PHYS 1410.002 Physical Science Spring 2017

[*www.phys.unt.edu*](http://www.phys.unt.edu) *courses 1410*

SYLLABUS

Dr. Arup Neogi  
Office: Physics 330  
Phone: 940 369-8437  
e-mail: [arup@unt.edu](mailto:littler@facstaff.cas.unt.edu)  
Teaching Assistant: Yuba Poudel

Email: yuba.poudel@my.unt.edu

 Office Hours for TA (319): Mon 3:00- 4:00 PMLecture: Wed: 6:00-8:50 PM  
 Physics Room 102  
Office Hours: Th 1:00 – 2:00 PM  
 or by appointment

Office: 330

Contact Email: arup@unt.edu

**Prerequisites: Physics 1100,** Math 1100 or equivalent

**Text:** Physics Volume 1, 10th Edition; Cutnell & Johnson, John Wiley and Son’s

**Materials:** Physics 1410 Laboratory Manual  
 Calculator with square root (√ ) and scientific notation

**Course Content:** Physics 1410 is a physical science course designed for the elementary physics education. This course will guide you in a study of the basic concepts and principles describing our physical world. We will be covering the topics of force & motion, energy, temperature & heat, waves & sound and the laws that govern their nature and behavior. With a good grasp of the concepts of physics, you will gain a better understanding and appreciation of our physical world. *This course requires proficiency in basic algebra for problem solving. The emphasis will be on understanding basic concepts of physics.*

**Quizzes:** Quizzes will be conducted at the end of every sectional topic as preparation for the multiple choice questions in the exams.There will be no make-up quizzes.

**Assignments:** "Problems & Conceptual Questions" listed at the end of the chapter has been assigned as **practice assignment**.Some of these problems will be solved during the recitation section. Solving these homework problems will prepare you for the exams. There are tutors at the Physics Instruction Center (PIC) available during scheduled hours for help with the assignments.

**Recitation Grade**: The attendance in recitation (Section 1410.202) will constitute 5% points to the total grades

**Exams:** Examinations are given at the scheduled times, and questions are taken from class notes, practice assignments, recitation and the textbook. This means that both understanding of in-class and recitation discussions, and assigned problems are crucial to success in this course. There will be three midterm exams, each given at roughly equal intervals followed by a cumulative final exam. There will be no make-up exams.

**Grading:**  Quizzes 10%  
Recitation 5 %

Exam 1 20%

Exam 2 20%

Exam 3 20%  
Final Exam 25%

Total 100%

**Final Exam (comprehensive):**

The University of North Texas’ College of Education does not discriminate on the basis of disability in the

recruitment and admission of students, the recruitment or employment of faculty and staff, and the operation of any

of its programs and activities, as specified by federal laws and regulations. Copies of the College of Arts and Science ADA

compliance document are available in the Dean’s Office, GAB. ***The student*** has the responsibility of

informing the course instructor of any disabling condition which will require modifications to avoid discrimination.

All students should activate and regularly check their Eagle Mail (e-mail) account. Eagle Mail is used for official

communication from the University to students. Many important announcements for the University and College are

sent to students via Eagle Mail. For information about Eagle Mail, including how to activate an account and how to

have Eagle Mail forwarded to another e-mail address, visit: https://eaglemail.unt.edu

The University of North Texas is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 92-112 – The Rehabilitation Act of 1973 as amended. With the passage of new federal legislation entitled Americans with Disabilities Act (ADA), pursuant to section 504 of the Rehabilitation Act, there is renewed focus on providing this population with the same opportunities enjoyed by all citizens.

**Academic Honesty**: It is expected that students will conform to the University of North Texas Code of Student

Conduct and Discipline as outlined in the undergraduate catalog (see also the Student Handbook which can be found

online at www.unt.edu). This states in part that all instances of cheating, fabrication and plagiarism are prohibited

and will be reported. Any student who assists in any form of dishonesty is equally as guilty as the student who

accepts such assistance. Any work submitted to me with your name alone on it should represent your work alone. To

the extent that others contribute ideas, suggestions, they must be directly credited by name (and full cite as

appropriate). Disciplinary action will be taken against any student found in violation of the Code, which may include

failure in the course and possible expulsion from the University.

UNT’s policy on Academic Dishonesty can be found at: http://www.vpaa.unt.edu/academic-integrity.htm

**Dropping a class:** To drop a class, students must do the following:

1. Log on to www.my.unt.edu

2. Click on ***Academics***

3. Click ***Registrar for Classes***

4. Click ***Registrar for Classes*** again

5. Click ***Drop/Update Classes***

6. Find the course to drop, and choose ***Drop*** from the drop-down menu

7. Click ***Submit***

8. Verify changes were successful by checking the ***Update Status***; never assume you’ve been dropped without checking

Drop information is available in the schedule of classes at: http://essc.unt.edu/registrar/schedule/scheduleclass.html

As you can see, there is extra credit in this course in the form of attendance in recitation section. Please enroll separately for the recitation section if you have not done so. Please note that extra credit for recitation is only possible if you attend the recitation which will be taught by the graduate teaching assistant.

