Stephen F. Austin State University  
Department of Elementary Education  
ELE 522.501  
Science in Elementary School Advanced  
Fall 2017  

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Course Time & Location: online  
Office Hours: MWF by appt; TR 9:00-11:30  
Credits: 3  

Note: If this is your first D2L course, (Technology) Training is recommended for successful participation in this course.

I. COURSE DESCRIPTION:  This course is designed to help teachers become more competent in the development and use of hands-on, inquiry-based science activities. It is a workshop-type course based upon the process skills, materials and goals of national science curriculum programs.

There is an assignment that is related to the accountability and accreditation that is required for this course. It is the documentation of teaching a science lesson and must be submitted in Livetext

II. INTENDED LEARNING OUTCOMES/GOALS/OBJECTIVES

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

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 PLO 1; AMLE PLO 1; AMLE PLO 3; InTASC 1, 8).

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; AMLE 2; InTASC 4, 5, 7, 8).

PLO 3 Candidates use their knowledge of students, learning, curriculum, environment, diversity, communication, and community to plan and implement collaborative engaging, thought provoking, inquiry-based instruction to meet the needs of all learners (ACEI 3; AMLE 4; InTASC 2, 3, 4, 5, 6, 7, 8).
PLO 4 Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate, and strengthen instruction to promote continuous intellectual, social, emotional, and physical development of all learners (ACEI 4; AMLE 4; InTASC 2, 3, 6, 7, 8).

PLO 5 Candidates know, implement, evaluate, and reflect upon research-based teaching, professional ethics, and professional learning resources to establish and maintain positive, collaborative relationships with families, colleagues, professional organizations, and community agencies to promote the intellectual, social, emotional, physical growth, and well-being of all learners (ACEI 5; AMLE 5; InTASC 9, 10).

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 PLO 1; AMLE PLO 1; AMLE PLO 3).

2013/2014 MOVING TO – ELE 527 Standard Assignment Rubric (Personal Theory Part II) (SPA other #6)
SPRING 2016 – FEM IN ELE 527 & MLG 540 to address observing and reflecting in “real” school settings concerning students from different socio-economic groups, diverse ethnic/racial groups, English language learners, and students with disabilities.

AMLE PLO 1 Candidates will understand the major concepts, principles, theories, and research related to young adolescent development, and they provide opportunities that support student development and learning:
   Element 1 A: Knowledge of young adolescent development
   Element 3 A: Middle level philosophical foundations
   AMLE PLO 1 Ideal Middle School Project (row 1) – MLG 540

ACEI 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; AMLE 2).

   ACEI PLO 2.1 Assessment – TExES Content PACT Exam – Notice of Admissions (SPA #1) CERTIFICATION MASTERS ONLY
   ACEI PLO 2.2 Assessment – Row 4 of PLO 4.1 Lesson Plan Rubric ELE 521, 522, 523, RDG 518 & 519 (SPA #2)

AMLE PLO 2 Candidates will understand and use the central concepts, tools of inquiry, standards, research and structures of content to plan and implement curriculum that develops all young adolescents’ competence in subject matter.
   Element A: Subject Matter Content
   Element B: Interdisciplinary Nature of Knowledge
   Element C: Middle Level Student Standards

   AMLE PLO 2.1 Assessment – TExES Content PACT Exam – Notice of Admissions (SPA #1) CERTIFICATION MASTERS ONLY
   AMLE PLO 2.2 Assessment – Row 4 PLO 4.1 Lesson Plan Rubric ELE 521, 522, 523, RDG 518 & 519 (SPA #2)

ACEI PLO 3 Candidates use their knowledge of students, learning, curriculum, environment, diversity, communication, and community to plan and implement collaborative engaging, thought provoking, inquiry-based instruction to meet the needs of all learners (ACEI 3; AMLE 4).

