

**Course Planning Document 2025**  
**B1391 Bachelor of Agricultural Science**  
**Major in Crop and Pasture Science - 72 credit points**  
**Academic Chairs Crop and Pasture Science:** Dr Graham O'Hara; [G.Ohara@murdoch.edu.au](mailto:G.Ohara@murdoch.edu.au)  
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Below are guidelines for the general course requirements, structure and options, followed by a checklist for Crop and Pasture Science, and a proposed course plan structure for a full-time student commencing in Semester 2, 2025.

**Course Core Units**

**Agricultural Science Course Core Units (12 credit points)**

Students must complete the following units: **ANS100, MAS183, CHE140, BIO152**

*Note: Students who achieved a final scaled score of 50 percent or more in Chemistry 3A/3B or Chemistry ATAR within the past three years should apply for exemption for CHE140 Fundamentals of Chemistry.*

**Crop and Pasture Science Major**

**Required Units (21 credit points)**

Students must complete the following units: **ANS101, ENV243, ANS207, ANS208, VET309, ANS311, ANS312**

**Specified Electives (3 credit points)**

**ANS306 or ANS307 or ANS202 or BIO246 or BIO257 or BIO282 or ENV303 or MAS223**

**Career Learning Spine (9 credit points)**

Students must complete **THREE** career learning spine units from the approved list:

- **ANS103** Animal Health and Welfare Workplace Skills
- **ANS306** Agriculture Biosecurity Case Studies
- **ANS307** Agriculture and Biosecurity Laboratory Skills and Practice
- **ANS202** Crop and Pasture Industry Career Skills
- **ANS203** Agricultural Industry Communication Skills
- **ANS301** Agricultural Study Tour Opportunities – 3 pts (Timing varies each year)
- **ANS302** Farm Placements – 3 pts (MURDOCH: Y-placement) *Note: Students should commence ANS302 in Sem 1 (Prerequisites ANS100 and ANS101)*
- **ANS303 Livestock** Industry Career readiness – 3 pts (MURDOCH: S2-internal) *Note - subject to availability and available to year 3 students only (Prerequisite ANS333)*
- **ANS305** Advanced Agricultural Career Skills – 3 pts (MURDOCH: S1-external, S2-external, SUM-external, W-external) *Note: Students may be able to do 2 x ANS305 (Prerequisite ANS101)*
- **ANS200** International Field Work in Agricultural and Environmental Sciences – Thailand (Summer unit)
- **ANS201** Livestock Production Systems Career Skills
- **MSP202** The Search for Everything: Data analytics – 3 pts (MURDOCH: S1-external, S1-internal, S2-external, S2-internal)

**Options**

You must include **ONE** of the following three options:

1. **A second (additional) major (24 credit points) or co-major (18 credit points)**
2. **A minor (12 credit points)**
3. **Specified Electives (12 credit points)**

### **1. Additional major or co-major**

#### **Recommended additional majors**

Animal Science

Animal Health

#### **Other suggested majors**

Conservation and Wildlife Biology

Applied Mathematics and Statistics

### **2. Minors**

You may complete one or two minors

#### **Agricultural Science Minors:**

Equine Science (BIO152, BMS107, ANS365, ANS366)

Applied Animal Production (BIO152, VET272, ANS363, ANS364)

Other suggested minors

Molecular Biology (BIO152, BIO282, BIO246, BIO394)

Plant Biology (BIO245 plus 1 of BIO103, BIO180; plus 2 of BIO254, BIO257, ENV334)

Applied Statistics (MAS183, MAS353; plus 2 of MAS182, MAS223, MAS224)

### **3. Specified Electives**

If you are NOT completing a second Major OR Co-Major OR Minor, then you are required to complete minimum of 12 points of Specified Electives IN ADDITION to 24 points for the Primary Major and 9 points for the career learning spine.

This means “extra” career learning spine units may be used as specified electives. i.e. units approved for the career learning spine can count towards the career spine OR specified elective, but the same unit cannot be double counted against both unless completing the unit twice for credit. Similarly, you can't double count the same unit for the major and as an elective.

