Bachelor of Applied Science

Welcome to the Bachelor of Applied Science (2012-2014)

The Bachelor of Applied Science is a versatile degree that provides students with the optimal balance between a defined sequence of study and flexible course options. This innovative program has been designed to develop graduates with the key practical skills in a chosen discipline plus interdisciplinary knowledge required to address today's global challenges.

Dual Program with the BAppSc

The BAppSc can be taken as a dual program by combining it with the Bachelor of Agribusiness (BAgribus/BAppSc). If you are in a single BAppSc, you may apply in a later semester for entry to a dual program. Check with the Faculty of Science about the process for changing into a dual program.

Structure of the BAppSc

Part-time students can complete the BAppSc in 6 years by passing 2 courses each semester. Each UQ course has a "unit value" with most courses worth 2 units (#2). To earn a BAppSc, you must choose a major and complete a total of #48 units (approximately 24 courses, each worth #2 units) according to the BAppSc requirements. The program requirements are listed below:

Students are required to obtain #48 units from the BAppSc course list comprising -

- #20 of Part A (compulsory); and either
    - #24 for an extended major from Part B; or
    - #16 for a single major from Part B; and
- the balance from Part B or Part C or other courses approved by the Executive Dean.

Students must complete at least #12 units of level 3 courses from the BAppSc course list overall.

Students are required to complete 30 days of Industry Practice Work Experience. This must be finished and approved at least two months prior to the end of your final semester in a minimum of two different placements. For further information please refer to the Industry Practice Work Experience Booklet.

Further information about the BAppSc rules and requirements.

What is a major?

Majors are areas of specialisation within the BAppSc that help you gain in-depth knowledge by completing a particular sequence and number of courses. All students in the BAppSc must complete the requirements for a single major or extended major listed in the BAppSc list. Your major will be printed on your degree certificate.

To complete the requirements for the major, you must complete the prerequisite courses for each major plus the following units:

- **Extended major** - #24 units (being #4 units at Level 1, #10 units at Level 2 and #10 units at Level 3) in a single discipline according to the course list
- **Single major** - #16 units (being #2 units at Level 1, #6 units at Level 2 and #8 units at Level 3) in a single discipline according to the course list

Residential Schools

External study is recommended at 2 courses per semester due mainly to the residential school timetable. This timetable is devised on students following the external study planners and only studying 2 courses per semester. The reason for this is that we cannot fit more classes in during the residential school period.

The residential school timetable can be accessed on the School of Agriculture and Food Sciences website.

Study Planners

Extended majors
Crop Production
Equine Science
Production Animal Science
Urban Horticulture
Veterinary Technology
Wildlife Science

Single majors
Agronomy
Animal Production
Equine Management
Horticulture

Bachelor of Applied Science – Crop Production

Introduction to Crop Production – Extended Major (2012-2014)

Crop Production deals with the science and technologies (including food security and economic principles) involved in the cultivation of plants for sustainable agricultural systems, crop production and pastures. Students learn how to manage the farming and business of grains, fruits, vegetables, and other plants. Topics of study include agricultural biochemistry, microbiology and gene technology, agronomy, soil and plant relationships, and enterprise management. This undergraduate program provides a solid foundation for students who are entering a career in modern agriculture and crop production. It is also important to note that this degree program provides a good base for students interested in work associated with field crop, permanent tree crop production, and/or a broad array of horticultural crops that are grown throughout Australia and other regions in the world. The fundamentals derived from this type of educational program can be applied to crop production systems and land management programs locally, regionally, or globally.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
AGRC1021 Applied Plant Biology	**Compulsory for program**
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
AGRC1014 Plant Production Principles	**Required for major**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] *Please contact Faculty for further advice*	
YEAR 2 SEMESTER 2	
AGRC1022 Plant Production Technology	**Required for major**
CHEM1004 Chemistry	**Compulsory for program**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
AGRC2040 Agroecology *(replaced AGRC2020)*	**Required for major**
YEAR 4 SEMESTER 1	
HORT2007 Horticultural Science	**Required for major**
LAND2003 The Soil Environment	**Required for major**
YEAR 4 SEMESTER 2	

