



The University of Southern Queensland

Course specification

The current and official versions of the course specifications are available on the web at <http://www.usq.edu.au/coursespecification/current>.
Please consult the web for updates that may occur during the year.

Description: Electrical and Electronic Practice C

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
ELE	2913	86343	1, 2009	ONC	0.00	Toowoomba

Academic group:	FOENS
Academic org:	FOES04
Student contribution band:	2
ASCED code:	031300

STAFFING

Examiner: Glenn Harris
Moderator: Paul Wen

OTHER REQUISITES

Recommended prior or concurrent study: (ELE2601 and ELE2504) or (ELE2503 and ELE2702)

SYNOPSIS

The purpose of this practice course is to provide experimental support for the 2nd level of day programs, and the 4th level of all external programs in Electrical & Electronic Engineering. This practice course provides equipment familiarisation and safety information, experience with prototyping together with experimental work in Rotating Machines, Transformers and Power Systems, Electronic Circuit Testing, Component and Circuit Characteristics, Waveform Analysis and Transmission Lines. The principle objectives are to allow the student to develop practical skills; a knowledge of devices, equipment and techniques; reinforce the learning of theory; develop observation and interpretation skills; stimulate interest and develop self confidence.

OBJECTIVES

The course objectives define the student learning outcomes for a course. The assessment item(s) that may be used to assess student achievement of an objective are shown in parenthesis. On completion of this course, students should be able to:

1. measure the transmission characteristics of cables and waveguides, and compare the results with theoretical predictions; (Report)
2. analyse the frequency spectra of communication signal waveforms and compare the results with theoretical predictions; (Report)
3. interpret and apply manufacturers' data for electronic devices; (Report)
4. select and use appropriate test equipment and procedures from a wide range of possibilities; (Report)
5. measure the characteristics and/or performance of a wide range of electrical and electronic circuits and devices; (Report)

6. analyse and interpret test results and measurements on electric and electronic circuits, in terms of theoretical models, and by comparison with the results of simulations; (Report)
7. predict the performance of electric and electronic circuits from device characteristics; (Report)
8. design electronic circuits to perform simple functions. (Report)

TOPICS

	Description	Weighting (%)
1.	Equipment Introduction and Safety Information	10.00
2.	Electronic Circuit Analysis	15.00
3.	Electronic Circuit Measurements	15.00
4.	Communication Signal Analysis	15.00
5.	Transmission Lines and Waveguide Propagation	15.00
6.	Power System Analysis	15.00
7.	Power System Measurements	15.00

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).

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.

ELE2601 Telecommunication principles, ELE2503 Electronic systems or ELE2504 Electronic design and analysis, and ELE2702 Electrical Measurement and Analysis: external study packages, University of Southern Queensland, Toowoomba.

(Bachelor of Engineering students excepted)

Floyd, TL 2005, *Electronic devices*, 7th edn, Pearson Prentice Hall, Upper Saddle River, New Jersey.

Ramakrishnan, GN 1995, *Electrical plant and energy conversion examples*, University of Southern Queensland, Toowoomba.

Ramakrishnan, GN 1994, *Electrical Technology Examples*, University of Southern Queensland, Toowoomba.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Laboratory or Practical Classes	40.00
Report Writing	10.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
REPORTS	100.00	100.00	12 Jun 2009

IMPORTANT ASSESSMENT INFORMATION

- 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.
- Requirements for students to complete each assessment item satisfactorily:**
To satisfactorily complete an assessment item a student must achieve at least 50% of the marks or a grade of at least C-. Students do not have to satisfactorily complete each assessment item to be awarded a passing grade in this course. Refer to Statement 4 below for the requirements to receive a passing grade in this course.
- Penalties for late submission of required work:**
If students submit assignments after the due date without prior approval then a penalty of 5% of the total marks available for the assignment will apply for each working day late.
- Requirements for student to be awarded a passing grade in the course:**
To be assured of receiving a passing grade, students must complete at least 80% of the practical and other activities at a satisfactory standard, as stated in the course Assessment Scheme.
- Method used to combine assessment results to attain final grade:**
As P is the only passing grade available for this course, all students who are qualified for a passing grade, under the requirements in 4 above, will be given a grade of P. Other students will be given either a Failing grade or an Incomplete grade.
- Examination information:**
There is no examination in this course.
- Examination period when Deferred/Supplementary examinations will be held:**
Not applicable.
- 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

- 1 Students who have undertaken all of the required assessments in a course but who have failed to meet some of the specified objectives of a course within the normally prescribed time may be awarded the temporary grade: IM (Incomplete - Make up). An IM grade will only be awarded when, in the opinion of the examiner, a student will be able to achieve the remaining objectives of the course after a period of non-directed personal study.