



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: Soil and Water Engineering Practice 2

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
AGR	3903	90361	2, 2009	EXT	0.00	Toowoomba

Academic group:	FOENS
Academic org:	FOES03
Student contribution band:	6
ASCED code:	010709

STAFFING

Examiner: Rabi Misra
Moderator: Steven Raine

SYNOPSIS

Agricultural and Environmental Engineers require a practical understanding of the processes governing soil and water behaviour in the environment. This course provides students with a practical introduction to the factors influencing soil formation and the techniques associated with the field description and classification of soils. Laboratory classes will be conducted to enable students to identify major factors influencing soil chemical and physical properties. Field measurement of important soil/water parameters and processes such as soil moisture content, infiltration, hydraulic conductivity and aquifer transmissivity will be undertaken. The course will also build on the hydraulics undertaken in the earlier soil and water practice course particularly in the areas of varied and unsteady flows and sediment transport.

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. demonstrate an understanding of the factors influencing soil formation and the relationships between soils and landscapes; (Soil desc't & classification)
2. undertake the field description and classification of soils; (Soil desc't & classification)
3. demonstrate an understanding of basic laboratory testing procedures required in soil science; (Soil Lab report)
4. apply techniques for the evaluation of irrigation performance in the field; (Irrigation Evaluation Report)
5. analyse data from a pumping test on a groundwater well and determine the transmissivity and storativity of an aquifer; (Pump Test Report)

TOPICS

Description	Weighting (%)
1. Soil formation, description and classification	25.00
2. Soil science testing procedures	30.00
3. Irrigation performance evaluation	25.00
4. Groundwater Hydraulics	20.00

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.

Chadwick, A & Morfett, J 2004, *Hydraulics in civil and environmental engineering*, 4th edn, E & FN Spon, London.

Kruseman, GP & de Ridder, NA 1990, *Analysis and evaluation of pumping test data*, 2nd edn, Intern Inst for Land Reclamation and Improvement, Wageningen, Netherlands.

McDonald, RC, Isbell, RF, Speight, JG, Walker, J & Hopkins, MS 1990, *Australian soil and land survey: field handbook*, 2nd edn, Inkata Press, Melbourne.

Singer, MJ & Munns, DN 2002, *Soils: an introduction*, 5th edn, Prentice Hall, Upper Saddle River, New Jersey.

Walker, WR & Skogerboe, GV 1987, *Surface irrigation theory and practice*, Prentice Hall, New Jersey.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Directed Study	4.00
Field Trips or Excursions	6.00
Laboratory or Practical Classes	30.00
Report Writing	10.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
SOIL FIELD & LAB REPORT	500.00	50.00	28 Sep 2009
IRRIGATION & PUMP TEST REPORT	500.00	50.00	28 Sep 2009

IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:**

This course requires attendance at a residential school. 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.
- 2 Requirements for students to complete each assessment item satisfactorily:**

To satisfactorily complete an individual assessment item a student must achieve at least 50% of the marks or a grade of at least C-. (Depending upon the requirements in Statement 4 below, students may not have to satisfactorily complete each assessment item to receive a passing grade in this course.)
- 3 Penalties for late submission of required work:**

If students submit assignments after the due date without extenuating circumstances then a penalty of 5% of the assigned mark may apply for each working day late up to a maximum of ten working days at which time a mark of zero can be recorded for that assignment.
- 4 Requirements for student to be awarded a passing grade in the course:**

To be assured of receiving a passing grade students must satisfactorily complete (as defined in statement 2) at least 80% of the practical and other activities.
- 5 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.
- 6 Examination information:**

There is no examination in this course.
- 7 Examination period when Deferred/Supplementary examinations will be held:**

Not applicable.
- 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

- 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 despatched to USQ within 24 hours 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).