



Prince Sultan University
Department of Mathematical Science
SYLLABUS
PHYSICAL SCIENCE (SCI101)
(Term 111)

Textbook: Conceptual Physical Science Explorations, Second Edition; Hewitt, Suchocki, J and Hewitt, L.A.; Pearson/Addison Wesley (2010).

(Reading and homework assignments will be from this textbook.)

Objectives:

The students are expected to develop an understanding of natural phenomena through direct observations and reasoning. In addition students are expected to learn problem solving strategies and analyzing problems.

Course Grades:

Two Major exams: Each exam contributes **15%** towards the final grade.

Final comprehensive Exam: Contributes **40%** to the final grade.

Homework: Contributes **15%** to the final grade.

Quizzes: At least 10 quizzes will be given which Contribute **15%** to the final grade.

Attendance and Absences:

You are responsible for the material covered in each class. No make-up of either Major Exams or Quizzes will be allowed.

- ◆ If a student misses a class because of a legitimate excuse, he should notify the Student's Affairs Office within a week.
- ◆ A "D N" Grade will be automatically issued to the student who misses 13 lectures. After 13 missed lectures, you are not allowed to either attend the lecture or to take any exam:
 - 1st warning is issued after 6 absences.
 - 2nd warning is issued after 11 absences.
- ◆ Attendance is usually taken during the first 5 minutes. If you enter the lecture room after the first 5 minutes, you will be recorded as an absent for that lecture.

Homework Assignment:

There will be an assignment at the end of each chapter which has to be handed one week after the end of the chapter. **You must show all your work in your solution in a well-organized presentation.** A box including **UNITS** and **SIGN** (i.e. positive or negative) should mark your final answer. These problems will be graded on the following scale: **5 (excellent), 4 (good), 3 (adequate), and 0-2 (unacceptable).** To receive full credit you must provide a **complete explanation** for how you obtained your answer.

Lecture Schedule (Tentative) & Exams Dates

| Week # | Date | Chapter & Topic/ Sections | Homework Assignment |
|--|---------------------|---|---|
| 1 | September 10 – 14 | CH2: Newton's First Law of Motion-The Law of Inertia | Think and explain:2,5,7,10,18 Think and solve: 1,2,3,4,5 |
| 2 | September 17 – 21 | CH2 - continues | |
| 3 | September 24 – 28 | CH3: : Newton's Second Law of Motion-Force and Acceleration | Think and explain:1,3,7,8,10 Think and solve:2,3,4,5,6 |
| 4 | October 01 – 05 | CH3 - continues | |
| 5 | October 08 – 12 | CH4: Newton's Third Law of Motion-Action and Reaction | Think and explain:2,3,6,7,10 Think and solve:1,2,3,4,5 |
| 6 | October 15 – 19 | CH4 - continues | |
| First Major Exam on Saturday, October 22nd /2011 | | | |
| 7 | October 22 – 26 | CH5: Momentum | Think and explain:2,6,9,16,20 Think and solve:1,3,4,6,7 |
| 8 | October 29 – 31 | CH5 - continues | |
| Eid Al Adha Vacation – Tuesday, November 01-Friday, November 11 | | | |
| 9 | November 12 – 16 | CH6: Energy | Think and explain:1,3,8,13,15 Think and solve:2,3,4,5,6 |
| 10 | November 19 – 23 | CH6 - continues | |
| 11 | November 26 – 30 | CH7: Gravity, Projectiles, and Satellite Motion | Think and explain:2,5,8,11,14 Think and solve:2,4,8,9,10 |
| 12 | December 03 – 07 | CH7 - continues | |
| Second Major Exam on Saturday, December 10th /2011 | | | |
| 13 | December 10 – 14 | CH8: Fluid Mechanics | Think and explain:1,7,9,14,18 Think and solve:1,2,3,4,5 |
| 14 | December 17 – 21 | CH8 - continues | |
| 15 | December 24 – 28 | CH10: Electricity | Think and explain:3,6,11,13,19 Think and solve:1,3,4,5,6 |
| 16 | December 31 –Jan.04 | CH10 - continues | |
| Final Exams : January 07 ---- 17 | | | |