I. Course Description:

**Teaching Science in EC-6** – 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.

**Prerequisites:** Admission to Educator Preparation; enrolled in ELE 450.

**MISSION:** Through active participation in classroom projects and outside field investigations the mission of this class, and that of the College Of Education, is to prepare competent, successful, caring and enthusiastic professionals dedicated to responsible service, leadership and continued professional and intellectual development.

II. Intended Learning Outcomes /Goals/Objectives:

Teaching Elementary Science (ELE 301 Paraprofessional course) is a hands-on /minds-on learning opportunity for teacher candidates at SFASU. It is our intent in the College of Education to prepare professional educators who positively impact learning for all students and graduate productive citizens and successful leaders.

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

**Program Learning Outcomes:**

The purpose of this course is to prepare professional educators who positively impact learning for all students. It is our mission to provide students 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.

This class will model how to collaborate with external partners to enhance students' knowledge, skills, and dispositions, and to influence the ongoing exchange of ideas for mutual benefit. Knowledge is gained in many ways. This necessitates that educators utilize various strategies from direct teaching to inquiry methods, from individual to small group and large group formats.
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.

EC6 PBIC Program Learning Objectives

- **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 (ACEI 1).
- **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 (ACEI 2).
  - SLO 2.2.2 Assessment – Lesson Sample/Lesson Plan Rubric Assignment (implementing unpacking TEKS, lesson and language objective taught in ECH 331 and RDG 320)
  - SLO 2.2.3 Assessment – Raising Butterflies Journaling & Research Assignment
  - SLO 2.2.4 Assessment – Learning Tree Certification
  - SLO 2.2.5 Assessment – Project Share Discussion (Demonstrate TEA Project Share see Wynter)(NETS-S ST III)
- **SLO 2.4.1 Assessment – Student Impact using technology and Self-Reflection of BBBB/Wetland Adventure Paper (APA citations & references)
  - SLO 1.1 Candidates will know and understand the history and nature of science (EC6 Texas Science ST VI).
    - SLO 1.1.1 Assessment – Position Paper on Teaching and History of Science (APA citations & references)
  - SLO 1.2 – Candidates will understand how students learn in science and how science interacts with and influences personal and societal decisions (EC6 Texas Science ST IV, VII).
    - SLO 1.2.1 Assessment – BBBB/Wetland Adventure Teaching Stations
  - 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 (EC6 Texas Science ST I, II).
    - SLO 2.1.1 Assessment – BBBB/Wetland Adventure Teaching Situations (same as SLO 1.2.1)
  - 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 (EC6 Texas Science ST IV, III)
    - SLO 2.2.1 Assessment – Modified Science Process Skills Assignment
SLO 2.3– Candidates will know and understand the TEKS in physical science, life science, earth, and space science and will use unifying concepts and processes that are common the science content appropriate (EC6 Texas Science ST VIII, IX, X, XI).
  - Assessment 2.3.1 – Science Diagnostic Assessment Quiz
SLO 2.4 – Candidates will know and use varied and appropriate assessment practices (formative/summative) to monitor science learning (EC6 Texas Science ST V)

B TEXT AND MATERIALS
1. Required Texts
   2. TEKS (Texas Essential Skills and Knowledge) - Science Curriculum for the State of Texas. You can acquire these on the web. http://tea.texas.gov/index2.aspx?id=5483
   4. National Science Education Standards. National Academy Press (1996). The Standards, which can be found on the web, are guidelines designed to ensure that all students graduate with the science knowledge and intellectual abilities they will need to make effective decisions in their everyday lives, participate in civic and cultural affairs, and become economically productive citizens.

