Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should not be used to purchase course materials.

COURSE SYLLABUS

LIBERTY UNIVERSITY

EDUC 634
TEACHING SCIENCE IN THE ELEMENTARY SCHOOL

COURSE DESCRIPTION

Contemporary methods and research for teaching science to elementary-aged students.

RATIONALE

This course is designed to help elementary grade teachers improve the skills necessary to effectively teach science in a God-centered manner.

I. Prerequisite

For information regarding prerequisites for this course, please refer to the Academic Course Catalog.

II. Required Resource Purchase

Click on the following link to view the required resource(s) for the term in which you are registered: http://bookstore.mbsdirect.net/liberty.htm

III. ADDITIONAL MATERIALS FOR LEARNING

A. Computer with basic audio/video output equipment

B. Internet access (broadband recommended)

C. Microsoft Office

IV. MEASURABLE LEARNING OUTCOMES

Upon successful completion of this course, the student will be able to:

A. Demonstrate a broad knowledge and understanding of the major concepts in life, physical, and earth science from a biblical perspective.

B. Use developmentally appropriate strategies to design and deliver instruction in science by developing an interdisciplinary unit with differentiated strategies for all types of learners.

C. Create a plan to include active inquiry experiences in the teaching of science by using various questioning skills, and developing science process skills

D. {classifying, observing (qualitative—using senses, and quantitative—using measurement), predicting, inferring, analyzing, interpreting, and synthesizing}.

E. Research strategies to encourage diverse groups to engage in the schooling process, especially science and mathematics.

F. Discuss educational policy issues and professional development by writing reviews of professional organizations that work with science education.

V. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings, journal articles, and presentations

B. Course Requirements Checklist

After reading the Syllabus and Student Expectations, the student will complete the related checklist found in Module/Week 1.

C. Discussion Board Forums (8)

The candidate will complete 8 Discussion Board Forums throughout the course. The candidate will create a thread of at least 400 words in response to the provided prompt. In addition, the candidate will provide 3 replies of at least 200 words each.

D. Science Literature Reviews (2)

The candidate will complete 2 Science Literature Review papers throughout this course. The candidate must choose 2 different journals relating to education and prepare a 1–2-page review in current APA format. Each Science Literature Review must be submitted via SafeAssign and posted to the corresponding Discussion Board Forum.

E. Science Experiment

The candidate will conduct a science experiment in 2 steps throughout this course:

1. Science Experiment Proposal

   The candidate will complete the first few steps of the Science Experiment including the problem/question, prior knowledge/research, prediction/hypothesis, and plan/procedure.

2. Complete Science Experiment

   The candidate will complete the experiment by submitting data collection, data analysis, and inference/conclusion in addition to the completed Science Experiment Proposal. The complete Science Experiment will be a total of 5–7 pages and must include a title page and a reference page.

F. Electronic Science Portfolio

The candidate will compose an electronic science portfolio. This portfolio will consist of at least 50 links, with 10 in each of 5 subgroups. This project must be compiled in Microsoft Word and must include a reference page of at least 5 sources; however, they do not need to be in APA format.

G. Electronic Vocabulary Notebook

The candidate will complete an electronic vocabulary notebook throughout the course. The candidate will use the Excel template provided to compile a notebook of at least 30 unfamiliar science vocabulary words and definitions. As our students become more and more visual, add the visual to the definition for each definition

H. Chapter Assignments

The candidate will answer specific chapter questions as specified in the Assignment Instructions folder.

I. Integrated Unit

The candidate will create 5 extensive and complete lesson plans for a science unit. Each lesson plan will be based on the 5 E's Learning Cycle and composed using the Lesson Plan Template.

VI. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist		10
Discussion Board Forums (8 at 25 pts ea)		200
Science Literature Reviews (2 at 50 pts ea)		100
Science Experiment Proposal		50
Science Experiment		100
Electronic Science Portfolio		100
Electronic Vocabulary Notebook		100
Chapter Assignments (2 at 50 pts ea)		200
Integrated Unit		150
	Total	1010

B. Scale

A = 960–1010 A- = 940–959 B+ = 920–939 B = 890–919 B- = 870–889
C+ = 850–869 C = 820–849 C- = 800–819 D+ = 780–799 D = 750–779
D- = 730–749 F = 0–729

C. LiveText Submission Policy

All LiveText assignments—including those submitted in Blackboard and/or via SafeAssign—must be submitted to LiveText in order for the student to receive credit for them.

D. Disability Assistance

Students with a documented disability may contact Liberty University Online's Office of Disability Academic Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.

LIBERTY UNIVERSITY

COURSE SCHEDULE

Textbooks: DeRosa and Abruscato, Teaching Children Science, e-Book-8th Edition

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	DeRosa and Abruscato, Chapters 1, 2, 3 1 presentation 2 websites	Course Requirements Checklist Advising Guide Quiz Class Introductions DB Forum 1 Science Literature Review 1	10 0 0 25 50
2	DeRosa and Abruscato, Chapters 4, 5, 6 1 presentation 2 websites	DB Forum 2 Science Experiment Proposal	25 50
3	DeRosa and Abruscato, Chapters 7, 8, 9 1 presentation 2 website	DB Forum 3 Science Literature Review 2	25 50
4	DeRosa and Abruscato, Chapters 10, 11, 12 1 presentation 2 websites	DB Forum 4 Electronic Science Portfolio	25 100
5	1 presentation	DB Forum 5 Chapter Assignments 1	25 100
6	DeRosa and Abruscato, Chapters 13, 14, 15 1 presentation	DB Forum 6 Science Experiment	25 100
7	1 presentation 1 website	DB Forum 7 Electronic Vocabulary Notebook	25 100
8	DeRosa and Abruscato, Chapters 16, 17, 18 1 presentation	DB Forum 8 Chapter Assignments 2 Integrated Unit	25 100 150
		TOTAL	**1010**

DB = Discussion Board

NOTE: Each course week begins on Monday morning at 12:00 a.m. (ET) and ends on Sunday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on Friday.