

## Academic Chairs

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## Course Core Units

Students must complete (or be exempt from) 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.*

*Note: Students commencing pre 2024 that have completed BSC100 have exemption for ANS100.*

## Crop and Pasture Science Major

Students must complete the following units: **ANS101, ENV243, ANS207, ANS208, ANS309, ANS311, ANS312**

Plus one unit from this list: **ENV303, BIO282, BIO257, MAS223, BIO246**

*Note: Students commencing pre-2024 that have completed ANS105 have exemption for ANS101.*

## Career Learning Spine

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

Highly recommended: **ANS301, ANS302, ANS303, ANS305 (can be repeated for credit), ANS200**

Also suitable for completion of Career Learning Spine: **MSP100, MSP200, MSP201, MSP202, VLS302**

## Options

You must include ONE of the following 3 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 (18 or 24 points)

Recommended additional majors:

- Animal Science
- Animal Health

Other suggested additional majors:

- Conservation and Wildlife Biology
- Applied Mathematics and Statistics

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## 2. Minors (12 points)

You may complete one or two minors

Recommended minors

- Applied Animal Production (BIO152, VET272, ANS363, ANS364)
- Equine Science (BIO152, BMS107, ANS365, ANS366)

Other suggested minors

- Molecular Biology (BIO152, BIO282, BIO246, BIO394)
- Plant Biology (BIO245; plus 1 from this list - BIO103, BIO180; plus 2 from this list – BIO254, BIO257, ENV334)
- Applied Statistics (MAS183, MAS353; plus 2 from this list: 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.

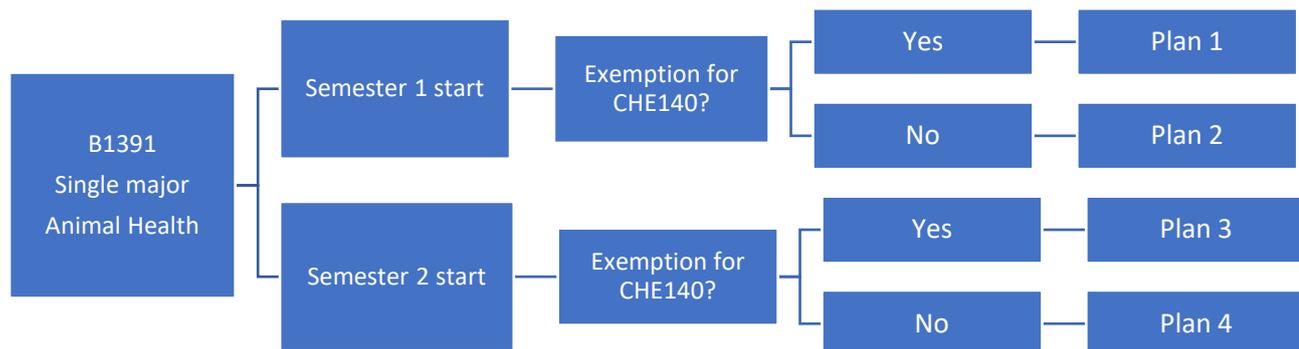
Select FOUR specified elective units from this list:

- **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)

## Choose the correct course plan template



**Please note:** These course plans are a sample only and must be read in conjunction with the full course structure, unit prerequisites and enrolment options as outlined in the [Handbook](#). Students should note that due to unit prerequisites, commencing study in Semester 2 may extend the duration of the course. This information is correct as at DD/MM/YY.