2. Materials and supplies you will need
   1. Painted Lady larvae (order on-line)
      - Original Butterfly Garden with Live Cup of Caterpillars $24.95
   2. Computer software/hardware you will need:
      1. Microsoft Word
      2. PowerPoint
      3. Netscape Composer
      4. RealPlayer
III. Course Assignments, Activities, Instructional Strategies:

(Each of the following requirements is described in detail in separate modules on the home page of this course)

1. *Teaching Science As Inquiry* post self-assessments (10 chapters: 10 pts each). **100 Pts**
2. 5 - Discussion Questions (10 pts each). **50 Pts**
3. Getting Started Quiz. **5 Pts**
4. Science Diagnostic Assessment Quiz. **40 Pts**
6. Special Project *choose one*) **100 Pts**
   1. Science Virtual Field Trip Project *OR*
   2. BBBB Special Event
7. BBBB video assignment **20 Pts**
9. PLT Workshop: PLT Hike Through the Guide; PLT Lesson 1; PLT Survey (total of) **50 Pts**
10. Course Evaluation. **10 Pts**
11. Final Exam. **50 Pts**

IV. Evaluation and Assessment

A = 450 – 500 points
B = 400 - 449
C = 350 - 399
F = Below 350

V. Course Calendar

01-19-16 Create Student Homepage (found in Discussion Tool)
01-20-16 “Getting Started Quiz” available through 1-22-15(Quiz Tool)
01-21-16 Student Homepage due by 11:55 PM
01-22-16 “Getting Started Quiz” due by 11:55 PM
01-25-16 Review Discussion # 1 (NSTA Position Papers from NSTA website – see Discussion Tool); due 02-05-16
01-26-16 Review “rubric” for grading all Discussion Questions
01-27-16 Determine which “Special Project” either Virtual Fieldtrip, or Bugs, Bees, Butterflies and Blossoms (at SFA Arboretum) by 2-05-16
01-28-16 Discussion # 1 Choose of of the NSTA position papers and write a response.
01-29-16 Discussion 1 (NSTA response paper) due by 11:55 PM

February 03 – February 05 On-line students will meet at SFASU

02-08-16 Science Diagnostic Assessment (Quiz) available thru 02-11-16
02-09-16 Order Painted Lady Butterfly larvae from Insect Lore
02-10-16 As soon as larvae arrive begin daily journal
02-11-16 Science Diagnostic assessment (Quiz) due by 11:30 PM
02-12-16 Review Discussion # 2
02-15-16 Begin reading Chapter 1
02-16-16 Discussion # 2 due by 11:55 PM
02-17-16 If the “Special Project” you selected was the VFT you must submit a science concept and grade level
02-18-16 If the “Special Project” you selected was the BBBB your day attending and partner will be confirmed.
02-19-16 Chapter 1 test due by 11:55 PM
02-22-16 Begin reading Chapter 2
02-23-16 Continue butterfly daily journal entrée; Review PLT book organization, Hike Through the PLT Pre K-8 Guide.
02-24-16 Begin to look for answers to PLT Hike Through the Guide Assignment - answers due 03-02-16.
02-25-16 Review Discussion # 3
02-26-16 Chapter 2 test due by 11:55 PM
02-29-16 Begin reading Chapter 3

03-01-16 Discussion # 3 due by 11:55 PM
03-02-16 PLT Hike Through the Guide Assignment due by 11:55 PM
03-04-16 Chapter 3 test due 11:55 PM
03-07-16 Begin reading Chapter 4
03-08-16 continue to research Painted Lady Life Cycle
03-11-16 Chapter 4 test due by 11:55 PM

March 14-18 SPRING BREAK

03-22-16 PLT Lesson 1 from workshop due by 11:55 PM
03-23-16 Continue research and work on science VFT Project for those who selected this as their “Special Project”

March 24-25 EASTER

03-28-16 Begin reading Chapter 5.
03-29-16 For those who selected BBBB as their “Special Project” you should be making preparations for this event.
03-30-16 Observe BBBB video and review questions.
03-31-16 Complete answers for BBBB video questions by 11:55 PM

04-01-16 Chapter 5 test is due by 11:55 PM
04-04-16 Begin reading Chapter 6
04-05-16 Discussion # 4 due by 11:55 PM
04-08-16 Chapter 6 test due by 11:55 PM