   ACEI PLO PLO 3.1 – Lesson Plan Rows 3-4 ELE 521, 522, 523, RDG 518 & 519 (SPA #3 & FIELD ADDENDUM)
   ACEI PLO PLO 3.2 – Field Experience Addendum (Student Teaching) CERTIFICATION ONLY

AMLE PLO 3 Candidates understand the major concepts, principles, theories, and research underlying the philosophical foundations of developmentally responsive middle level programs and schools, and they work successfully within these organizational components
   Element B: Middle Level Organization and Best Practices

   AMLE PLO 3 Ideal Middle School Project (rows 2-9) – MLG 540 (SPA other #6)
AMLE PLO 4 Candidates will understand, use, and reflect on the major concepts, principles, theories and research related to data-informed instruction and assessment, and they will employ a variety of strategies for a developmentally appropriate climate to meet the varying abilities and learning styles of all young adolescents. (Keeping here with ACEI PLO because it makes sense to report in TRACDAT this way)

AMLE PLO 4.1 – Lesson Plan Rows 3-4 ELE 521, 522, 523, RDG 518 & 519 (SPA #3)
AMLE PLO 4.2 – Field Experience Addendum (Student Teaching) CERTIFICATION MASTERS ONLY

ACEI PLO 4 Candidates know, understand, and use formal and informal assessment strategies to plan, evaluate, and strengthen instruction to promote continuous intellectual, social, emotional, and physical development of all learners (ACEI 4; AMLE 4).

ACEI PLO 4.1 – PART 1 - Formal-based Assessment Project ECH 525/ELE 525 (SPA #7 OTHER)
ACEI PLO 4.2 – PART 2 - Informal-based Assessment Assignment ECH 525/ELE 525 (SPA #7 OTHER)

ABOVE PLO 4.1 & 4.2 PUT ON ONE RUBRIC FOR REPORTING TO SPA PART 1 AND PART 2 BUT PLACED IN COURSE (525) AS TWO SEPARATE RUBRICS

ACEI & AMLE ELE 584 WORK SAMPLE

ACEI PLO 5 Candidates know, implement, evaluate, and reflect upon research-based teaching, professional ethics, and professional learning resources to establish and maintain positive, collaborative relationships with families, colleagues, professional organizations, and community agencies to promote the intellectual, social, emotional, physical growth, and well-being of all learners (ACEI 5; AMLE 5).

ACEI PLO 5.1 – RDG 518 & 519 (SPA #8) Professionalism and Community Assignment
ACEI PLO 5.2 – TEES PPR Exam (licensure exam) (SPA #1) CERTIFICATION MASTERS ONLY

AMLE PLO 5 Candidates will understand the complexity of teaching young adolescents, and they engage in practices and behaviors that develop their competence as professionals.
Element A: Professional Roles of Middle Level Teachers
Element B: Advocacy for Young Adolescents and Developmentally Responsible Schooling Practices
Element C: Working with Family Members and Community Involvement
Element D: Dispositions and Professional Behaviors

AMLE PLO 5.1 – RDG 518 & 519 (SPA #8) Professionalism and Community Assignment
AMLE PLO 5.2 – TEES PPR Exam (licensure exam) (SPA #1) CERTIFICATION MASTERS ONLY

OTHER ASSESSMENTS - ELE 584 WORK SAMPLE (IMPACT), FINAL DISPOSITIONS, COMPLETER SURVEY; ELE 527 DISPOSITIONS; ELE 525 PHILOSOPHY PAPER; ELE 543 WORK SAMPLE
III. COURSE ASSIGNMENTS: Activities, Instructional Strategies, use of Technology

1. Three essays based on prompts. These will be turned in through Dropbox. You must support your thoughts and ideas with citations obtained from resources within the NSTA website. You are required to use correct APA 100 points each for a total of 300 points.
2. Complete Earth and Space, Life, and Physics indexers (diagnostic tests) in the NSTA Learning Center 25 points each indexer for a total of 75 points.
3. Complete one SciPack in NSTA Learning Center 100 points.
4. Science Lesson Plan implemented including reflection and assessment pieces 200 points. This is a Livetext assignment. Lesson must be taught by Friday, November 10th.
5. Science Investigation implemented with presentation using Power Point, Prezi, or other E-tool 100 total points. (25 points for written component, 75 points for presentation).
6. Three discussions in D2L 20 to 75 points each for a total of 150 points.
7. Participating and posting in NSTA Learning Center forums 25 points.
8. Write a review for a resource contained in the NSTA site 20 points.
9. Participation/professionalism 25 points

IV. EVALUATION and ASSESSMENTS (Grading)

A = 900 - 1000 points
B = 800 - 899
C = 700 - 799
F = Below 700

You must complete all of the assignments in this course to receive an “A” in the course. For each assignment not completed, your grade in the course will drop one letter grade.