## PLAN 1: exemption for CHE140 (chemistry)

Start Date: Semester 1 2024

Year 1 – 2024	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	<b>ANS100</b> Introduction to Agricultural Science	3	<b>BIO152</b> Cell Biology	3
	<b>MAS183</b> Statistical data analysis	3	<b>ANS101</b> Introduction to Livestock Science & Genetics	3
	Career Learning Spine or elective	3	Career Learning Spine or elective	3
	Career Learning Spine or elective	3	Career Learning Spine or elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 2 - 2025	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	<b>ENV243</b> Water & Earth Science	3	<b>ANS207</b> Crop & Pasture Science	3
		3	<b>ANS208</b> Crop Protection & Plant Biosecurity	3
	Career Learning Spine or Elective	3	<b>CPS elective</b> (ENV303 or BIO257 or MAS223) or elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 3 - 2026	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	<b>ANS309</b> Agricultural Markets, Economics & Policy	3	<b>ANS311</b> Agricultural & Environmental Technologies	3
	<b>Alternate CPS elective</b> (BIO282 or BIO246) or elective	3	<b>ANS312</b> Advanced Crop & Pasture Science	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>

**TOTAL CREDIT POINTS 72**

## PLAN 2: No exemption for CHE140 (chemistry)

Start Date: Semester 1 2024

Year 1 – 2024	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	ANS100 Introduction to Agricultural Science	3	BIO152 Cell Biology	3
	MAS183 Statistical data analysis	3	ANS101 Introduction to Livestock Science & Genetics	3
	CHE140 Fundamentals of Chemistry	3	Career Learning Spine or elective	3
	Career Learning Spine or elective	3	Career Learning Spine or elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 2 - 2025	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	ENV243 Water & Earth Science	3	ANS207 Crop & Pasture Science	3
	Career Learning Spine or Elective	3	ANS208 Crop Protection & Plant Biosecurity	3
	Career Learning Spine or Elective	3	CPS elective (ENV303 or BIO257 or MAS223) or elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 3 - 2026	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	ANS309 Agricultural Markets, Economics & Policy	3	ANS311 Agricultural & Environmental Technologies	3
	Alternate CPS elective (BIO282 or BIO246) or elective	3	ANS312 Advanced Crop & Pasture Science	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>

**TOTAL CREDIT POINTS 72**

## PLAN 3: exemption for CHE140 (chemistry)

Start Date: Semester 2 2024

Year 1 – 2024			<b>Semester 2 Units</b>	<b>CP</b>
			<b>ANS100</b> Introduction to Agricultural Science	3
			<b>BIO152</b> Cell Biology	3
			<b>MAS183</b> Statistical Data Analysis	3
			<b>ANS101</b> Introduction to Livestock Science & Genetics	3
			<b>Summer Units</b>	<b>CP</b>
			<b>Total</b>	12
Year 2 – 2025	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	<b>ENV243</b> Water & Earth Science	3	<b>ANS207</b> Crop & Pasture Science	3
	Career Learning Spine or Elective	3	<b>ANS208</b> Crop Protection & Plant Biosecurity	3
	Career Learning Spine or Elective	3	<b>CPS elective</b> (ENV303 or BIO257 or MAS223) or elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	12	<b>Total</b>	12
Year 3 – 2026	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	<b>ANS309</b> Agricultural Markets, Economics & Policy	3	<b>ANS311</b> Agricultural & Environmental Technologies	3
	<b>Alternate CPS elective</b> (BIO282 or BIO246) or elective	3	<b>ANS312</b> Advanced Crop & Pasture Science	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	12	<b>Total</b>	12
Year 4 – 2027	<b>Semester 1 Units</b>	<b>CP</b>		
	Career Learning Spine or Elective	3		
	Career Learning Spine or Elective	3		
	Career Learning Spine or Elective	3		
	Career Learning Spine or Elective	3		
	<b>Winter Units</b>	<b>CP</b>		
	<b>Total</b>	12		

