

Elements of Earth Science Lab

PHSC-211

CG Section 16WK 11/10/2019 to 04/18/2020 Modified 06/16/2022

Course Description

An optional lab experience to accompany PHSC 210.

Requisites

For information regarding prerequisites for this course, please refer to the [Academic Course Catalog](https://catalog.liberty.edu/) (<https://catalog.liberty.edu/>).

Rationale

The purpose of this lab is to reveal the complex inter-relatedness of earth processes affecting the hydrosphere, atmosphere, and lithosphere. These processes and the contemporary scientific paradigms upon which they are founded will be evaluated via the grid of biblical revelation. Naturally, particular attention will be given to the book of Genesis. In the end, this course is designed to broaden the student's understanding of the earth and its function from both scientific and biblical perspectives.

Course Learning Outcomes

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

- A. Identify the basic geologic materials, minerals, and rocks.
- B. Apply various geologic rules and methods to solve geological problems.
- C. Evaluate the scientific evidences of young Earth and old Earth frameworks and integrate Scripture with science as it relates to the topic of Earth history.
- D. Interpret topographic/geologic maps and meteorological maps.
- E. Evaluate potential hazards to coastal regions posed by natural disasters and changes to the coastal system.

General Education Foundational Skill Learning Outcomes (FSLO): Social and Scientific Inquiry (SSI)

- A. SSI 1: Demonstrate an understanding of the impact of science on the world in which we live.
- B. SSI 2b: Demonstrate a biblical understanding of humankind's role in scientific inquiry and discovery.
- C. SSI 3: Apply solutions for a social and/or scientific question experienced in nature or society.

Course Resources

Click on the following link to view the required resource(s) for the term in which you are registered: [Liberty University Online Bookstore](https://bncvirtual.com/liberty/) (<https://bncvirtual.com/liberty/>).

Additional Materials for Learning

- A. Computer with basic audio/video output equipment
- B. Internet access (broadband recommended)
- C. Blackboard [recommended browsers](https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support) (https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support)
- D. Microsoft Office

☰ Course Assignments

Textbook readings and lecture presentations/notes

Course Requirements Checklist

After reading the Course Syllabus and [Student Expectations \(https://www.liberty.edu/institutional-effectiveness/student-expectations/\)](https://www.liberty.edu/institutional-effectiveness/student-expectations/), the student will complete the related checklist found in Module/Week 1.

Discussion Board Forums (2)

Discussion boards are collaborative learning experiences. Therefore, the student is required to provide a thread in response to the provided prompt for each forum. Each thread must be at least 250 words and demonstrate course-related knowledge. In addition to the thread, the student is required to reply to 1 other classmates' thread. Each reply must be at least 100 words.

Lab Safety Quiz

This quiz does not require any studying or preparation before taking it. It simply consists of 10 lab safety statements with which the student must agree or disagree. In order to receive full credit on the quiz, the student must agree with all 10 statements. If the student does not agree with all 10 statements on the quiz, he/she will not be allowed to continue in the course.

Chapter Quizzes (13)

Each quiz will cover the Reading & Study material for the assigned module/week. Each quiz will be open-book/open-notes, contain multiple-choice and short answer questions, and will have a time limit of 2 hours and 45 minutes.

Midterm Exam

The student will complete a Midterm Exam that will consist of 50 multiple-choice and short-answer questions and will be open-book/open-notes. The exam will have a time limit of 2 hours and 45 minutes and will cover lab exercises and the Reading & Study from Modules/Weeks 1–8.

Final Exam

The student will complete a Final Exam that will consist of 50 multiple-choice and short-answer questions and will be open-book/open-notes. The exam will have a time limit of 2 hours and 45 minutes and will cover lab exercises and the Reading & Study from Modules/Weeks 10–15.

✓ Course Grading

Course Requirements Checklist		10
Discussion Board Forums (2 at 30 pts ea)		60
Lab Safety Quiz		20
Chapter Quizzes	(13 at 40 pts ea)	520
Midterm Exam	(Modules 1–8)	200
Final Exam	(Modules 10–15)	200

Policies

Mathematical Late Assignment Policy

Mathematical assignments that are submitted after the due date without prior approval from the instructor will receive the following deductions

1. Late *mathematical* assignments submitted within one week after the due date will receive a 10% deduction.
2. *Mathematical* assignments submitted more than one week late or after the final date of the course will not be accepted.
3. Discussion board assignments submitted within one week after the due date will receive a 10% deduction.
4. Discussion board submitted more than one week and less than 2 weeks late will receive a 20% deduction.
5. Discussion board submitted more than 2 weeks late will not be accepted.
6. Group projects, including group discussion board threads and/or replies, and assignments will not be accepted after the due date.