V. TENTATIVE COURSE OUTLINE

Week 1 August 28-September 2

1. Classes begin. Purchase required E-Textbook: NSTA E-Textbook. See instructions for purchasing in “IV. Readings” below and in D2L. Those requiring financial aid see instructions in D2L.

   Become familiar with the NSTA Learning Center (LC).

   Visit your class landing page at: http://learningcenter.nsta.org/sfasu-ele522-501-fa17
   Edit your profile – introduce yourself to the community; tell others about you.
   Use the search field at top of the page to find resources and add them to your library.
   Explore the “Forums & User Community.” Join the conversation and make a post.
   Watch the “How to Videos” and learn how to create and share a collection.

2. Complete “Getting Started Quiz” available through Sept. 3, 11:55 PM
3. Create Student Homepage (in D2L Discussions) due Sept. 3, 11:55 PM

Week 2 September 4-September 10

1. Review Position Papers from NSTA web site (nsta.org). Link available in D2L.
2. Select one of the NSTA Position Papers to write a one-page reflection essay. Specific directions for this assignment are found in D2L in the module titled NSTA Position Statements.
3. NSTA position statement essay is due Sunday, Sept. 10th at 11:59 PM in Dropbox.
Week 3 September 11-September 17 (Begin preparation for teaching of science lesson)

You will plan and teach a science lesson as a major assignment for this class (LiveText requirement). The lesson must be taught by Friday, November 10th.

1. Review the D2L Module Teaching a Science Lesson: Project 1. Note all due dates within module.
2. Locate and read four articles from the NSTA website that will help you in planning and implementing your science lesson, and add them to your My Library. You will then annotate (summarize) each of the four articles, including correct APA references, and submit to D2L in Discussions. See directions and example in D2L.
3. Following your annotation of the four articles, at the end of the document, include the grade level and the topic of the lesson you will be teaching.
4. Annotation of four articles, and information about grade level and topic is due Sept. 17 at 11:59 PM in Discussions.

Week 4 September 18-September 24

1. Review the module Diagnostic Testing and Completion of SciPacks using the NSTA Learning Center. Note all due dates within module.
2. Complete the Content Knowledge Discussion by Sunday September 24th at 11:59 PM.
3. Begin working on your NSTA SciPack. (Due Sunday, October 22nd at 11:59 PM). See directions in D2L.
4. Work on Lesson Plan for Science Lesson. (Due Sunday, October 22nd at 11:59 PM)

Week 5 September 25-October 1

1. Complete Essay # 2 Science for All Children. Due Sunday, October 1st at 11:59 PM.
2. Review module: Directions for Project II.
4. Submit summary of the results from the Science Buddies survey and the topic you chose to conduct your science project/experiment on by Sunday, October 1st at 11:59 PM.
5. Work on Lesson Plan for Science Lesson. (Due Sunday, October 22nd at 11:59 PM)

Week 6 October 2 - October 8

1. Submit your choice of science topic and grade level for your science Investigation (Project 2) from Science Buddies due Sunday Oct. 8 at 11:59 PM. You will submit this in a Discussion in D2L.
2. Continue working on your NSTA SciPack. (Due Sunday, October 22nd at 11:59 PM). See directions in D2L.
3. Work on Lesson Plan for Science Lesson. (Due Sunday, October 22nd at 11:59 PM) Lesson must be taught by Friday, November 10th.