PLNT2002 Plant Physiology	**Required for major**
PLNT2011 Plant and Environmental Health	**Required for major**
YEAR 5 SEMESTER 1	
AGRC3036 Precision Agriculture	**Required for major**
See course list for available electives	**Elective**
YEAR 5 SEMESTER 2	
AGRC3002 Crop Production Science	**Required for major**
HORT3003 Production Horticulture	**Required for major**
YEAR 6 SEMESTER 1	
AGRC2043 Molecular and Quantitative Plant Genetics *(replaced AGRC3017 and GNET3002)*	**Compulsory for program**
LAND3005 Soil Plant Relationships	**Required for major**
YEAR 6 SEMESTER 2	
AGRC3006 Pasture Science	Required for major
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**

Students can choose electives from Part B or Part C of the BAppSc course list.

Where can I work?

Due to the continued growth of the global population-and the consequent expanding need for study of food crops and agriculture in general-the outlook for agronomy and agronomists is excellent. Past agricultural research has created higher yielding crops, crops with better resistance to pests and plant pathogens, and more effective fertilizers and pesticides. Research is still necessary, however, particularly as insects and diseases continue to adapt to pesticides and as soil fertility and water quality continue to need improvement.

Bachelor of Applied Science – Equine Science

Introduction to Equine Science – Extended Major (2012-2014)

Equine Science is a specialised area of animal science which involves the study of horses and incorporates the disciplines of welfare, behaviour, nutrition, reproduction, health and rehabilitation as well as exercise and physiology. This extended major gives you experience in scientific and practical aspects of the horse industry. The program provides an understanding of generic animal science principles and related social and community issues. You have access to the world class $1.5 million Equine Precinct, including equitation arenas, breeding and horse-handling facilities, day yards and stabling amenities. There is the option to work with your own horse, in conjunction with UQ's expert instructors and lecturers. Further hands-on training is available by including a vocational program with your studies or taking part in extended industry placements.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] Please contact Faculty for further advice	
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
AGRC1021 Applied Plant Biology	**Compulsory for program**
ANIM1014 Animal Welfare, Behaviour and Handling	**Required for major**
YEAR 2 SEMESTER 2	
ANIM1006 Equine Husbandry and Equitation I	**Required for major**
CHEM1004 Chemistry	**Compulsory for program**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
ANIM2053 Animal Nutrition	**Required for major**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
ANIM2039 Equine Breeding and Stud Management	**Required for major**
YEAR 4 SEMESTER 1	
ANIM2051 Animal Anatomy and Physiology I	**Required for major**
ANIM2024 Equine Behaviour and Handling	**Required for major**

YEAR 4 SEMESTER 2	
ANIM2030 Molecular and Quantitative Animal Genetics *(replaced ANIM3046)*	**Compulsory for program**
ANIM2052 Animal Anatomy and Physiology II	**Required for major**
YEAR 5 SEMESTER 1	
ANIM3019 Animal Reproduction	**Required for major**
See course list for available electives	**Elective**
YEAR 5 SEMESTER 2	
AGRC3006 Pasture Science	**Required for major**
ANIM3006 Animal Health and Epidemiology	**Required for major**
YEAR 6 SEMESTER 1	
ANIM3039 Equine Exercise and Rehabilitation	**Required for major**
See course list for available electives	**Elective**
YEAR 6 SEMESTER 2	
ANIM3030 Equine Nutrition and Health	**Required for major**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**

Students can choose electives from Part B or Part C of the BAppSc course list.

Where can I work?

UQ's Equine Graduates have established careers in Australia, Germany, Britain, the United States of America and New Zealand at every level of the horse industry. With experience, many progress to supervisory and management positions.

