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

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**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Requirements Checklist</td>
<td>10</td>
</tr>
<tr>
<td>Discussion Board Forums (4 at 50 pts ea)</td>
<td>200</td>
</tr>
<tr>
<td>Science Literature Reviews (2 at 50 pts ea)</td>
<td>100</td>
</tr>
<tr>
<td>Science Experiment Proposal</td>
<td>50</td>
</tr>
<tr>
<td>Complete Science Experiment</td>
<td>100</td>
</tr>
<tr>
<td>Electronic Vocabulary Notebook</td>
<td>100</td>
</tr>
<tr>
<td>Chapter Assignments (2 at 100 pts ea)</td>
<td>200</td>
</tr>
<tr>
<td>Integrated Lesson Plan</td>
<td>250</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1010</td>
</tr>
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</table>

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.
# Course Schedule

**Textbook:** DeRosa and Abruscato, *Teaching Children Science*

<table>
<thead>
<tr>
<th>Module/Week</th>
<th>Reading &amp; Study</th>
<th>Assignments</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>DeRosa and Abruscato, Chapters 1, 2, 3 1 presentation 2 websites</td>
<td>Course Requirements Checklist Advising Guide Acknowledgement Class Introductions DB Forum 1 Science Literature Review 1</td>
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<tr>
<td>2</td>
<td>DeRosa and Abruscato, Chapters 4, 5, 6 1 presentation 2 websites</td>
<td>Science Experiment Proposal</td>
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<tr>
<td>3</td>
<td>DeRosa and Abruscato, Chapters 7, 8, 9 1 presentation 2 website</td>
<td>DB Forum 2 Science Literature Review 2</td>
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<tr>
<td>4</td>
<td>DeRosa and Abruscato, Chapters 10, 11, 12 1 presentation 2 websites</td>
<td>Chapter Assignments 1</td>
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<td>5</td>
<td>1 presentation</td>
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<td>50 100</td>
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<tr>
<td>6</td>
<td>DeRosa and Abruscato, Chapters 13, 14, 15 1 presentation</td>
<td>Electronic Vocabulary Notebook</td>
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<tr>
<td>7</td>
<td>1 presentation 1 website</td>
<td>DB Forum 4 Chapter Assignments 2</td>
<td>50 100</td>
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<tr>
<td>8</td>
<td>DeRosa and Abruscato, Chapters 16, 17, 18 1 presentation</td>
<td>Integrated Lesson Plan</td>
<td>250</td>
</tr>
</tbody>
</table>

**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.