gt;• Read Chapters 1 &amp; 2 in course textbook&lt;br&gt;• Complete Chapters 1 &amp; 2 Quizzes&lt;br&gt;• Discussion Board #2 Posts&lt;br&gt;• Begin looking over Module 5&lt;br&gt;• Journal Reflection #2</td>
</tr>
<tr>
<td>3</td>
<td>Sun., September 12</td>
<td>Module 2 – Course Discussions Module 3 – Chapter Quizzes Module 4 – Science Safety Standards Module 5 – Butterfly Project</td>
<td>• Read Chapters 3 &amp; 4 in course textbook&lt;br&gt;• Complete Chapters 3 &amp; 4 Quizzes&lt;br&gt;• Discussion Board #3 Posts&lt;br&gt;• Science Safety Standards PPT</td>
</tr>
</tbody>
</table>

Dr. Jeffery, Fall 2021
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Activities</th>
</tr>
</thead>
</table>
| 4    | Sun., September 19 | - Module 2 – Course Discussions  
- Module 3 – Chapter Quizzes  
- Module 5 – Butterfly Project  
- Module 6 – Project Learning Tree (PLT)  
- Read Chapters 5 & 6 in course textbook  
- Complete Chapters 5 & 6 Quizzes  
- Discussion Board #4 Posts  
- PLT Welcome Video, History & Overview Quiz - Module 6 (PLT)  
- Journal Reflection #3 |
| 5    | Sun., September 26 | - Read Chapters 7 & 8 in course textbook  
- Complete Chapters 7 & 8 Quizzes  
- Discussion Board #5 Posts  
- PLT 5E Lesson Plan/Teach (30-45 min. video lesson)  
- PLT Video Response Assignments  
- Journal Reflection #4 |
| 6    | Sun., October 3  | - Read Chapters 9 & 10 in course textbook  
- Complete Chapters 9 & 10 Quizzes  
- Teach Reflection (review recorded video for reflection)  
- PLT Hike through the Guide  
- PLT Survey |
| 7    | Sun., October 10  | (Final Week) - Module 5 – Butterfly Project  
- Module 6 – Project Learning Tree (PLT)  
- Butterfly Project  
- Journal Reflection #6 Final Reflection) |

The information contained in this class syllabus is subject to change. Students are expected to be aware of any additional course policies presented by the instructor during the course.

VI. Readings & Additional Course Materials (Required):

**REQUIRED TEXTS:**
TEACHING SCIENCE THROUGH INQUIRY-BASED INSTRUCTION  
Authors: Terry Contant, Joel Bass, Anne Tweed, & Arthur Carin  

Forest Foundation.
This text will be purchased via a website link provided by the professor on the homepage of the course.

**SCIENCE TEKS:**

**MATERIALS/SUPPLIES:**
Butterfly Garden with Live Cup of Caterpillars $27.99
[https://www.insectlore.com/catalogsearch/result/index/?living_kits=37&q=painted+lady+larvae+thru+Insect+Lore](https://www.insectlore.com/catalogsearch/result/index/?living_kits=37&q=painted+lady+larvae+thru+Insect+Lore)

**Resources:**
**Journals**


*American Scientist*, Sigma XI, the Scientific Research Society — [www.americanscientist.org](http://www.americanscientist.org)

*ChemMatters*, American Chemical Society — [www.acs.org/](http://www.acs.org/)


*Exceptional Children*, Council for Exceptional Children — [www.cec.sped.org](http://www.cec.sped.org)


*The Earth Scientist*, National Earth Science Teachers Association — [http://www.nestanet.org/cms/content/welcome](http://www.nestanet.org/cms/content/welcome)


*Dr. Jeffery, Fall 2021*
**Other Resources**


ONLINE RESOURCES

Center on Instruction, RMC Research Corporation — www.centeroninstruction.org

Education Resources Information Center (ERIC) — www.eric.ed.gov


Searchlight, The University of Texas at Austin — http://searchlight.utexas.org

Texas Education Agency — www.tea.state.tx.us


Social Justice Resources:


Teaching for Change — https://www.teachingforchange.org/

References:


LiveText:

This course uses the LiveText data management system to collect critical assessments for students who are Perkins College of Education majors (undergraduate, graduate, and doctoral) or majors in other colleges seeking educator certification through the Perkins College of Education. Students who do not have an existing LiveText account will receive an access code via the SFA email system within the first week of class. You will be required to register your LiveText account, and you will be notified how to do this via email. If you forward your SFA e-mail to another account and do not receive an email concerning LiveText registration, please be sure to check your junk mail folder and your spam filter for these emails.