**Exam lateness policy:** No one will be admitted to an exam after 15 minutes of the start of the exam.

**Exam illness policy:** One (1) exam may be made up during the semester, at the discretion of the instructor. The exam

must be scheduled during the week following the exam – no exceptions. Scheduling a make-up exam requires a

physician’s note. ***Quiz policy*:** There are no make-up quizzes under any circumstances**.**

**Re-Grading policy:** If you think that an assignment or test has been mis-graded, write a note of explanation and turn it in together with the graded exam/quiz to the instructor within **two** (**2**) lecture periods (in other words, within one week) after the quiz or test has been handed back. After 2 lecture periods, grades will not be changed.

Do not send emails to the instructor or the graduate assistant using the Blackboard portal.

The following schedule is tentative and the date of exams, course and practice assignments are tentative and can change (except the date of the final exam) as per the lectures in the class room.Physics 1410.002 [www.phys.unt.edu](http://www.phys.unt.edu) courses 1410 Fall 2016

**Date Lecture Preparation Exercises/ Problems**

| Week 1 | Jan 18 | *Course Introduction*  Chap 1: Basic Mathematical concepts  Chap 2: Kinematics in one dimension | Chapter 1; FC 1, 6,12; P; 4, 9, 16, 28, 46  Chapter 2  FC 6,24; P: 7, 22, 26, 37,45, 67 |
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| Week 2 | Jan. 25 | Chap 3: Kinematics in two dimension, speed, velocity  Chap 3: Kinematics in two dimension, speed, velocity | Chapter 3  FC: 1, 3, 5  P: 4, 7,12,20,30, 41, 46,53, 59, 61 |
| Week 3 | Feb 1 | Chap 4: Forces & Newton’s Laws of Motion (I)  Chap 4: Forces & Newton’s Laws of Motion (II) | Chapter 4  FC : 1,5,8,11  P : 2,6,9,11,15,21,23,24,30,36, 38, 43, 53, 70, 90 |
| Week 4 | Feb 8 | Chap *5:* Uniform Circular Motion | Chapter 5  P: 1, 4, 10, 14, 16, 24, 27, 32, 36 |
| Week 5 | Feb 15 | Chap *6:* Work and Energy  Chap 7. Impulse Momentum | Chapter 6  P: 2,4,10,14,21,27,29,34,38,44,46,56,58,59 |
| Week 6 | Feb 22 | EXAM 1: Chapters 1-5 | Chapter 7  FC: 10, 13  P: 2,6,9,13,17,21,23,28,32,35,42,48,51 |
| Week 7 | Mar. 1 | Chap 7. Impulse Momentum  Chap *8:*  Rotational Kinematics | Chapter 8  P : 3,4,11,13,16,20,22,35,38,47,54,58 |
| Week 8 | Mar 8 | Chap *9:* Rotational Dynamics  Chap *9:* Rotational Dynamics | Chapter 9: P-2,6,13,25,38,48,57,60,63 |

**Date Lecture Preparation Exercises/ Problems**

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| Week 9 | Mar 22 | *EXAM 2: Chapters 6-9* |  |
| Week 10 | Mar 29 | Chap *10:* Harmonic Motion | Chapter 10: P-2,3,12,18,23, 40,42,46,50,63 |
| Week 11 | Apr 5 | *Chap 11: Fluids* | Chapter 11: P 6,10,12, 14,16, 22,26, 32,42, 54, 57, 63, 69 |
| Week 12 | Apr. 12 | Chap 12: Temperature and Heat  Chap 13: Heat transfer | Chapter 12: 3,6,9,12,15, 19, 28, 32, 35, 39, 43 |
| Week 13 | Apr. 19 | EXAM 3: Chapters 10-12 | Chapter 13, 2,6, 8, 14, 20, 22, 30, 31, 40, 41, 43 |
| Week 14 | Apr 26 | Chap 16: Waves and Sound | Chapter 14: 2,4,7,9,20,24,26,32,35,37  Chapter 15: 4, 8, 10, 14, 18, 22 |
| Week 15 | May.3 | Chap 17: Interference of Sound Waves  Review sessions |  |
| Week 16 | May. 10  Wed | *FINAL EXAMS (*6:00-9:00 PM) |  |

**Comprehensive Final Exam: May 10, 2017 (Wednesday)** Final Exam: 6:00-9:00 PM (Physics # 102)