



Nanchang University PHYS 201: Principle of Physics II

Credit: 4

Contact Hours

This course is composed of 24 lecture sessions, 3 tutorial sessions and 9 office contact hours(50minutes/contact hour). Each lecture session takes 2 contact hours in length; each tutorial session takes 3 contact hours in length;There will be a Q-A review session(3 contact hours) and Final Exam (3 contact hours)at the end of this term. This course has 72 contact hours in total.

Course Description

The principal aim of this course is to provide a firm understanding of physical concepts and processes. Built from the ground up for optimal learning; refined to help students focus on the big picture. Building on the research-proven instructional techniques introduced in Knight's Physics for Scientists and Engineers. This class satisfies the General Education Core Science requirement for A.A. degree seeking students. The topics covered geometrical and physical optics, electric fields and forces, electric potential, capacitance, current and resistance, DC circuits, magnetic fields and forces, electromagnetic induction, electromagnetic waves.

Required Material

Physics for Scientists and Engineers: A Strategic Approach with Modern Physics , Global Edition(3rd edition), 1096 pages , English written.

Authored by Randall D. Knight

Published by Pearson Education Limited

ISBN: 1292157542

Grading

• Participation	10%
• Quizzes	20%
• Lab	20%
• Midterm	20%
• Final Exam	30%



A+ 96-100	A 90-95	A- 85-89
B+ 82-84	B 78-81	B- 75-77
C+ 71-74	C 66-70	C- 62-65
D 60-61	F < 60	

Course Schedule

The course has 24 class sessions in total. All sessions are 2 contact hours in length. At the end of this term, there will be a Q-A review session(3 contact hours) and Final Exam (3 contact hours).

Note: the course outline and required readings are subject to change.

Class1: Introduction to syllabus and attending policy

Class2: Oscillations and Waves

Class3: Traveling Waves

Class4: Superposition

Class5: Thermodynamics, Quiz 1

Class6: A Macroscopic Description of Matter

Class7: Work, Heat, and the First Law of Thermodynamics

Class8: The Micro/Macro Connection

Class9: The Micro/Macro Connection (Cont.)

Class10: Heat Engines and Refrigerators

Class11: Mid-Term Test

Class12: Electric Charges and Forces

Class13: Electricity and Magnetism

Class14: The Electric Potential

Class15: Potential and Field, Quiz 2

Class16: Potential and Field (Cont.)

Class17: Current and Resistance

Class18: Fundamentals of Circuits

Class19: The Magnetic Field

Class20: The Magnetic Field (Cont.)

Class21: Electromagnetic Induction

Class22: Electromagnetic Fields and Waves

Class23: Wave Optics & Ray Optics, Quiz 3

Class24: Over All Review and Individual Report

Laboratory and Practical Exercises Schedule

Room: To be determined

In order to do a good job in the experiments, it is essential that you come well prepared. Reading the experiment requirements for the first time in lab will put you and your partner at a disadvantage and make it very difficult to complete the experiment on time.



If you have any technical questions on the pre-lab, data section or post-lab assignments, you are encouraged to ask the professor.

Lab: The application of physics instrument

Lecture Section Lab Section

Lecture Section	Lab Section
Class5	Lab1
Class9	Lab2
Class12	Lab3
Class16	Lab4
Class18	Lab5
Class21	Lab6

Notes:

1. The lab reports have three parts, the pre-lab (to be completed on-line before the lab commences), the data and calculations and the post-lab. The pre-lab Assignment due when you enter the lab. You and your partner will work collaboratively on the data and post-lab sections and hand in one report for the two of you.
2. In order to do a good job in the experiments, it is essential that you come well prepared. Reading the experiment for the first time in lab will put you and your partner at a disadvantage and make it very difficult to complete the experiment on time.
3. If you have any technical questions on the pre-lab, data section or post-lab assignments, you are encouraged to ask the professor.

Attending Policy

Regular and prompt attendance is required. Under ordinary circumstances, you may miss two times without penalty. Each absence over this number will lower your course grade by a third of a letter and missing more than five classes may lead to a failing grade in the course. Arriving late and/or leaving before the end of the class period are equivalent to absences.

Policy on "Late Withdrawals"

In accordance with university policy, appeals for late withdrawal will be approved ONLY in case of medical emergency and similar crises.

Academic Honesty

Nanchang University expects all students to do their own work. Instructors will fail assignments that show evidence of plagiarism or other forms of cheating, and will also report the student's name to the University administration. A student reported to the University for cheating is placed on disciplinary probation; a student reported twice is suspended or expelled.



General Expectations:

Students are expected to:

- Attend all classes and be responsible for all materials covered in class and otherwise assigned;
- Complete the day's required reading and assignments before class;
- Review the previous day's notes before class and make notes about questions you have about the previous class or the day's reading;
- Participate in class discussions and complete required written work on time;
- Refrain from texting, phoning or engaging in computer activities unrelated to class during the class period;
- While class participation is welcome, even required, you are expected to refrain from private conversations during the class period.

Special Needs or Assistance

Please contact the Administrative Office immediately if you have a learning disability, a medical issue, or any other type of problem that prevents professors from seeing you have learned the course material. Our goal is to help you learn, not to penalize you for issues which mask your learning.