



The University of Southern Queensland

Course specification

Description: Foundation Physics

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
PHY	1103	30353	1, 2004	ONC	1.00	TWMBA

Academic group:	FOSCI
Academic org:	FOS002
Student contribution band:	2
ASCED code:	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. This course is intended for students wishing to study for professional careers.

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; Solids and Fluids.	50.00
2. Simple Harmonic Motion and Waves; Wave Behaviour; Heat; Thermodynamics; The Electric Field; The Magnetic Field; Electric Circuits; Geometric Optics.	50.00

TEXT and MATERIALS required to be PURCHASED or ACCESSED:

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

College Physics 5th edition (Technology version) kit: consisting of: Saunders Core Concepts in College Physics, 3 CD-ROMs and Interactive Physics Software CD-ROM, Serway, R.A. and Faughn, J.S., 2000, College Physics, Saunders College Publishing, Fort Worth, Workbook to accompany the, Saunders Core Concepts in College Physics, CD-ROM.

Parisi, A. 2004, *PHY 1104 Foundation Physics Laboratory Manual*, USQ Publication, Toowoomba.

Parisi, A. & Carter, B. 2004, *PHY 1104 - Introductory Physics Introductory/Study Book*, USQ Publication, Toowoomba.

REFERENCE MATERIALS:

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

STUDENT WORKLOAD REQUIREMENTS:

ACTIVITY	HOURS
Examinations	3.00
Laboratory or Practical Classes	16.00
Lectures	24.00
Private Study	95.00
Report Writing	16.00
Tutorial	12.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
LABORATORY REPORTS	20.00	20.00	02 Mar 2004 (see note 1)
CMA TEST 1	10.00	10.00	30 Apr 2004
CMA TEST 2	10.00	10.00	08 Jun 2004
3 HR RESTRICTED EXAM	30.00	60.00	END S1 (see note 2)

NOTES:

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

IMPORTANT ASSESSMENT INFORMATION

1 Attendance requirements:

It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) 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. To maximize their chances of satisfying the objectives of the practical component of the course, students should attend and actively participate in the laboratory sessions in the course.

2 Requirements for students to complete each assessment item satisfactorily:

To complete the CMA Tests satisfactorily, students must achieve an aggregated mark of at least 50% in the total marks allocated for the CMA Tests. To complete the examination satisfactorily, students must achieve at least 50% of the marks for the examination.

- 3 Penalties for late submission of required work:
If students submit assignments after the due date without prior approval then a penalty of 20% of the total marks available for the assignment will apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:
To be assured of receiving a passing grade a student must achieve at least 50% of the available weighted marks for each of the summative assessment items.
- 5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.
- 6 Examination information:
In a Restricted Examination, candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could give the student an unfair advantage in the examination); 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 Examiner's approval, candidates may, take an appropriate non- electronic translation dictionary (but not technical dictionaries) into the examination. This will be subject to perusal and, if it is found to contain annotations or markings that could give the candidate an unfair advantage, it may be removed from the candidate's possession until the appropriate disciplinary action is completed.
- 7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held during the examination period at the end of the semester of the next offering of this course.
- 8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm> or in the current USQ Handbook.

ASSESSMENT NOTES

- 9 Students must retain a copy of each item submitted for assessment. This must be produced within 24 hours if required by the Examiner.
- 10 In order to attend laboratory classes, students must provide and wear appropriate personal protective equipment. This shall include a laboratory coat, closed in shoes, and safety glasses. Such equipment must be approved by supervising staff. Failure to provide and wear the appropriate safety equipment will result in students being excluded from classes.