208-320 Fertiliser Management

Credit Points:	12.50
Level:	3 (Undergraduate)
Time Commitment:	Contact Hours: Thirty-six hours of lectures and tutorials including a five-day block at Dookie Total Time Commitment: Not available
Prerequisites:	202-201 Plant Function, 202-203 Soil and Water Resources
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	None
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Subject Overview:	The objectives of this subject are to provide specialist knowledge on the fertiliser and soil ameliorant industries in Australia, and on systems of recommending and applying fertilisers to crops (grain, horticultural and vegetable) and pastures. This unit is designed specifically for students considering a career as an extension and/or research agronomist. Subject content includes: # factors affecting availability of macro- and micro-nutrients from soil and fertiliser; major nutrient and carbon cycles; role of major nutrients in plant and farm animal growth, with specific reference to grain, horticulture and vegetable crops and pasture-based livestock production; # overview of the Australian fertiliser and soil ameliorant industries; chemical fertiliser production and distribution; alternative fertilisers - biosolids, green manures, mineral fertilisers, other organic fertilisers; types and forms of fertilisers; physical and chemical characteristics and standards of fertilisers and soil ameliorants; # interpretation of plant nutrient status including visual assessment and soil and foliar analysis; prediction of fertiliser responses using a range of systems including response curves, yield targets, nutrient mass balance and other predictive models; economics of fertiliser use; # factors affecting availability of macro- and micro-nutrients from soil and fertiliser; major nutrient and carbon cycles; role of major nutrients in plant and farm animal growth, with specific reference to grain, horticulture and vegetable crops and pasture-based livestock production; # fertiliser application technologies for different forms and types of fertilisers; fertiliser mixtures and compatibilities; site specific application; time of application; risks and problems in fertiliser use and application systems; and # environmental issues in fertiliser use; high or low input systems; nutrient transfer and off-site effects; interactions between plant nutrition and protection, sustainability issues associated with fertiliser use including soil acidification, structural decline, organic matter decline.
Assessment:	One 3-hour examination (60%), two assignments equivalent to 3000 words (20% each).

Prescribed Texts:	None
Recommended Texts:	Recommended Texts: # **Australian Soil Fertility Manual** (J S Glenndinning), CSIRO Publishing, Collingwood, 2000
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:	Information Not Available
Related Course(s):	Bachelor of Agricultural Science Bachelor of Agricultural Science