Areas of employment include:

- horse studs
- agistment
- preconditioning and training establishments
- racing and competition stables
- statutory bodies administering racing and trotting
- bloodstock agencies, agribusiness firms
- breed societies, pastoral enterprises, equestrian centres and riding schools
- sales and marketing
- animal nutrition and animal health companies
- equine journalism
- veterinary assistants
- equine industry organisations and educational institutions.

Bachelor of Applied Science – Production Animal Science

Introduction to Production Animal Science – Extended Major (2012-2014)

Production Animal Science students study the sciences (such as animal behaviour, welfare, microbiology, anatomy and physiology, biochemistry, health, genetics and reproduction) that underpin animal production. Students learn how to use the latest technologies and how to apply these in animal production systems.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] Please contact Faculty for further advice	
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**
YEAR 2 SEMESTER 1	
AGRC1021 Applied Plant Biology	**Compulsory for program**
ANIM1014 Animal Welfare, Behaviour and Handling	**Required for major**
YEAR 2 SEMESTER 2	
ANIM1018 Livestock Industries	**Required for major**
CHEM1004 Chemistry	**Compulsory for program**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
ANIM2051 Animal Anatomy and Physiology I	**Required for major**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
ANIM2052 Animal Anatomy and Physiology II	**Required for major**
YEAR 4 SEMESTER 1	
ANIM2053 Animal Nutrition	**Required for major**
See course list for available electives	**Elective**
YEAR 4 SEMESTER 2	
ANIM2030 Molecular and Quantitative Animal Genetics *(replaced ANIM3046)*	**Compulsory for program**
ANIM3006 Animal Health and Epidemiology	**Required for major**

YEAR 5 SEMESTER 1	
ANIM2044 Intensive Animal Production	**Required for major**
ANIM3019 Animal Reproduction	**Required for major**

YEAR 5 SEMESTER 2	
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
ANIM2054 Grazing Animal Production	**Required for major**

YEAR 6 SEMESTER 1	
ANIM3062 Emerging Issues in Animal Biosciences	**Required for major**
See course list for available electives	**Elective**

YEAR 6 SEMESTER 2	
AGRC3006 Pasture Science	**Required for major**
ANIM3045 Livestock Enterprise Management	**Required for major**

Students can choose electives from Part B or Part C of the BAppSc course list.

Where can I work?

This major leads to careers in the commercial animal industries in Australia and overseas, including beef, sheep, dairy, goats, pigs and poultry, as well as allied industries.

Graduates find employment as:

- managers of animal production enterprise
- extension and animal welfare officers with government departments
- research scientists with government departments, CSIRO and universities
- officers with the Australian Quarantine and Inspection Services and Customs
- biosecurity officers
- technical officers with allied industries, such as feed milling and stock equipment manufacturers and animal health companies

Bachelor of Applied Science – Urban Horticulture

Introduction to Urban Horticulture – Extended Major (2012-2014)

Crop Production deals with the science and technologies (including food security and economic principles) involved in the cultivation of plants for sustainable agricultural systems, crop production and pastures. Students learn how to manage the farming and business of grains, fruits, vegetables, and other plants. Topics of study include agricultural biochemistry, microbiology and gene technology, agronomy, soil and plant relationships, and enterprise management. This undergraduate program provides a solid foundation for students who are entering a career in modern agriculture and crop production. It is also important to note that this degree program provides a good base for students interested in work associated with field crop, permanent tree crop production, and/or a broad array of horticultural crops that are grown throughout Australia and other regions in the world. The fundamentals derived from this type of educational program can be applied to crop production systems and land management programs locally, regionally, or globally.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
AGRC1021 Applied Plant Biology	**Compulsory for program**
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
AGRC1014 Plant Production Principles	**Required for major**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] *Please contact Faculty for further advice*	
YEAR 2 SEMESTER 2	
AGRC1022 Plant Production Technology *(2012 and 2014 students)*	**Required for major**
CHEM1004 Chemistry	**Compulsory for program**
OHSS1000 Introduction to Health & Safety *(2013 students)*	
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
PLNT2014 Turf Science I	**Required for major**
YEAR 4 SEMESTER 1	