Week 7 October 9-October 15

1. Continue working on your NSTA SciPack. (Due Sunday, October 22nd at 11:59 PM). See directions in D2L.
3. Work on Lesson Plan for Science Lesson. (Due Sunday, October 22nd at 11:59 PM) Lesson must be taught by Friday, November 10th.
**Week 8 October 16-October 22**

1. Begin collecting data for your science investigation (Project 2).
2. Lesson Plan is Due **Sunday, October 22nd at 11:59 PM.** Science lesson must be taught by **Friday, November 10th.**
3. NSTA SciPack must be completed by **Sunday, October 22nd at 11:59 PM.**

**Week 9 October 23-October 29**

1. Submit your 2-3-page research paper for your Science Investigation Project 2; include 3 APA correct references **due Sunday, October 29 at 11:59.**
2. Continue to work on Science Project 2 – Science Field Investigation.
3. Science lesson must be taught by **Friday, November 10th.**

**Week 10 October 30-November 5**

1. Continue to work on Science Project 2 – Science Field Investigation.
2. Science lesson must be taught by **Friday, November 10th.**

**Week 11 November 6-November 12**

1. Continue to work on Project 2 – Science Investigation data collection.
2. Lesson plan reflection paper and assessment component **due Nov. 12 at 11:59 PM.**

**Week 12 November 13-November 19**

1. Science Project II electronic presentation due **Sunday, November 19th at 11:59 PM.**

**Week 13 November 20-November 25**

Happy Thanksgiving!

**Week 14 November 26-December 3**

1. Complete Essay # 3 due **December 3rd at 11:59 PM.**

**Week 15 December 4-December 10**

1. Complete a review of an article or book chapter in the NSTA Learning Center.

**VI. READINGS**

**TEXT AND MATERIALS**

You will be using the NSTA class bundle as your online “textbook” this semester.

Below are instructions for you to follow in purchasing the NSTA Learning Center (NSTA LC) subscription **AND** NSTA student membership class bundle.

**IMPORTANT NOTE FOR STUDENTS:**

*Do not purchase individual NSTA Membership. Individual NSTA membership is sold online for $39 or $79 and does not include the NSTA Learning Center subscription.*
You must purchase the **class bundle** which includes the NSTA Learning Center subscription **AND** NSTA student membership available **ONLY** at the web address provided below.

**Students:** Follow the steps below in order:
Step 1: Create your NSTA LC account
Step 2: Buy the NSTA LC subscription/NSTA student membership class bundle

(1) **Create your NSTA LC account:**
*Go to the Learning Center to create a free account:
http://learningcenter.nsta.org/my_learning_center/register.aspx*

*If you already have a Learning Center account you do not need to create a second account for your class. Use your NSTA LC e-mail address and password to login to the portal.

(2) **Buy the NSTA LC subscription/NSTA student membership class bundle:**
After logging-in, you need to purchase the NSTA LC subscription/NSTA student membership class bundle.

To purchase the class bundle for $72 using a credit card, go to the following web address:
http://learningcenter.nsta.org/preservice

**Next steps?**
Become familiar with the NSTA LC.

1. Visit your class landing page at:
2. Edit your profile – introduce yourself to the community; tell others about you.
3. Use the search field at top of the page to find resources and add them to your library.
4. Explore the “Forums & User Community.” Join the conversation and make a post.
5. Watch the “How to Videos” and learn how to create and share a collection.

2. **TEKS (Texas Essential Skills and Knowledge) - Science Curriculum for the State of Texas.** You can acquire these on the Texas Education Agency web-site.

3. **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.

**Materials and supplies you will need**

Computer software/hardware you will need:
1. Microsoft Word
2. PowerPoint
4. RealPlayer

**LiveText Statement:**

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 e-mail concerning LiveText registration, please be sure to check your junk mail folder and your spam filter for these e-mails.

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 may result in course failure.

VII. Course Evaluations:

Near the conclusion of each semester, students in the Perkins College of Education electronically evaluate courses taken within the PCOE. 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 PCOE faculty is committed to excellence in teaching and continued improvement. Therefore, your response is critical!

In the Perkins 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:

Class Attendance and Excused Absence: Policy 6.7

Regular, punctual attendance, documented participation, and, if indicated in the syllabus, submission of completed assignments is 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 absences. 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. Faculty members must promote the components of academic integrity in their instruction, and course syllabi are required to provide information about penalties for cheating and plagiarism, as well as the appeal process.

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 the work, make-up exam, failure of the course, or expulsion from the university.

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.

Additional Information:

To complete Certification/Licensing Requirements in Texas related to public education and other professional settings, 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. 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.texas.ets.org/registrationBulletin/<http://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 Katie Snyder 936-468-1740 or snyderke1@sfasu.edu.

IX. Other Relevant Course Information:

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 graduate student 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.