April 11-15 BBBB Special Event at SFA MAST Arboretum

04-11-16 Begin reading Chapter 7
04-15-16 Chapter 7 test is due 11:55 PM
04-18-16 Begin reading Chapter 8
04-19-16 BBBB Reflection (Special Project) due 11:55 PM
04-20-16 Butterfly Journal due by 11:55 PM
04-22-16 Chapter 8 test due by 11:55 PM
04-25-16 Begin reading Chapter 9
04-27-16 Preview NSTA’s publication – Science and Children on-line (www.nsta.org)
04-28-16 Select an article from Science and Children and write a one page summary/reflection due 05-04-16
04-29-16 Chapter 9 test due by 11:55 PM

05-02-16 Begin reading Chapter 10
05-03-16 Discussion # 5 due by 11:55 PM
05-04-16 Science and Children article summary/reflection due by 11:55 PM
05-05-16 “Special Projects” – VFT due by 11:55 PM
05-06-16 Chapter 10 test due by 11:55 PM
05-08-15 Chapter 10 test due by 11:55 PM
05-09-16 PLT Survey due by 11:55 PM; Begin reviewing Chapter 1-10 for Final Exam (50 multiple choose questions)
05-10-16 Final Exam available through 05-11-16
05-11-16 Final Exam must be completed by 11:55 PM

VI. Readings


VII. Courses Evaluation:

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: 1. Course and program improvement, planning, and accreditation; 2. Instruction evaluation purposes; and 3. 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 instructors 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:

COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT OF 1990

Stephen F. Austin State University does not discriminate on the basis of disability in admission to, access to, or operations of its programs, services, or activities. Stephen F. Austin State University does not discriminate on the basis of disability in its hiring or employment practices.

Students with Disabilities: 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, Room 325, 468-3004/468-1004 (TDD) as soon as possible. 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.

ASSIGNMENT POLICY:
All students are expected to complete assignments on the due date shown on the Calendar of Assignments. 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. Written work in which the use of the English language is not at an acceptable level for a university senior will be returned to the intern marked "Unacceptable" and a zero assigned.

MAKE-UP WORK POLICY:
The decision whether to accept make-up work is at the discretion of the instructor. No make-up work will be accepted Dead Week or Finals Week.

LATE WORK POLICY:
No late work will be accepted.

Academic Integrity

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) 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 your own. Examples of plagiarism are (1) submitting an assignment as if it were one’s own work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one’s paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

Withheld Grades Semester Grades Policy (A-54)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, 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. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Acceptable Student Behavior

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 (see the Student Conduct Code, policy D-34.1). 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 prohibition 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 Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

To complete Certification/Licensing Requirements in Texas related to public education, you will be required to:

1. Undergo criminal background checks for field or clinical experiences on public school campuses; the public school campuses are responsible for the criminal background check; YOU are responsible for completing the information form requesting the criminal background check; the completed information form is due _______. If you have a history of criminal activity, you may not be allowed to complete field or clinical experiences on public school campuses. At that point, you may want to reconsider your major while at SFASU.
2. Provide one of the following primary ID documents: passport, drivers license, state or providence ID cards, a national ID card, or military ID card to take the TExES exams (additional information available at www.texes.ets.org/registrationBulletin/ <http://www.texes.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.

LiveText

Required:

Although this course does not use 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, you must make sure LiveText is activated. 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 e-mail concerning LiveText registration, please be sure to check your junk mail folder and your spam filter for these e-mails.

In addition, if you have not previously done so, you must purchase and activate the LiveText add-on, Field Experience Module (FEM), PRIOR to your first day of field experience/clinical teaching. Failure to purchase and activate the account and/or submit the required assignment(s) within the FEM system may result in course failure. FEM must be purchased from www.livetext.com for a fee of $18.00.

If you have questions about obtaining or registering your LiveText account, call ext. 1267 or e-mail SFALiveText@sfasu.edu. Once LiveText is activated, if you have technical questions, call ext. 7050 or e-mail livetext@sfasu.edu. Failure to activate the account and/or submit the required assignment(s) within the LiveText system will reduce the final course grade by one letter.

ISTE Technology Standards

1. Facilitate and Inspire Student Learning and Creativity
2. Design and Develop Digital-Age Learning Experiences and Assessments
3. Model Digital-Age Work and Learning
4. Promote and Model Digital Citizenship and Responsibility
5. Engage in Professional Growth and Leadership

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