



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: Environmental Engineering Practice

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
ENV	3904	96116	3, 2009	EXT	0.00	Toowoomba

<b>Academic group:</b>	FOENS
<b>Academic org:</b>	FOES03
<b>Student contribution band:</b>	2
<b>ASCED code:</b>	039901

### STAFFING

Examiner: Vasanthadevi Aravinthan  
Moderator: Ian Brodie

### REQUISITES

Pre-requisite: ENV4203

### SYNOPSIS

Students will gain an understanding of the engineering practice of environmental sanitation and evaluate some tests to ascertain the quality of water using bio-chemical and engineering principles. Students will engage in a range of activities related to environmental engineering practice through laboratory experiments, field excursion, and lecture/tutorial.

### 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. describe the operational functions involved in a water treatment plant that represent chemical and physical processes (Report);
2. describe the operational functions involved in a wastewater treatment plant that represents the physical, chemical and biological processes (Report);
3. review basic chemistry concepts and calculations related to water quality (Report);
4. evaluate equipment used in the examination of water quality (Report);
5. conduct tests to ascertain the quality of water (Report);
6. conduct tests related to noise and odour pollution (Report).

## TOPICS

Description	Weighting (%)
1. Unit processes, flow rates, residence times, equipment capacities and waste generation involved in water treatment.	45.00
2. Basic water chemistry and calculations	10.00
3. Water testing equipment	10.00
4. Tests for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Sludge Volume Index (SVI), and their relevance to water quality.	25.00
5. Noise and odour	10.00

## 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).

Hand held battery operated calculator.

Laboratory coat.

## 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.

American Public Health Association 2005, *Standard Methods for the Examination of Water and Wastewater*, 21th edn, Water Environment Federation,

Davis, M. L. & Cornwell, D. A 2008, *Introduction to Environmental Engineering*, 4th edn, McGraw-Hill International Editions, Boston, MA.

National Health and Medical Research Council 2004, *Australian Drinking Water Guidelines 6*,

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessments	12.00
Directed Study	10.00
Laboratory or Practical Classes	28.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg (%)	Due date
PRACTICAL ACTIVITIES & REPORT	1.00	100.00	19 Feb 2010

## 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 be assured of receiving a passing grade students must complete at least 80% of the practical and other activities at a satisfactory standard at the Residential School for the course. 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:**

Practical reports submitted after the due date will not be assessed.
- 4 Requirements for student to be awarded a passing grade in the course:**

To be assured of a passing grade, students must demonstrate, via the summative assessment items, that they have achieved the required minimum standards in relation to the objectives of the course by satisfactorily completing the summative assessment items, 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/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).

## **OTHER REQUIREMENTS**

- 1 Students will require access to e-mail and internet access to UConnect for this course.
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