**TOTAL CREDIT POINTS 72**

# Bachelor of Agricultural Science (Crop & Pasture Science)

## PLAN 4: No exemption for CHE140 (chemistry)

Start Date: Semester 2 2024

Year 1 – 2024			<b>Semester 2 Units</b>	<b>CP</b>
			<b>ANS100</b> Introduction to Agricultural Science	3
			<b>CHE140</b> Fundamentals of Chemistry	3
			<b>MAS183</b> Statistical Data Analysis	3
			<b>ANS101</b> Introduction to Livestock Science & Genetics	3
			<b>Summer Units</b>	<b>CP</b>
		<b>Total</b>	<b>12</b>	
Year 2 - 2025	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	<b>BIO152</b> Cell Biology	3	<b>ANS207</b> Crop & Pasture Science	3
	<b>ENV243</b> Water & Earth Science	3	<b>ANS208</b> Crop Protection & Plant Biosecurity	3
	Career Learning Spine or Elective	3	<b>CPS elective</b> (ENV303 or BIO257 or MAS223) or elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 3 - 2026	<b>Semester 1 Units</b>	<b>CP</b>	<b>Semester 2 Units</b>	<b>CP</b>
	<b>ANS309</b> Agricultural Markets, Economics & Policy	3	<b>ANS311</b> Agricultural & Environmental Technologies	3
	<b>Alternate CPS elective</b> (BIO282 or BIO246) or elective	3	<b>ANS312</b> Advanced Crop & Pasture Science	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	Career Learning Spine or Elective	3	Career Learning Spine or Elective	3
	<b>Winter Units</b>	<b>CP</b>	<b>Summer Units</b>	<b>CP</b>
	<b>Total</b>	<b>12</b>	<b>Total</b>	<b>12</b>
Year 4 - 2027	<b>Semester 1 Units</b>	<b>CP</b>		
	Career Learning Spine or Elective	3		
	Career Learning Spine or Elective	3		
	Career Learning Spine or Elective	3		
	Career Learning Spine or Elective	3		
	<b>Winter Units</b>	<b>CP</b>		
	<b>Total</b>	<b>12</b>		

**TOTAL CREDIT POINTS 72**

# Bachelor of Agricultural Science (Crop & Pasture Science)

## Pre-requisite checklist 2024

### Core

Code	Name	Pre-req	Enrolment notes
ANS100	Introduction to Agricultural Science	None	
MAS183	Statistical Data Analysis	None	
CHE140	Fundamentals of Chemistry	None	
BIO152	Cell Biology	CHE140	Recommend completing 12 points prior to enrolment

### Crop and Pasture Science Major

Code	Name	Pre-req	Enrolment notes
ANS101	Introduction to Livestock Science & Genetics	None	
ENV243	Water & Earth Science	None	
ANS207	Crop & Pasture Science	CHE140	
ANS208	Crop Protection & Plant Biosecurity	ANS100	
ANS309	Agricultural Markets, Economics & Policy	None	
ANS311	Agricultural & Environmental Technologies	None	
ANS312	Advanced Crop & Pasture Science	ANS207 ANS208	
ENV303	GIS for Environmental Management & Planning	None	Completion of 24 points of 100 level units
BIO282	Molecular Biology	BIO152	
BIO257	Australian Biodiversity	None	
MAS223	Applied Statistics	MAS183	
BIO246	Microbiology	BIO152	

### Career learning spine

Code	Name	Pre-req	Enrolment notes
ANS305	Advanced Agricultural Career Skills	ANS100/ANS101 Or ANS101 (2020-22)	Some placements may be available for students that have not completed pre-reqs
ANS301	Agricultural Study Tour Opportunities	TBA	Students will need to submit an application for enrolment, please contact Unit Coordinator.
ANS302	Farm Placements	ANS100/ANS101 Or ANS101 (2020-22)	
ANS303	Livestock Industry Career Readiness	ANS333	
ANS200	International Field Work in Agricultural and Environmental Sciences – Thailand	None	Students must have completed 24 credit points before enrolling in this unit
MSP100	Career Learning: Managing Your Career	None	
MSP200	Building Employability Skills	None	
MSP201	Real World Learning	None	Successful completion of 24 credit points.
MSP202	The Search for Everything: Data Analytics and Storytelling in the Twenty-First Century	None	
VLS302	Professional Placement in Environmental and Life Sciences	None	Students must have completed 36 credit points towards their degree Students must have a GPA of 2.0 or higher.

