Description: Soil and Water Engineering Practice 2

<table>
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<th>Subject</th>
<th>Cat-Nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
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Academic Group: FOENS
Academic Org: FOES03
HECS Band: 2
ASCED Code: 010709

STAFFING
Examiner: Steven Raine
Moderator: Mark Porter

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
On successful completion of this course, students should be able to:

- demonstrate an understanding of the factors influencing soil formation and the relationships between soils and landscapes;
- undertake the field description and classification of soils;
- demonstrate an understanding of basic laboratory testing procedures required in soil science;
- apply techniques for the measurement of infiltration and soil moisture in the field;
- conduct a pumping test on a groundwater well and determine the transmissivity and storativity of an aquifer.
TOPICS

<table>
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<th>Description</th>
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<tr>
<td>1. Soil formation, description and classification</td>
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<td>2. Soil science testing procedures</td>
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<td>3. Infiltration and soil moisture measurement</td>
<td>25.00</td>
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<td>4. Groundwater Hydraulics</td>
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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

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
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<tbody>
<tr>
<td>Directed Study</td>
<td>4</td>
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<tr>
<td>Field Trips or Excursions</td>
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<tr>
<td>Laboratory or Practical Classes</td>
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<td>Report Writing</td>
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ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks Out of</th>
<th>Wtg(%)</th>
<th>Required</th>
<th>Due Date</th>
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<td>ORAL</td>
<td>200.00</td>
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<td>REPORT 1 - SOIL LAB PRAC</td>
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<td>REPORT 2 - INFILTRATION PRAC</td>
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<td>GRAPHICAL ANALYSIS - PUMP</td>
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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 complete the practical component satisfactorily, students must submit, by the due date, a practical report which meets the requirements of the assessment scheme.

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 students must complete at least 80% of the practical and other activities at a satisfactory standard, as stated in 2 above.

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/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 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).