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.

LIBERTY UNIVERSITY

COURSE SYLLABUS

PHYS 101

ELEMENTS OF PHYSICS

COURSE DESCRIPTION

A study of the basic concepts of physics for non-science majors. Included topics: Mechanics (motion, energy, simple machines, momentum, gravity), heat and thermodynamics, electricity and magnetism, sound and light, history and methodology of science.

RATIONALE

Since science and technology are dominant themes in our culture, every student should be exposed to some area of natural science. PHYS 101 is an introductory course designed for non-science and non-math majors to partially fulfill the general education requirement in the area of natural science.

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 Word

D. Scientific calculator

IV. MEASURABLE LEARNING OUTCOMES

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

A. Apply major fundamental concepts of physics as presented in the textbook.

B. Translate realistic physical problems into the equations which describe them.

C. Use appropriate units for physical quantities.

D. Use quantitative reasoning and basic mathematics skills in the solution of problems.

E. Effectively communicate an understanding of physical concepts.

V. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings and lecture presentations

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 (2)

Discussion boards are collaborative learning experiences. Therefore, the student is required to create a thread in response to the provided prompt for each forum. Each thread must be at least 250 words and demonstrate course-related knowledge by using Reading & Study materials. Any additional sources used must be cited using current APA format. In addition to the thread, the student is required to reply to at least 1 classmate's thread. Your reply must be at least 125 words.

D. Homework (8)

For each module/week, the student will complete various online exercises in Cengage's *Inquiry into Physics* system, WebAssign. These homework assignments will reinforce the content of the course textbook readings from the assigned module/week.

E. Quizzes (8)

Each quiz will build on the homework assignments and cover the Reading & Study material for the assigned module/week. Each quiz will be open-book/open-notes and contain 25 multiple-choice and true/false questions. In addition, quizzes for Modules/Weeks 2, 3, 5, 6, and 7 will have 1 multi-part problem. This multi-part problem will be given at the time of the quiz. It must be written on paper and solved, and then an image of the solution must be uploaded during the quiz. The student must include his/her name on the paper. Each quiz will have a time limit of 1 hour and 30 minutes.

VI. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist		10
Discussion Board Forums (2 at 60 pts ea)		120
Homework (8 at 50 pts ea)		400
Quizzes (8 at 60 pts ea)		480
	Total	1010

B. Scale

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

C. 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

PHYS 101

Textbook: Ostdiek & Bord, *Inquiry into Physics* (2018).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	POINTS
1	Ostdiek & Bord: ch. 1 2 presentations	Course Requirements Checklist Class Introductions DB Forum 1 Homework 1 Quiz 1	10 0 60 50 60
2	Ostdiek & Bord: ch. 2 2 presentations	Homework 2 Quiz 2	50 60
3	Ostdiek & Bord: ch. 3 2 presentations	Homework 3 Quiz 3	50 60
4	Ostdiek & Bord: ch. 4 2 presentations	DB Forum 2 Homework 4 Quiz 4	60 50 60
5	Ostdiek & Bord: ch. 5 2 presentations	Homework 5 Quiz 5	50 60
6	Ostdiek & Bord: ch. 6 3 presentations	Homework 6 Quiz 6	50 60
7	Ostdiek & Bord: chs. 7–8 4 presentations	Homework 7 Quiz 7	50 60
8	Ostdiek & Bord: ch. 9 2 presentations	Homework 8 Quiz 8	50 60
		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**.