## Options: Specified electives and recommended general electives

Code	Name	Pre-req	Enrolment notes
ANS102	Introduction to the Animal Body	None	
ANS221	Animal Structure & Function	BIO152 BMS107	
ANS363	Applied Animal Agriculture	None	Should have completed 24 credit points before enrolling in this unit
ANS364	Applied Animal Breeding	None	Should have completed 24 credit points before enrolling in this unit
ANS365	Equine Physiology & Behaviour	ANS102/BMS107	
ANS366	Equine Health and Performance	None	Prior completion of BMS107 (or equivalent) is recommended, but not essential.
ANS230	Animal Production Systems II	ANS101	
VET380	Veterinary Nutrition & Animal Toxicology	VET272 ANS221	Concurrent enrolment with VET272 considered only under exceptional circumstances
ANS313	Animal Pathology and Diseases	BIO152 ANS221	Recommended complete VET272 Veterinary Biochemistry as background where possible.
ANS301	Agricultural Study Tour Opportunities	TBA	Students will need to submit an application for enrolment, please contact Unit Coordinator.
ANS302	Farm Placements	ANS100/ANS101 Or ANS101 (2020-22)	
ANS303	Livestock Industry Career Readiness	ANS333	
ANS305	Advanced Agricultural Career Skills	ANS100/ANS101 Or ANS101 (2020-22)	Some placements may be available for students that have not completed pre-reqs
ANS200	International Field Work in Agricultural and Environmental Sciences – Thailand	None	Students must have completed 24 credit points before enrolling in this unit

## Options: recommended minors

	Code	Name	Pre-req	Enrolment notes
<b>Applied Animal Production</b>	BIO152	Cell Biology	CHE140	Recommend completing 12 points prior to enrolment
	VET272	Veterinary Biochemistry	BIO152	
	ANS363	Applied Animal Agriculture		Should have completed 24 credit points before enrolling in this unit
	ANS364	Applied Animal Breeding		Should have completed 24 credit points before enrolling in this unit
<b>Molecular Biology</b>	BIO152	Cell Biology	CHE140	Recommend completing 12 points prior to enrolment
	BIO282	Molecular Biology	BIO152	
	BIO246	Microbiology	BIO152	
	BIO394	Genetic Engineering	BIO282	
<b>Applied Statistics</b>	MAS183	Statistical Data Analysis	None	
	MAS182	Intro Calculus with Applications	MAS164	A final scaled score of 55% or more in ATAR Mathematics Methods (or equivalent), or MAS164. Students who have successfully completed a calculus unit of the level of MAS161 Calculus and Matrix Algebra or higher may not enrol in this unit for credit.
	MAS223	Applied Statistics	MAS183	
	MAS224	Biostatistics	MAS183	
	MAS353	Statistical Design and Data Analysis	MAS224	Cannot do MAS180 or MAS183 concurrently

**Other suitable minors**

	<b>Code</b>	<b>Name</b>	<b>Pre-req</b>	<b>Enrolment notes</b>
<b>Equine Science</b>	BIO152	Cell Biology	CHE140	
	BMS107	Foundations of Vertebrate Form and Function	None	It is recommended that students complete BMS101 or ANS102 prior to enrolment.
	ANS365	Equine Physiology & Behaviour	ANS102/BMS107	
	ANS366	Equine Health & Performance	None	Prior completion of BMS107 (or equivalent) is recommended, but not essential.
<b>Plant Biology</b>	BIO245	Plant Evolution, Radiation and Adaptation	BIO103/BIO180	
	BIO103	Environmental Biology	None	
	BIO254	Marine Botany	BIO103/BIO180	
	BIO257	Australian Biodiversity	None	
	ENV334	Environmental Restoration	ENV241	