EVSC90016 Environmental Monitoring and Audit

Credit Points:	12.50
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2012, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 45 hours comprising 2 one-hour lectures per week , and 1 three-hour practical class per week for 7 weeks Total Time Commitment: Not available
Prerequisites:	Students must have completed the following subjects before enrolling in 600-653 Environmental Monitoring and Audit.

Subject	Study Period Commencement:	Credit Points:
EVSC90017 Global Environmental Change	Semester 1	12.50
MAST90044 Thinking and Reasoning with Data	Semester 1	12.50

Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact upon their active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
Coordinator:	Assoc Prof Michael Mccarthy, Dr Angus Webb
Contact:	Email: mamcca@unimelb.edu.au
Subject Overview:	Monitoring and auditing are key elements of contemporary environmental management. This subject will examine the different roles of monitoring, including prediction and monitoring environmental impacts, calibration and evaluation of environmental models, and monitoring and auditing as part of the risk management cycle. In this subject you will examine field sampling across a range of chemical, physical and biological indicators. You will gain an appreciation of the demands of monitoring and auditing in different organisational and regulatory settings, including pollution control, natural resource management, biosecurity and demonstrating performance against industry codes and standards. You will develop skills in sampling design, including recognition of issues associated with trade-offs in cost and precision, detectability, and inferential errors. These skills will enable you to make valued contributions to evidence-based decision-making in public and private sector organisations involved in environmental management.
Objectives:	At the completion of the subject, participants should be able to: # Apply sampling protocols to a range of environments and chemical, physical and biological indicators. # Describe and apply the main elements of an environmental audit as specified in ISO 14001. # Recognise and distinguish the monitoring needs of different decision-making contexts, including monitoring for performance, compliance, risk management and adaptive management.

	# Evaluate the merit of a monitoring program according to cost, precision and the likelihood of inferential errors.
Assessment:	Two assignments of up to 2000 words each (totalling 50%), one due early mid semester and the other late mid semester. A take-home exam at the end of semester (50%).
Prescribed Texts:	None
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Generic skills which should be gained from this subject include the ability to: # work constructively with colleagues to recognise, synthesise and resolve disagreement through respect for evidence and analytical rigour; # use scientific evidence to influence and persuade others; # write technical reports that are accessible to non-specialists such as senior decision-makers; # exercise critical judgement, think rigorously and independently, account for decisions, and solve problems; and # apply advanced analytical methods
Notes:	Students undertaking this subject will be expected to regularly access an internet-enabled computer and will be expected to be competent in the use of spreadsheet software such as Microsoft Excel or equivalent.
Related Majors/Minors/ Specialisations:	Climate Change Environmental Science Environmental Science