



The University of Southern Queensland

Course Specification

Description: Soil Science

Subject	Cat-Nbr	Class	Term	Mode	Units	Campus
AGR	3304	20592	1, 2003	EXT	1.00	TWMBBA

Academic Group:	FOENS
Academic Org:	FOES03
HECS Band:	2
ASCED Code:	010709

STAFFING

Examiner: Steven Raine

Moderator: Mark Porter

SYNOPSIS

A knowledge of soils as a resource in both natural and agricultural ecosystems is important to science, arts and engineering professionals involved in the sustainable management of biological systems. This introductory course focuses on soils as a medium for plant growth and investigates the nature and role of the soil chemical and physical properties, clay mineralogy, and soil biology as limiting factors on soil fertility. It also provides a comprehensive investigation of the processes of soil formation and the methods of soil description and classification. Both the physical and chemical processes of soil degradation are investigated and management practices to prevent, ameliorate and rehabilitate degraded land are discussed.

OBJECTIVES

On completion of this course, student should be able to:

- examine the processes of soil formation and demonstrate an understanding of techniques involved in soil description and classification;
- analyse the physical and chemical properties of soil components;
- analyse the factors and processes influencing soil fertility, structural stability, water availability and movement, temperature fluctuations and soil biology;
- analyse the factors and processes that lead to the degradation of soil resources;
- evaluate the management practices used to reduce soil degradation or increase productivity in sustainable systems.

TOPICS

Description	Weighting (%)
1. Paedogenesis and soil description	15.00
2. Soil mineralogy and chemistry	20.00
3. Soil fertility and biology	20.00
4. Soil physics	25.00
5. Processes of soil degradation and conservation practices	20.00

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.

Singer M J and Munns D N 1999, *Soils, An Introduction*, 4th edition, MacMillan, New York.

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.

Brady N C and Weil R R 1996, *The Nature and Properties of Soils*, 11th edition, Prentice Hall,

Isbell R F 1996, *The Australian Soil Classification*, CSIRO Publishing,

Leeper G W and Uren N C 1993, *Soil Science: An Introduction*, 5th edition, Melbourne University Press,

McDonald R C, Isbell R F, Speight J G, Walker J and Hopkins M S 1990, *Australian Soil and Land Survey Field Handbook*, 2nd edition, Inkata Press,

McLaren R G and Cameron K C 1996, *Soil Science: Sustainable Production and Environmental Protection*, Oxford University Press,

Rowell D L 1994, *Soil Science: Methods and Applications*, Longman Scientific and Technical, Harlow.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessment	36
Directed Study	52
Examinations	3
Private Study	64

ASSESSMENT DETAILS

Description	Marks Out of	Wtg(%)	Required	Due Date
ASSIGNMENT 1	150.00	15.00	Y	11 Apr 2003
ASSIGNMENT 2	250.00	25.00	Y	23 May 2003
3 HOUR CLOSED EXAMINATION	600.00	60.00	Y	END S1 (see note)

NOTES:

- Student Administration will advise students of the dates of their examinations during the semester.

IMPORTANT ASSESSMENT INFORMATION

- Attendance requirements:**

There are no attendance requirements for this course. However, it is the students' responsibility 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 complete each of the assessment items satisfactorily, students must obtain at least 50% of the marks available (or at least a grade of C-) for each assessment item.
- 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.
- 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 45% in each of the summative assessments and at least 50% of the available weighted marks for the summative assessment items.
- Method used to combine assessment results to attain final grade:**

The final grades for students will be assigned on the basis of the weighted aggregate of the marks (or grades) obtained for each of the summative assessment items in the course.
- Examination information:**

In a Closed Examination, candidates are allowed to bring only writing and drawing instruments into the examination.
- 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.
- 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/SECARIAT/calendar/Part5/> or in the printed version of the current USQ Handbook.

ASSESSMENT NOTES

- 1 The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner.
- 2 Students must retain a copy of each item submitted for assessment. This must be produced within five days if required by the Examiner.
- 3 In accordance with University's Assignment Extension Policy (Regulation 5.6.1), the examiner of a course may grant an extension of the due date of an assignment in extenuating circumstances.
- 4 The Faculty will normally only accept assessments that have been written, typed or printed on paper-based media.
- 5 The Faculty will NOT accept submission of assignments by facsimile.
- 6 Students who do not have regular access to postal services or who are otherwise disadvantaged by these regulations may be given special consideration. They should contact the examiner of the course to negotiate such special arrangements.
- 7 In the event that a due date for an assignment falls on a local public holiday in their area, such as a Show holiday, the due date for the assignment will be the next day. Students are to note on the assignment cover the date of the public holiday for the Examiner's convenience.
- 8 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.
- 9 Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded IDS (Incomplete - Deferred Examination); IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).
- 10 The Faculty of Engineering and Surveying does not offer supplementary examinations.