If you have questions about obtaining or registering your LiveText account, call 936-468-2395 or e-mail livetext@sfasu.edu. Once LiveText is activated, if you have technical questions, call 936-468-2395 or e-mail livetext@sfasu.edu. Failure to activate the account and/or submit the required assignment(s) within the LiveText system may result in course failure.
VII. Course Evaluations:

Near the conclusion of each semester, students in the College of Education electronically evaluate courses taken within the COE. Evaluation data is used for a variety of important purposes including: course and program improvement, planning, and accreditation; instruction evaluation purposes; and making decisions on faculty tenure, promotion, pay, and retention. As you evaluate this course, please be thoughtful, thorough, and accurate in completing the evaluation. Please know that the COE faculty is committed to excellence in teaching and continued improvement. Therefore, your response is critical!

In the College of Education, the course evaluation process has been simplified and is completed electronically through MySFA. Although the instructor will be able to view the names of students who complete the survey, all ratings and comments are confidential and anonymous, and will not be available to the instructor until after final grades are posted.

VIII. Student Ethics and Other Policy Information: Found at https://www.sfasu.edu/policies

Class Attendance and Excused Absence: Policy 6.7

Regular, punctual attendance, documented participation, and, if indicated in the syllabus, submission of completed assignments are expected at all classes, laboratories, and other activities for which the student is registered. Based on university policy, failure of students to adhere to these requirements shall influence the course grade, financial assistance, and/or enrollment status. The instructor shall maintain an accurate record of each student’s attendance and participation as well as note this information in required reports and in determining final grades. Students may be excused from attendance for reasons such as health, family emergencies, or student participation in approved university sponsored events. However, students are responsible for notifying their instructors in advance, when possible, for excusable absence. Whether absences are excused or unexcused, a student is still responsible for all course content and assignments. Students with accepted excuses may be permitted to make up work for up to three weeks of absences during a semester or one week of a summer term, depending on the nature of the missed work. Make-up work must be completed as soon as possible after returning from an absence.

Academic Accommodation for Students with Disabilities: Policy 6.1 and 6.6

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 936-468-3004 as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Student Academic Dishonesty: Policy 4.1

Abiding by university policy on academic integrity is a responsibility of all university faculty and students.

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes, but is not limited to: using or attempting to use unauthorized materials on any class assignment or exam; falsifying or inventing of any information, including citations, on an assignment; and/or; helping or attempting to help another in an act of cheating or plagiarism.

Plagiarism is presenting the words or ideas of another person as if they were one’s own. Examples of plagiarism include, but are not limited to: submitting an assignment as one’s own work when it is at least partly the work of another person; submitting a work that has been purchased or otherwise obtained from the Internet or another source; and/or, incorporating the words or ideas of an author into one’s paper or presentation without giving the author credit.

Penalties for Academic Dishonesty
Penalties may include, but are not limited to reprimand, no credit for the assignment or exam, re-submission of...
Student Appeals
A student who wishes to appeal decisions related to academic dishonesty should follow procedures outlined in Academic Appeals by Students (6.3).

Withheld Grades: Policy 5.5
At the discretion of the instructor of record and with the approval of the academic unit head, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F, except as allowed through policy [i.e., Active Military Service (6.14)]. If students register for the same course in future semesters, the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Student Code of Conduct: Policy 10.4
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program. Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This policy applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the iCare: Early Alert Program at SFA. Information regarding the iCare program is found at https://www.sfasu.edu/judicial/earlyalert.asp or call the office at 936-468-2703.

Diversity Statement
The James I. Perkins College of Education is committed to proactively recruiting and retaining a diverse faculty, staff, and student population. Through open dialogue, mutual respect, and shared responsibility, faculty, staff, and students will demonstrate an understanding and sensitivity to ethnicity, race, gender, exceptionalities, culture, language/dialect, age, social class, family structure, sexual orientation, religion, and spiritual values in order to enhance the quality of life in a diverse, global community.

James I. Perkins College of Education Mission, Vision, Core Values, and Diversity can be found at the following link: http://coe.sfasu.edu/about-us.

Additional Information:
Code of Ethics for the Texas Educator:
The Texas educator shall comply with standard practices and ethical conduct toward students, professional colleagues, school officials, parents, and members of the community and shall safeguard academic freedom. The Texas educator, in maintaining the dignity of the profession, shall respect and obey the law, demonstrate personal integrity, and exemplify honesty and good moral character. The Texas educator, in exemplifying ethical relations with colleagues, shall extend just and equitable treatment to all members of the profession. The Texas educator, in accepting a position of public trust, shall measure success by the progress of each student toward realization of his or her potential as an effective citizen. The Texas educator, in fulfilling responsibilities in the community, shall cooperate with parents and others to improve the public schools of the community. This chapter shall apply to educators and candidates for certification.