Special circumstances (e.g. death in the family, personal health issues) will be reviewed by the instructor on a case-by-case basis.

For other assignments, please refer to the standard Late Assignment Policy, below.

Late Assignment Policy

Course Assignments, including discussions, exams, and other graded assignments, should be submitted on time.

If the student is unable to complete an assignment on time, then he or she must contact the instructor immediately by email.

Assignments that are submitted after the due date without prior approval from the instructor will receive the following deductions:

1. Late assignments submitted within one week after the due date will receive up to a 10% deduction.
2. Assignments submitted more than one week and less than 2 weeks late will receive up to a 20% deduction.
3. Assignments submitted two weeks late or after the final date of the course will not be accepted outside of special circumstances (e.g. death in the family, significant personal health issues), which will be reviewed on a case-by-case basis by the instructor.
4. Group projects, including group discussion threads and/or replies, and assignments will not be accepted after the due date outside of special circumstances (e.g. death in the family, significant personal health issues), which will be reviewed on a case-by-case basis by the instructor.

Disability Assistance

Students with a disability and those with medical conditions associated with pregnancy may contact Liberty University's Online Office of Disability Accommodation Support (ODAS) at LUOODAS@liberty.edu for accommodations. Such accommodations require appropriate documentation of your condition. For more information about ODAS and the accommodations process, including how to request an accommodation, please visit <https://www.liberty.edu/online/online-disability-accommodation-support/> (<https://www.liberty.edu/online/online-disability-accommodation-support/>). Requests for accommodations not related to disabilities or pregnancy must be directed to the Registrar's Office, which generally handles medical needs support.

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](https://www.liberty.edu/media/1226/Liberty_University_Discrimination_Harassment_and_Sexual_Misconduct_Policy.pdf) (https://www.liberty.edu/media/1226/Liberty_University_Discrimination_Harassment_and_Sexual_Misconduct_Policy.pdf) or the [Student Disability Grievance Policy and Procedures](http://www.liberty.edu/media/8021/Disability_Grievance_Procedures.pdf) (http://www.liberty.edu/media/8021/Disability_Grievance_Procedures.pdf).

Course Attendance

In an effort to comply with U.S. Department of Education policies, attendance is measured by physical class attendance or any submission of a required assignment within the enrollment dates of the course (such as examinations, written papers or projects,

any discussion posts, etc.) or initiating any communication with one's professor regarding an academic subject. More information regarding the [attendance policy \(https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FOnline%2BAttendance%2BAnd%2BNon-Attendance&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613719138&sdata=%2BNBTsPOoXuHAPLfiSQRugK7cRSuV6UyC7qD3agf3l2k%3D&reserved=0\)](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FOnline%2BAttendance%2BAnd%2BNon-Attendance&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613719138&sdata=%2BNBTsPOoXuHAPLfiSQRugK7cRSuV6UyC7qD3agf3l2k%3D&reserved=0) can be found in the [Academic Course Catalogs \(https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.liberty.edu%2Findex.cfm%3FPID%3D791&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=DjjhMiRBFnF%2B2ZJUC8eBd1OdNb26S9ADukODYsilXIA%3D&reserved=0\)](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.liberty.edu%2Findex.cfm%3FPID%3D791&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=DjjhMiRBFnF%2B2ZJUC8eBd1OdNb26S9ADukODYsilXIA%3D&reserved=0). Regular attendance in online courses is expected throughout the length of the term. Students who do not attend within the first week of a sub-term by submitting a required academic assignment (such as the Course Requirements Checklist, an examination, written paper or project, discussion post, or other academic activity) will be dropped from the course. Students who wish to re-engage in the course are encouraged to contact Academic Advising to discuss their enrollment options. Students who begin an online course, but at some point in the semester cease attending, and do not provide official notification to withdraw, will be assigned a grade of "FN" ([Failure for Non-Attendance \(https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FUnofficial%2BWithdrawals&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=MoMvZdPfa69InuhVHMHAVgu59ZP0Fw45xJTU9PIBrU%3D&reserved=0\)](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FUnofficial%2BWithdrawals&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=MoMvZdPfa69InuhVHMHAVgu59ZP0Fw45xJTU9PIBrU%3D&reserved=0)). Students wishing to withdraw from courses after the official start date should familiarize themselves with the [withdrawal policy](#).

