

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 635

TEACHING SCIENCE IN THE MIDDLE SCHOOL

COURSE DESCRIPTION

Contemporary methods and research for teaching science to middle school students.

RATIONALE

This course is designed to help middle school 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. Analyze the major concepts in life, physical, and earth science.
- B. Use developmentally appropriate strategies to design and deliver instruction in science.
- C. Discuss methods to provide active inquiry experiences in the teaching of science by using various questioning skills and developing science process skills.
- D. Design a unit that will focus on diverse students which will promote their engagement in the schooling process, especially science and mathematics.
- E. Evaluate important areas of educational policy issues and professional development from a biblical perspective.

V. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings and lecture presentations/notes

B. Course Requirements Checklist

After reading the Course Syllabus and [Student Expectations](#), the student will complete the related checklist found in Module/Week 1.

C. Discussion Board Forums (4)

Discussion Boards are collaborative learning experiences. Therefore, the candidate will complete 4 Discussion Board Forums in this course. The response to the discussion board question posed must contain at least 200 words and be posted in a new thread of the corresponding forum. Candidates must reply with at least 150 words each to 3 classmates' threads. (MLO A, B D, E)

D. Literature Review Assignments (2)

The candidate will complete 2 Science Literature Reviews designed to acquaint yourself with teacher-oriented literature in education. The candidate will prepare a 2-4-page typed report for each article including a summary of the main points and a reaction or analysis that includes a reflection of how one might use this information as a science educator. The summary of the paper will state how important the article is to the field of education. Each review must include a title page and reference page and must be in APA format. The topic reviews must be submitted via SafeAssign. (MLO A, D, E)

E. Chapter Assignments (2)

The candidate will read the assigned chapters and submit a detailed summary of the chapter assignments completed. There is no need to type out the questions. All Chapter Assignments will be submitted in a single Microsoft Word document. (MLO A, D, E)

F. 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. (MLO A, C)

2. Science Experiment: Final

The candidate will complete an experiment by submitting data collection, data analysis, and inference/conclusion in addition to the Science Experiment: Proposal. The Science Experiment: Final will be a total of 5–7 pages (excluding the title page and reference page). (MLO A, C)

- G. **Electronic Vocabulary Notebook**
The candidate will complete an electronic vocabulary notebook throughout the course. Each defined word will have the definition and a simple but impacting visual of that definition. A provided template will be used to compile a notebook of at least 10 unfamiliar science vocabulary words and definitions. (MLO A, D)
- H. **Integrated Lesson Plan**
The candidate will an extensive, integrated lesson plan for a science unit. Each lesson plan will be based on the 5 E's Learning Cycle and composed using the Lesson Plan Template. (MLO A, B, C, D)

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 |
| Chapter Assignments (2 at 100 pts ea) | 200 |
| Science Experiment | |
| Science Experiment: Proposal | 50 |
| Science Experiment: Final | 100 |
| Electronic Vocabulary Notebook | 100 |
| 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](#).

COURSE SCHEDULE

EDUC 635

Textbook: Chiappetta & Koballa, *Science Instruction in the Middle and Secondary Schools* (2015).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Chiappetta & Koballa: chs. 1–2 5 presentations	Course Requirements Checklist Advising Guide Acknowledgement Class Introductions DB Forum 1 Science Literature Review 1	10 0 0 50 50
2	Chiappetta & Koballa: chs. 3, 5 4 presentations	Science Experiment Proposal	50
3	Chiappetta & Koballa: chs. 4, 6 4 presentations	DB Forum 2 Science Literature Review 2	50 50
4	Chiappetta & Koballa: chs. 7, 9 10 presentations	Chapter Assignments 1	100
5	Chiappetta & Koballa: chs. 8, 10 4 presentations	DB Forum 3 Complete Science Experiment	50 100
6	Chiappetta & Koballa: chs. 11–12 4 presentations	Electronic Vocabulary Notebook	100
7	Chiappetta & Koballa: chs. 13–14 7 presentations	DB Forum 4 Chapter Assignments 2	50 100
8	Chiappetta & Koballa: ch. 15 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.