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 <u>not</u> be used to purchase course materials.

LIBERTY UNIVERSITY

COURSE SYLLABUS

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. Blackboard recommended browsers

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

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

E. 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 (4)

The candidate will complete 4 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 review in current APA format. Each Science Literature Review must be submitted via SafeAssign.

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, variables, 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 Vocabulary Notebook

The candidate will complete an electronic vocabulary notebook throughout the course. The candidate will use the Word template provided to compile a notebook of at least 10 unfamiliar science vocabulary words.

G. Chapter Assignments

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

H. Integrated Lesson Plan

The candidate will create one extensive and complete integrated lesson plan for a science unit. The 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 (4 at 50 pts ea)		200
Science Literature Reviews (2 at 50 pts ea)		100
Science Experiment Proposal		50
Complete Science Experiment		100
Electronic Vocabulary Notebook		100
Chapter Assignments (2 at 100 pts ea)		200
Integrated Lesson Plan		250
	Total	1010

B. Scale

A = 940–1010 A- = 920–939 B+ = 900–919 B = 860–899 B- = 840–859
C+ = 820–839 C = 780–819 C- = 760–779 D+ = 740–759 D = 700–739
D- = 680–699 F = 0–679

C. LiveText Submission Policy

All LiveText assignments must be submitted to Blackboard and LiveText in order for the candidate to receive credit. **LiveText Submission Exception:** Candidates pursuing the following programs: M.Ed. in Higher Education, Ed.S. in Higher Education Administration, the Ph.D. in Education, and the Ph.D. in Higher Education Administration, are not required to submit this assignment in LiveText, but must submit this assignment in Blackboard.

D. Disability Assistance

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

If you have a complaint related to disability discrimination or an accommodation that was not provided, you may contact ODAS or the Office of Equity and Compliance by phone at (434) 592-4999 or by email at equityandcompliance@liberty.edu. Click to see a full copy of Liberty's Discrimination, Harassment, and Sexual Misconduct Policy or the Student Disability Grievance Policy and Procedures.

LIBERTY UNIVERSITY

COURSE SCHEDULE

Textbook: DeRosa and Abruscato, *Teaching Children Science*

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	DeRosa and Abruscato, Chapters 1, 2, 3 1 presentation 2 websites	Course Requirements Checklist Advising Guide Acknowledgement Class Introductions DB Forum 1 Science Literature Review 1	10 0 0 50 50
2	DeRosa and Abruscato, Chapters 4, 5, 6 1 presentation 2 websites	Science Experiment Proposal	50
3	DeRosa and Abruscato, Chapters 7, 8, 9 1 presentation 2 website	DB Forum 2 Science Literature Review 2	50 50
4	DeRosa and Abruscato, Chapters 10, 11, 12 1 presentation 2 websites	Chapter Assignments 1	100
5	1 presentation	DB Forum 3 Complete Science Experiment	50 100
6	DeRosa and Abruscato, Chapters 13, 14, 15 1 presentation	Electronic Vocabulary Notebook	100
7	1 presentation 1 website	DB Forum 4 Chapter Assignments 2	50 100
8	DeRosa and Abruscato, Chapters 16, 17, 18 1 presentation	Integrated Lesson Plan	250
		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.