

Course Materials	
Author:	Hewitt
Title:	Conceptual Physics
Publisher:	Pearson
Edition:	12th
ISBN:	9780321908605
Required:	REQUIRED

**University of North Texas at Dallas**  
**Spring 2016**  
**SYLLABUS**

<b>PHYS 1210 Section 002, Conceptual Physics, 3 Hrs</b>	
<b>Department of Life and Health Sciences</b>	
<b>Division of Liberal Arts and Life Sciences</b>	
<b>Instructor Name:</b>	James Lee Ph.D.
<b>Office Location:</b>	
<b>Office Phone:</b>	
<b>Email Address:</b>	<a href="mailto:Jameslee4684@gmail.com">Jameslee4684@gmail.com</a>
<b>Office Hours:</b> After class	
<b>Virtual Office Hours:</b> Anytime online	
<b>Classroom Location:</b> DAL2, Room 240 for Lecture, DAL2, Room 248 for Laboratory Exercises I	
<b>Class Meeting Days &amp; Times:</b> Sat 9:00-11:50 PM for Lecture, 12:00-1:50pm for Laboratory Exercises	
<b>Course Catalog Description:</b>	This course will guide you in a study of the basic concepts and principles describing our physical world. We will start with mechanics by studying single particle motion, Newton's laws, and uniform circular motion. The motion of systems of particles and the concepts of conservation of momentum and energy will be then discussed. We continue with topics like electric charge and electric force as well as current and magnetic force. This will lead to the discussion of light as an electromagnetic phenomenon and a discussion of reflection and refraction of light waves. There will be an emphasis on in-class problem solving techniques.
<b>Prerequisites:</b>	Math 11 OOD or higher and interdisciplinary studies (Elementary Education) major status.
<b>Co-requisites:</b>	None.
<b>Required Text:</b>	Conceptual Physics 12" edition, Paul G. Hewitt, Addison Wesley
<b>Recommended Text and References:</b>	
<b>Access to Learning Resources:</b>	UNT Dallas Library: phone: (972) 780-3625; web: <a href="http://www.unt.edu/unt-dallas/library.htm">http://www.unt.edu/unt-dallas/library.htm</a>
<b>Course Goals or Overview:</b>	
The goal of this course is to provide students with understanding of basic physics concepts and laws.	

**Learning Objectives/Outcomes:** At the end of this course, the student will

1	Demonstrate good understanding of physics concepts <ul style="list-style-type: none"><li>• Be able to accurately define basic physics concepts and laws.</li><li>• Have a solid understanding of the relationship between the mathematical representations and the associated physical concepts and principles</li><li>• Demonstrate the ability to use those physics law and concepts in solving problems.</li><li>• Demonstrate the ability to combine concepts in solving multiple-step problems.</li></ul>
2	<ul style="list-style-type: none"><li>• Students should develop effective problem-solving skills</li><li>• Satisfactorily solve standard textbook problem</li><li>• Develop the ability to solve multi-step or multi-concept problems</li></ul>
3	Develop student cognitive attitudes: <ul style="list-style-type: none"><li>• See physics as a coherent framework of ideas that can be used to understand the world around us.</li><li>• See what they are learning in the classroom as useful and strongly connected to the real world</li><li>• Have the laboratory skills for the analysis of physical systems including data and error analysis, instrumentation statistics and dimensional analysis.</li></ul>
4	<ul style="list-style-type: none"><li>• Have appropriate oral and written communication skills to explain their work to people from a wide variety of backgrounds.</li></ul>

## Course Outline

This schedule is subject to change by the instructor

Date	Lecture	Lab
1/23	Course Introduction Chapter 1 : About Science Chapter 2 : Newton's 1st Law of Motion Chapter 3 : Linear Motion Chapter 4 : Newton's Second Law of Motion	Lab Safety
1/30	Chapter 5 : Newton's Third Law of Motion Chapter 6 : Momentum Chapter 7 : Energy	Measurement Skills
2/6	Test #1 Chapter 8 : Rotational Motion Chapter 9 : Gravity	Motion
2/13	Chapter 10 : Projectile and Satellite Motion Chapter 11 : Atomic Nature of Matter Chapter 12 : Solids Chapter 13 : Liquid	Momentum
2/20	Chapter 14 : Gases Chapter 15 : Temperature, Heat and Expansion	Center of Mass
2/27	Chapter 16 : Heat Transfer Chapter 17 : Change of Phase	Projectile Motion
3/5	Chapter 18 : Thermodynamics Chapter 19 : Vibrations and Waves	Density
3/12	Test #2 Chapter 20 : Sound Chapter 21 : Musical Sounds Chapter 22 : Electrostatics	Heat
3/19	Spring Break	
3/26	Chapter 23 : Electric Current Chapter 24 : Magnetism	Change of Phase
4/2	Chapter 25 : Electromagnetic Induction Chapter 26 : Properties of Light	Speed of Sound
4/9	Chapter 27 : Color Chapter 28 : Reflection and Refraction	Electric Current
4/16	Chapter 29 : Light Waves Chapter 30 : Light Emission	Simple Electric Circuits
4/23	Test #3	No Lab
4/30	Chapter 31 : Light Quanta Chapter 32 : The Atom and the Quantum	Magnetic Fields
5/7	Chapter 33 : The Atomic Nucleus and Radioactivity Chapter 34 : Nuclear Fission and Fusion	Light
5/14	Final Exam	

## Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Examinations - written tests to measure knowledge of material presented in lecture and laboratory exercises.

- There will be three exams and one comprehensive final exam.
- Exams are closed book.
- Use of a student supplied calculator is permitted.
- There are no makeup exams.

Assignments - written assignments designed to supplement and reinforce course material

- Homework is online. You have a week to complete the assignment.
- In class exercises – they will be assigned periodically. They will be based on the material for that day's lecture.

Laboratory Exercises

Each week, starting with the second week of classes, there is a lab that illustrates the material covered in lectures. You are responsible to read information from the lab manual and complete the Pre-lab assignment prior to the lab. There are no makeup labs

Grading Matrix:

Instrument	Total
Homework	10%
Class work	5%
Laboratory	20%
Exam	15%
Exam	15%
Exam	15%
Final Examination	20%
Total:	100

Grade Determination:

A = 90% or better B=80-89%

C = 70 - 79 % D=60-69 %

F = less than 60%

## University Policies and Procedures Students with Disabilities (ADA Compliance)

The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. Grades assigned before an accommodation is provided will not be changed as accommodations are not retroactive For more information you may visit the Student Life Office Suite 200 Building 2 or call Laura Smith at 972-780-3632.

## Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at LINT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught I am very interested in the feedback I get from students as I work to continually improve my teaching I consider the SETE to be an important part of your participation in this class.

**Assignment Policy:**

Homework assignments are due at the beginning of class

**Exam Policy;**

Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook)

**Academic Integrity:**

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at <http://www.unt.edu/untDallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Fundraising/7.002%20Code%20of%20Academic%20Integrity.pdf> for complete provisions of this code. In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:

On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.

**Bad Weather Policy**

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call LINT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website [www.unt.edu/dallas](http://www.unt.edu/dallas). Students are encouraged to update their Eagle Alert contact information so they will receive this information automatically.

**Attendance and Participation Policy**

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes if they are absent.

**Diversity/Tolerance Policy**

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Office of Student Life as the instructor deems appropriate.