



The University of Southern Queensland

## Course Specification

### Description: Foundation Physics

Subject	Cat-Nbr	Class	Term	Mode	Units	Campus
PHY	1103	10396	1, 2002	ONC	1.00	TWMBBA

<b>Academic Group:</b>	FOSCI
<b>Academic Org:</b>	FOS002
<b>HECS Band:</b>	2
<b>ASCED Code:</b>	010301

### STAFFING

Examiner: Alfio Parisi

Moderator: Brad Carter

### RATIONALE

A knowledge of the concepts of physics is fundamental to the understanding of the mechanisms used widely in modern science and technology. This course provides the necessary physics for future professionals, for example, scientists, engineers, doctors and teachers.

### SYNOPSIS

Physics is a fundamental science and is concerned with the basic principles of science and technology. This introductory course provides students with an understanding of basic physics principles. Applications of physics are provided along with the problem solving and practical exercises. It is intended for students wishing to study for professional careers. This course has a compulsory one day residential school.

### OBJECTIVES

On successful completion of this course students will be able to:

- demonstrate a basic knowledge of physics principles with emphasis on measurement, vectors, kinematics, forces, work, energy, momentum, rotational mechanics, simple harmonic motion, waves, thermodynamics, electric and magnetic fields, electric circuits and geometric optics.
- Demonstrate skills and knowledge required to perform laboratory experiments safely with appropriate equipment.

## TOPICS

Description	Weighting (%)
1. Problem Solving in Physics Vectors Kinematics Forces Work and Energy Linear Momentum Rotational Mechanics	50.00
2. Simple Harmonic Motion and Waves Wave Behaviour Thermodynamics The Electric Field The Magnetic Field Electric Circuits Geometric Optics	50.00

### TEXT and MATERIALS required to be PURCHASED or ACCESSED:

Books can be ordered by fax or telephone. For costs and further details use the 'Book Search' facility at <http://bookshop.usq.edu.au> by entering the author or title of the text.

*College Physics*, 5th edn (Technology version) kit consisting of:

*Saunders Core Concepts in College Physics*, CD-ROM 3 discs.

*65100 Foundation Physics Introductory/Study Book*, USQ.

*65100 Foundation Physics Laboratory Manual*,

Interactive Physics Software, CD-ROM - 1 disc.

Serway, R.A. and Faughn, J.S., 2000 *College Physics*, 5th edn, Saunders College Publishing,

Workbook to accompany the *Saunders Core Concepts in College Physics*, CD-ROM.

### STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Examinations	3
Laboratory or Practical Classes	20
Lectures	24
Private Study	95
Report Writing	16
Tutorial	12

### ASSESSMENT DETAILS

Description	Marks Out of	Wtg(%)	Required	Due Date
CMA TEST 1	100.00	10.00	Y	03 May 2002
CMA TEST 2	100.00	10.00	Y	11 Jun 2002
LABORATORY REPORTS	100.00	20.00	Y	04 Mar 2002 (see note 3)
3 HR RESTRICTED EXAM	30.00	60.00	Y	END S1 (see note 4)

**NOTES:**

3. Examiner to advise due dates for the Laboratory Reports
4. Examination dates will be available during the Semester. Please refer to the examination timetable when published.

**OTHER REQUIREMENTS**

- 1 Attendance Requirements It is the students' responsibility to actively participate in all classes scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements to Satisfactorily Complete Each Assessment Item To ensure that students can satisfy the objectives of the practical component of the course, students must attend at least 80% of the practical classes, including submission of the assessment items and obtain at least half of the marks available for each item submitted. To satisfactorily complete the examinations in the course, students must obtain at least half of the marks available for each examination.
- 3 Minimum Requirements to Pass the Course To be assured of a pass in this unit, students must: obtain an overall mark of at least 50%; obtain at least 50% of the marks available in the examination(s); obtain an overall mark of at least 50% in the other assessments.
- 4 Grading Final grades for students will be determined by the addition of the marks obtained in each assessment item, weighted as in the Assessment Details and by considering the students' level of achievement of the objectives of the course.
- 5 Supplementary and Deferred Examinations Students who obtain an overall passing mark, but who do not perform satisfactorily in an examination, may, at the discretion of the examiner, be granted a supplementary examination. Students will be granted a deferred examination only if they perform satisfactorily in all other assessment items. Any supplementary or deferred examinations for this course will be held during the examination period at the end of the semester of the next offering of this course.
- 6 Assignments The due date for assignments is the date by which a student must despatch an assignment to the USQ. The onus is on the students to provide proof of the despatch date, if requested by the Examiner. Students must retain a copy of each item submitted for assessment. This must be produced within 48 hours if required by the Examiner. In accordance with University's Policy on Assignments (Regulation 5.6.1), the Examiner of a course may grant an extension of the due date of an assignment in extenuating circumstances. This policy may be found in the USQ Handbook, the Distance Education Study Guide and the Faculty of Sciences' Orientation Handbook for new on-campus students. All students are advised to study and follow the guidelines associated with this policy. An assignment submitted after the due date without an extension approved by the Examiner, will attract a penalty of 20 percent of the assigned mark for each day (or part thereof) that the assignment is late.
- 7 Examinations Candidates should be aware that the University has policies and regulations (Regulation 5.6.2.2.) about the use of unfair means and electronic devices in an examination and they should refer to them to determine whether or

not actions they intend to take are acceptable to the University. Restricted Examination: Candidates will be allowed access only to specific materials in a restricted examination. The only materials that students may use in the restricted examination for this course are: (a) writing materials (non-electronic and free from materials which could give the student an unfair advantage in the examination. (b) calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination). With the approval of the Examiner, candidates may take an appropriate non-electronic translation dictionary into the examination. This will be subject to perusal and may be removed from the candidate's possession until appropriate disciplinary action is completed if found to contain material that could give the candidate an unfair advantage. A list of the materials candidates may access in the restricted examination will be on the frontispiece of the examination paper.

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