HORT2007 Horticultural Science	**Required for major**
LAND2003 The Soil Environment	**Required for major**
YEAR 4 SEMESTER 2	
PLNT2002 Plant Physiology	**Required for major**
PLNT2011 Plant and Environmental Health	**Required for major**
YEAR 5 SEMESTER 1	
LAND3005 Soil Plant Relationships	**Required for major**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**
YEAR 5 SEMESTER 2	
AGRC2043 Molecular and Quantitative Plant Genetics *(replaced AGRC3017 and GNET3002)*	**Compulsory for program**
HORT3003 Production Horticulture	**Required for major**
YEAR 6 SEMESTER 1	
AGRC3036 Precision Plant and Animal Management *(replaced HORT3010)*	**Required for major**
PLNT3016 Turf Science 2	**Required for major**
YEAR 6 SEMESTER 2	
HORT3009 Horticultural Science *2 (replaced HORT3008)*	**Required for major**
See course list for available electives	**Elective**

Students can choose electives from Part B or Part C of the BAppSc course list.

Where can I work?

Graduates find employment in the following areas:

- environmental planning and approval for new developments within City Councils
- urban tree service
- urban forestry, urban parks, grounds, and golf course maintenance
- residential and commercial landscape design and management
- installation and maintenance
- retail and wholesale nursery operations and management
- plant pest control and horticulture consulting
- landscape management and revegetation
- horticultural media
- agronomists and consultants within the turf industry

Bachelor of Applied Science – Veterinary Technology

Introduction to Veterinary Technology – Extended Major (2012-2014)

The Veterinary technologist works closely with a veterinarian in providing the care and handling of companion, research and production animals, and in routine laboratory and clinical procedures. Positions in zoos, biosecurity, animal research facilities and veterinary laboratories are also possible. Students learn the basic principles of normal and abnormal life processes and develop a broad range of skills, including the use of technology in the field. Additionally, students have the opportunity to complete the Certificate IV in Veterinary Nursing concurrently with the degree program, similar to programs in the United Kingdom and North America.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
AGRC1021 Applied Plant Biology	**Compulsory for program**
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
ANIM1014 Animal Welfare, Behaviour and Handling	**Required for major**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] Please contact Faculty for further advice	
YEAR 2 SEMESTER 2	
CHEM1004 Chemistry	**Compulsory for program**
VETS1005 Professional Studies for Veterinary Technology	**Required for major**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
ANIM2051 Animal Anatomy and Physiology I	**Required for major**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
ANIM2052 Animal Anatomy and Physiology II	**Required for major**
YEAR 4 SEMESTER 1	
ANIM2053 Animal Nutrition	**Required for major**
VETS2001 Animal Health Technology	**Required for major**

YEAR 4 SEMESTER 2	
ANIM2030 Molecular and Quantitative Animal Genetics *(replaced ANIM3046)*	**Compulsory for program**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**

YEAR 5 SEMESTER 1 (must be enrolled internally)	
VETS3009 Small Animal Health	**Required for major**
VETS3017 Animal Therapeutics	**Required for major**
VETS3018 Large Animal Health and Management	**Required for major**
VETS3043 Surgical Principles and Practices *(replaced VETS3020)*	**Required for major**
VETS3044 Preparation for Professional Practice (#4) *(replaced VETS3030)*	**Required for major**

YEAR 5 SEMESTER 2 (must be enrolled internally)	
VETS3043 Surgical Principles and Practices *(replaced VETS3020)*	**Required for major**
VETS3044 Preparation for Professional Practice (#4) *(replaced VETS3030)*	**Required for major**
VETS3023 Veterinary Laboratory Diagnostics for Veterinary Technologists	**Recommended elective**
See course list for BAppSc or BVetTech for available electives	**Elective**

Electives can be drawn from the BAppSc or BVetTech course list.

What will I study?