Grading Scale

A	B	C	D	F
900-1010	800-899	700-799	600-699	0-599

For courses with a Pass/NP final grade, please refer to the Course Grading section of this syllabus for the assignment requirements and/or point value required to earn a Passing final grade.

Add/Drop Policy

The full policy statement and procedures are published in the [Policy Directory \(https://wiki.os.liberty.edu/display/IE/Dropping+and+Adding+Online+Classes\)](https://wiki.os.liberty.edu/display/IE/Dropping+and+Adding+Online+Classes).

Honor Code

Liberty University comprises a network of students, Alumni, faculty, staff and supporters that together form a Christian community based upon the truth of the Bible. This truth defines our foundational principles, from our Doctrinal Statement to the Code of Honor. These principles irrevocably align Liberty University's operational procedures with the long tradition of university culture, which remains distinctively Christian, designed to preserve and advance truth. Our desire is to create a safe, comfortable environment within our community of learning, and we extend our academic and spiritual resources to all of our students with the goal of fostering academic maturity, spiritual growth and character development.

Communities are predicated on shared values and goals. The Code of Honor, an expression of the values from which our Doctrinal Statement was born, defines the fundamental principles by which our community exists. At the core of this code lie two essential concepts: a belief in the significance of all individuals, and a reliance on the existence of objective truth.

While we acknowledge that some may disagree with various elements of the Code of Honor, we maintain the expectation that our students will commit to respect and uphold the Code while enrolled at Liberty University.

Adherence to the principles and concepts established within facilitates the success of our students and strengthens the Liberty community.

The Code of Honor can be viewed in its entirety at <http://www.liberty.edu/index.cfm?PID=19155> (<http://www.liberty.edu/index.cfm?PID=19155>).

Schedule

PHSC 211

Textbook: Tinsley et al., *Elements of Earth Science Laboratory Manual* (and kit) (2014).

Module/Week	Reading & Study	Assignments	Points
1	Tinsley et al.: Preface	Course Requirements Checklist	10
	1 presentation	Class Introductions	0
		DB Forum 1	30
		Lab Safety Quiz	20
2	Tinsley et al.: ch. 1	Chapter 1 Quiz	40
	Chapter 1 Lab		
	1 presentation		
3	Tinsley et al.: ch. 2	Chapter 2 Quiz	40
	Chapter 2 Lab		
	3 presentations		
4	Tinsley et al.: ch. 3	Chapter 3 Quiz	40
	Chapter 3 Lab		
	1 presentation		
5	Tinsley et al.: ch. 4	Chapter 4 Quiz	40
	Chapter 4 Lab		
	3 presentations		
6	Tinsley et al.: ch. 5	Chapter 5 Quiz	40
	Chapter 5 Lab		
	2 presentations		
7	Tinsley et al.: ch. 6	Chapter 6 Quiz	40
	Chapter 6 Lab		
	2 Presentations		
8	Tinsley et al.: ch. 7	Chapter 7 Quiz	40
	Chapter 7 Lab		
	4 presentations		
9	Midterm Exam Review	Midterm Exam	200
	1 website		

Module/Week	Reading & Study	Assignments	Points
10	Tinsley et al.: ch. 8 Chapter 8 Lab 4 presentations	Chapter 8 Quiz	40
11	Tinsley et al.: ch. 9 Chapter 9 Lab 3 presentations	Chapter 9 Quiz	40
12	Tinsley et al.: ch. 11 Chapter 11 Lab 3 presentations	Chapter 11 Quiz	40
13	Tinsley et al.: ch. 13 Chapter 13 Lab 2 presentations	DB Forum 2 Chapter 13 Quiz	30 40
14	Tinsley et al.: ch. 15 Chapter 15 Lab 2 presentations	Chapter 15 Quiz	40
15	Tinsley et al.: ch. 16 Chapter 16 Lab 2 presentations	Chapter 16 Quiz	40
16	Final Exam Review 1 website	Final Exam	200
Total			1010

DB = Discussion Board

NOTE: Each course module/week (except Module/Week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on Friday.