## 208-248 Water, Soil and Nutrient Management

| Credit Points:                       | 12.500   |
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| Level:                               | Undergraduate  |
| Dates & Locations:                   | 2008,<br>This subject commences in the following study period/s:<br>Semester 2, - Taught on campus.  |
| Time Commitment:                     | Contact Hours: I wenty-four hours of lectures and 36 hours of tutorials/workshops I otal Time<br>Commitment: Not available   |
| Prerequisites:                       | 202-110 Land Resources or 207-171 Sustainable Catchment Management.  |
| Corequisites:                        | None   |
| Recommended<br>Background Knowledge: | None   |
| Non Allowed Subjects:                | None   |
| Core Participation<br>Requirements:  | For the purposes of considering request for Reasonable Adjustments under the Disability<br>Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic<br>requirements for this subject are articulated in the Subject Overview, Learning Outcomes,<br>Assessment and Generic Skills sections of this entry.It is University policy to<br>take all reasonable steps to minimise the impact of disability upon academic study, and<br>reasonable adjustments will be made to enhance a student's participation in the University's<br>programs. Students who feel their disability may impact on meeting the requirements of this<br>subject are encouraged to discuss this matter with a Faculty Student Adviser and Student<br>Equity and Disability Support: <a href="http://services.unimelb.edu.au/disability">http://<br/>services.unimelb.edu.au/disability</a> |
| Coordinator:                         | Mr Roger Wrigley   |
| Subject Overview:                    | This subject provides students with an understanding of the importance of optimal use<br>of nutrients and water in production to ensure maximum productivity whilst maintaining<br>sustainability and avoiding off-site impact. The impact of tillage practices, rotational sequences,<br>and livestock grazing on soil physical properties that influence soil fertility, infiltration and soil<br>water availability will be assessed.<br>Topics include:  |
|                                      | # evaluation of management strategies, cropping systems, and tillage systems that maximise<br>infiltration and use stored soil water efficiently;  |
|                                      | <sup>#</sup> developing skills in identifying major soil groups and land capability for specific land-use;   |
|                                      | <sup>#</sup> providing a framework for evaluating soil: physical and chemical properties;  |
|                                      | # developing an understanding of sustainable crop and integrated crop-livestock production<br>systems that sustain soil and water quality without impacting adversely in the environment;  |
|                                      | # evaluation of soil water and crop properties based on climatic parameters and<br>meteorological conditions;  |
|                                      | # developing awareness of the impact on soil and water nutrient levels as a result of intensive agricultural practices;  |
|                                      | # the influence of intensive agriculture and horticulture on soil water and atmospheric conditions with examples of strategies to deal with these issues;  |
|                                      | # issues associated with allocation of water between agricultural, environmental, urban<br>industrial and recreational uses;   |
|                                      | # developing knowledge of farm water supply systems for both stock and domestic use and<br>irrigation in terms of both quality and quantity;   |

|                    | <sup>#</sup> water reclamation and re-use;  |
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|                    | # methods of nutrient application including fertigation, broadcasting, row, deep placement<br>and site specific will be discussed; and  |
|                    | # efficient and economic application of nutrients including the preparation of nutrient budgets<br>and performance monitoring.  |
| Assessment:        | Three-hour examination (50%) and two assignments equivalent to 3000 words (each worth 25%).   |
| Prescribed Texts:  | None  |
| Recommended Texts: | Information Not Available   |
| Breadth Options:   | This subject is a level 2 or level 3 subject and is not available to new generation degree students as a breadth option in 2008.<br>This subject or an equivalent will be available as breadth in the future.<br>Breadth subjects are currently being developed and these existing subject details can be used as guide to the type of options that might be available.<br>2009 subjects to be offered as breadth will be finalised before re-enrolment for 2009 starts in early October. |
| Fees Information:  | Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees  |
| Generic Skills:    | Information Not Available   |
| Related Course(s): | Associate Degree in Agriculture   |