Select FOUR specified elective units from this list:

- ANS363 Applied Animal Agriculture – 3 pts (S2 or year)
- ANS364 Applied Animal Breeding – 3 pts (S1 or year)
- ANS365 Equine Physiology and Behaviour - 3 pts (S1)
- ANS366 Equine Performance and Management - 3 pts (S2)
- ANS300 Applied Livestock Health Management - 3 pts (S2)
- VET380 Veterinary Nutrition & Animal Toxicology – 3pts (S1)
- ANS200 International Field Work in Agricultural and Environmental Sciences – Thailand – 3 pts. S1 but tour completed in summer break. Subject to availability.
- ANS301 International Study Tour Opportunities – 3 pts (S2 – with tour usually conducted in winter break)
- ANS302 Farm Placement – 3 pts (Year – commence in S1)
- ANS303 Livestock Industry Career Readiness – 3 pts (S2)
- ANS305 Advanced Agricultural Skills – 3 pts (MURDOCH: S1, S2, Summer, Winter) *Note: Students may be able to repeat ANS305 for credit*

#### **General Electives added to bring total credit points to 72 points**

- You can use general electives to bring total credit points to 72 points.
- The timing and type of elective units is flexible. The only restriction on general electives is that no more than 30 credit points can come from Part 1 units (i.e. you cannot count more than ten

100- level units for completion of the degree)

- Units listed above under specified electives are recommended general electives
- “Extra” career learning spine units may be used as general electives (ie can count towards the career spine OR specified/general elective, but cannot be double counted against both unless completing the unit twice for credit.

**B1391 Course Plan Checklist: Major in Crop and Pasture Science**

<b>B1391 Course Requirements</b> (Units total 72 credit points) (prerequisites in brackets)	
<b>Agricultural Science</b>	
<b>Core:</b> ANS100	
<b>Core:</b> MAS183	
<b>Core:</b> CHE140	
<b>Core:</b> BIO152	
<b>Career Spine 1:</b>	
<b>Career Spine 2:</b>	
<b>Career Spine 3:</b>	

**Major: Crop and Pasture Science MJ-CPS**

ANS101	Intro to Livestock Science & Genetics S2	
ENV243	Water and Earth Science S1	
ANS207	Crop and Pasture Science (CHE140)	
ANS208	Crop Protection and Plant Biosecurity (ANS105 or ANS100)	
ANS309	Agricultural Markets, Economics and Policy S1	
ANS311	Agricultural and Environmental Technologies S2	
ANS312	Advanced Crop and Pasture Science (ANS207 and ANS208) S2	
Spec Elect.	ANS306 or ANS307 or ANS202 or BIO246 or BIO257 or BIO282 or ENV303 or MAS223	

**Additional Major or Minor/s or Specified Electives plus General Electives (Total 9 units/ 27 credit points)**

Unit 1		
Unit 2		
Unit 3		
Unit 4		
Unit 5		
Unit 6		
Unit 7		
Unit 8		
Unit 9		

**Disclaimer:** This course plan is a recommendation only and must be read in conjunction with the full course structure, unit prerequisites and enrolment options as per the online Handbook (<https://handbook.murdoch.edu.au/>).

**Proposed Course Plan Structure – Commencing Semester 2, 2025**  
**B1391 Bachelor of Agricultural Science**  
**Crop and Pasture Science**  
**- 72 credit points**

**Academic Chair Crop and Pasture Science: Dr Graham O'Hara**  
**Email: [G.Ohara@murdoch.edu.au](mailto:G.Ohara@murdoch.edu.au)**

		Semester 1	Semester 2
2025			<a href="#">ANS100</a> Introduction to Agricultural Science 3pts <a href="#">CHE140</a> Fundamentals of Chemistry 3pts <a href="#">MAS183</a> Statistical Data Analysis 3pts <a href="#">ANS101</a> Introduction to Livestock Science & Genetics 3pts <b>12pts</b>
2026	<a href="#">BIO152</a> Cell Biology 3pts <a href="#">ENV243</a> Water and Earth Science 3pts Career Learning Spine or other major or specified elective 3pts Career Learning Spine or other major or specified elective 3pts <b>12pts</b>		<a href="#">ANS207</a> Crop and Pasture Science 3pts <a href="#">ANS208</a> Crop Protection and Plant Biosecurity 3pts <b>CPS specified elective</b> (ENV303 or BIO257 or MAS223) or another specified elective 3pts Career Learning Spine or other major or specified elective 3pts <b>12pts</b>
2027	<a href="#">ANS309</a> Agricultural Markets, Economics and Policy 3pts <b>Alternate CPS specified elective</b> (BIO246 or BIO282) or another specified elective 3pts Career Learning Spine or other major or specified elective 3pts Career Learning Spine or other major or specified elective 3pts <b>12pts</b>		<a href="#">ANS311</a> Agricultural and Environmental Technologies 3pts <a href="#">ANS312</a> Advanced Crop and Pasture Science 3pts Career Learning Spine or other major or specified elective 3pts Career Learning Spine or other major or specified elective 3pts <b>12pts</b>
2028	Career Learning Spine or other major or specified elective 3pts Career Learning Spine or other major or specified elective 3pts Career Learning Spine or other major or specified elective 3pts Career Learning Spine or other major or specified elective 3pts <b>12pts</b>		