Dr. Jeffery, Fall 2021
To complete Certification/Licensing Requirements in Texas related to public education and other professional settings, you will be required to:

1. Candidates must undergo a criminal history background check prior to clinical teaching and prior to employment as an educator. The public school campuses are responsible for completing the criminal background check. A person who is enrolled or planning to enroll in a State Board for Educator Certification-approved educator preparation program or planning to take a certification examination may request a preliminary criminal history evaluation letter regarding the person's potential ineligibility for certification due to a conviction or deferred adjudication for a felony or misdemeanor offense.

A Preliminary Criminal History Evaluation is a non-mandatory, non-binding evaluation of an individual’s self-reported criminal history. In addition, the agency obtains your name-based Texas criminal history information. The service is provided to the requestor for a non-refundable fee. The requestor will receive an evaluation letter by email from agency staff advising of potential ineligibility for educator certification.

You are eligible to request a Preliminary Criminal History Evaluation if:

- You enrolled or planning to enroll in an educator preparation program or
- You are planning to take a certification exam for initial educator certification, and
- You have reason to believe that you may be ineligible for educator certification due to a conviction or deferred adjudication for a felony or misdemeanor offense.

You are not eligible for a preliminary evaluation of your criminal history if you do not have a conviction or deferred adjudication for a felony or misdemeanor offense.

In addition, you must complete the fingerprinting process when you apply for certification. Participation in the evaluation does not preclude you from submitting to a national criminal history review at the time you apply for your educator certification. Your criminal history will be reviewed and you may be subject to an investigation based on that criminal history, including any information you failed to submit for evaluation.

Additional information can be found at https://tea.texas.gov/Texas_Educators/Investigations/Preliminary_Criminal_History_Evaluation-FAQs/.

2. Provide one of the following primary ID documents: passport, driver’s license, state or providence ID cards, a national ID card, or military ID card to take the TExES exams (additional information available at www.texas.ets.org/registrationBulletin/). YOU must provide legal documentation to be allowed to take these mandated examinations that are related to certification/licensing requirements in Texas. If you do not have legal documentation, you may want to reconsider your major while at SFASU.

3. Successfully complete state mandated a fingerprint background check. If you have a history of criminal activity, you may want to reconsider your major while at SFASU.

For further information concerning this matter, contact the Office of Assessment and Accountability at 936-468-1282 or edprep@sfasu.edu.

IX. Other Relevant Course Information:

REQUIREMENT FOR ADVANCEMENT IN TEACHER EDUCATION
In order to take the next course(s) in the professional teacher education sequence, departmental policy requires that teacher candidates maintain a GPA of 2.75 or better (the same as required for admission to Teacher Education).

Candidates failing to maintain at least a 2.75 GPA will be dropped from professional education courses.
**Late assignments**
Late assignments will not receive full credit. A deduction of 10% per day will be applied to any late assignment. Communicating an excuse for a late assignment does not constitute a waiver of the deadline or avoid the deduction.

**Attendance/Participation**
Regular attendance is best for students enrolled in the course. Participation points are awarded each week. You will gain from the course what you are also willing to put into the course.

**Late work and Make-up Exams**
Full credit will not be given for late assignments or unexcused missed conference.

**Extra Credit**
Extra credit is not an option for this course.

**COMMUNICATION**
Email is the preferred mode of communication between instructor and student. Please use the email tool in this course to contact the instructor. Students may expect an email reply Monday-Friday within 24 hours from the initial contact effort. Emails sent on Friday, Saturday, or Sunday may not receive a response until the following Monday.

**PARENTS & CAREGIVERS**
Parents and caregivers deserve access to education. Especially now, in our virtual learning space, with many children learning from home and schools facing sudden closures, I expect children to be present in class from time to time.

1) Breastfeeding babies and children of all ages are welcome and may be visible on screen during class sessions. Alternatively, parents and caregivers may turn the camera off when more privacy is required.
2) Stepping away momentarily for childcare reasons is completely understandable and expected. Simply mute and/or turn off your camera as necessary and rejoin us when you are able.
3) Do not take any photos, audio, or video of any children on screen. Students who do so are subject to censure.
4) All students are encouraged to support and respect caregivers as they mute and/or turn off their video and use the chat function as needed.
5) Please consider disclosing your student-caregiver status to me. This is the first step in my being able to accommodate any special needs that arise. While I maintain the same high expectations for all students in my classes, I am happy to problem-solve with you in a way that makes you feel supported as you strive for school-caregiver balance.