

# Advanced Diploma in Agriculture

## Second-year subjects

### 207-278 Resource Management (Soil and Water)

**Availability:** Dookie campus

**Credit points:** 12.5

**Coordinator:** Mr Ashley Wheaton

**Contact:** Twenty-four hours of lectures and 36 hours of practicals/tutorials (*Semester 2*).

**Description:** The objective of this subject is to enable students to:

- develop skills in identifying major soil groups;
- provide a framework for evaluating soil: physical and chemical properties;
- develop an understanding of land systems, ecosystems and land management;
- develop an understanding of water systems, water quality and water management;
- understand the ecological principles which influence the management of sustainable systems;
- plan and develop farm water supply systems for both stock and domestic use and irrigation;
- analyse the practices and management strategies for natural resource management and sustainable farm productivity and lifestyle.

**Assessment:** One 2-hour written examination (40% of final marks), one mid-semester assignment equivalent to 3000 words (30% of final mark) and one technical report equivalent to 3000 words based on exercises and practical work conducted during the semester (30% of final mark). A hurdle requirement for this subject is a minimum attendance of 80% of exercises and practical sessions.

### 208-273 Managing Staff

See full subject details on page 2.

## Year-long subject

### 202-052 Industry Placement#

See full subject details on page 2.

## Elective subjects

### Second-year (Semester 1)

#### 202-250 Quantitative Skills for Land and Food

**Note:** Students with a pass in Year 12 VCE Mathematics (other than those with a study score of 25-29 in Year 12 VCE Further Mathematics) need the permission of their course coordinator before enrolling in this subject.

**Credit points:** 12.5

**Coordinator:** Ms Robyn Price

**Prerequisites:** At least 100 credit points completed at advanced diploma level.

**Contact:** The subject will be delivered by distance mode. Content is equivalent to 72 hours teaching (*Not Offered*).

**Description:** This subject will introduce and apply mathematical concepts and skills needed to solve problems in land and food resources contexts. It provides a foundation for 202-107 Mathematics for Land and Food Resources.

Topic areas include geometry and trigonometry, measurement of area and volume, Pythagoras' theorem; number patterns, ratio and proportion, arithmetic and geometric sequences, calculations using ratios; data analysis: data displays and numerical summaries, estimation, straight line graphs, correlation and regression; probability: definitions and axioms, simple and compound events, Venn and tree diagrams, independent and mutually exclusive events, normal distributions; graphs and functions: graphs of simple polynomial, exponential, logarithmic and trigonometric functions and their transformations, domains and ranges, function notation; algebra and equations: substitution and transposition of formulas, expansion and factorisation, linear and quadratic equations, simultaneous linear equations in two unknowns, index laws and equations; rates of change: constant and variable rates of change, gradient as a measure of rate, definition and notation of derivatives, derivatives of simple polynomials, average and instantaneous rates of change.

**Assessment:** Assignments and projects throughout the subject (60%), a 2-hour final examination (40%).

### 208-251 Rural Community Development

**Availability:** Dookie campus

**Credit points:** 12.5

**Coordinator:** Ms Cathy Botta

**Contact:** Thirty-six hours of lectures and 36 hours of practicals/tutorials (*Semester 1*).

**Description:** This subject will cover the principles and practices of rural community education and development. The subject should help students to develop the skills and understanding for working with community groups on education and regional development projects that relate to agriculture and natural resource management. The material will include participant exercises, discussion, case studies, field trips and guest speakers.

Topics include:

- communication;
- principles of community education and development; and
- methods and techniques of engaging communities in learning projects.

**Assessment:** One 2000-word written mid-semester assignment (30% of final marks), oral presentation (20% of final marks) participation in class exercises (10% of final marks), 3-hour examination (40% of final marks).

### 208-253 Pasture Management

See full subject details on page 3.

### 208-263 Animal Science and Nutrition

See full subject details on page 3.

### 208-265 Integrated Pest and Weed Management

See full subject details on page 2.

## Second-year (Semester 2)

### 208-152 Agricultural Technology

See full subject details on page 1.

### 208-162 Agribusiness Marketing

See full subject details on page 3.

### 208-271 Animal Management

See full subject details on page 3.

### 208-252 Production Horticulture (Fruits & Vines)

**Availability:** Dookie campus

**Credit points:** 12.5

**Coordinator:** Mr John Wellman

**Contact:** Thirty-six hours of lectures and 36 hours of practicals/tutorials (*Semester 2*).

**Description:** On completion of this subject students should be able to:

- develop management strategies for selected horticultural crops that integrate environmental influences, site characteristics and maximum crop value;
- describe steps required to establish a sustainable production enterprise and justify the chosen technology, including pest control strategies;
- match crop climatic requirements with suitable production regions; and
- describe trends in crop product markets and resultant changes in production technology; including the impact of world markets and production regions on the Australian industry.

Content includes:

- production regions in Australia and overseas and the importance of international trade;
- impact of climate, soils, processing and market, on crop yield and value;
- current production options;
- crop variety characteristics and production requirements;
- site characteristics and development requirements, and matching these with crop requirements;
- crop quality assessment and harvest requirements;
- integrated pest management strategies for the control of current and potential pests;
- crop management practices through planting, pruning, trellising and training, irrigation, fertilising, pest control and harvesting;

- interactions between crop yield, climatic variables and crop harvest quality; and
- post-harvest treatments including cool storage and their impact on product quality.

**Assessment:** Two mid-semester assignments totalling 2500 words (each 25% of final marks) and one 2.5-hour end-of-semester examination (50% of final marks).

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### **208-255 Crop Management**

See full subject details on page 3.