The veterinary technologist is an integral member of the veterinary health care team who has been educated in the care and handling of companion, laboratory, production animals and wildlife. Graduates are able to perform routine veterinary laboratory techniques and assist the veterinarian in the fields of veterinary radiography, clinical pathology, veterinary surgery, and anaesthesia, as well as perform a range of veterinary support procedures. In clinical practice, veterinary technologists work under the supervision of a veterinarian. They cannot diagnose, prescribe or perform surgery. Veterinary technologists are also utilised in government agencies where they complement the role of the veterinarian.

Veterinary Technology students will study foundation science courses such as chemistry, anatomy, physiology, microbiology and biology. Applied courses will include animal behaviour; welfare and handling; small and large animal health; clinical nutrition; veterinary pharmacology and therapeutics; veterinary pathology; diagnostic practices; veterinary nursing principles; and, veterinary practice management.

Most importantly, a veterinary technology degree equips graduates with the attributes of critical thinking, problem solving and self-directed learning, which prepare them for supervisory, and management roles in a range of fields. To develop a broader range of competencies, the veterinary technology student can also enrol in the Certificate IV in Veterinary Nursing.

Where can I work?

Graduates find employment as:

- support staff in veterinary practice (general and specialist, including animal emergency, equine and wildlife nursing)
- biosecurity inspectors and project support staff with government agencies
- animal behaviour and training instructors
- animal research technicians and supervisors
- animal management officers with municipal councils
- veterinary laboratory scientists
- veterinary pharmaceuticals representatives
- teachers/trainers in veterinary nursing vocational training and education
- regulatory affairs officers for veterinary drug and product registration
- veterinary clinical nutrition technicians
- clinical academics in higher education

Students can pursue a research career by undertaking a research honours year, which could lead to postgraduate studies and broader employment opportunities.

Bachelor of Applied Science – Wildlife Science

Introduction to Wildlife Science – Extended Major (2012-2014)

Wildlife Science focuses on the biology, management, ecology and conservation of wild animals. Wildlife Scientists study native and exotic birds, mammals, reptiles and amphibians in natural or created environments, their biodiversity and human/wildlife interactions. This extended major gives you the ability to implement and evaluate wildlife management programs for captive and free-ranging wildlife. You will develop strong scientific knowledge of wildlife anatomy and physiology, breeding, reproduction, nutrition, health, husbandry, ecology, welfare and behaviour. With excellent wildlife trapping, identification and handling skills, you can make a major contribution to the wildlife, game and vertebrate pest management industries in Australia.

As part of your program, there is an opportunity to take a three-week International Experience elective that examines wildlife and natural resources management in Australia and Southern Africa.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
AGRC1021 Applied Plant Biology	**Compulsory for program**
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
ANIM1014 Animal Welfare, Behaviour and Handling	**Required for major**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] Please contact Faculty for further advice	
YEAR 2 SEMESTER 2	
ANIM1026 Australian Terrestrial Vertebrates	**Required for major**
CHEM1004 Chemistry	**Compulsory for program**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
ANIM2051 Animal Anatomy and Physiology I	**Required for major**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**
YEAR 4 SEMESTER 1	

AGRC2019 Ecology of Natural and Agricultural Systems[2]	**Required for major**
ANIM3019 Animal Reproduction	**Required for major**

[2] Please contact Faculty for further advice

YEAR 4 SEMESTER 2	
ANIM2030 Molecular and Quantitative Animal Genetics *(replaced ANIM3046)*	**Compulsory for program**
ANIM2052 Animal Anatomy and Physiology II	**Required for major**

YEAR 5 SEMESTER 1	
ANIM2053 Animal Nutrition	**Required for major**
See course list for available electives	**Elective**

YEAR 5 SEMESTER 2	
ANIM2043 Biology of Australian Marsupials and Monotremes	**Required for major**
ANIM3016 Captive Wildlife Husbandry	**Required for major**

YEAR 6 SEMESTER 1	
See course list for available electives	**Elective**

YEAR 6 SEMESTER 2	
ANIM3006 Animal Health and Epidemiology	**Required for major**
ANIM3018 Wildlife Technologies	**Required for major**
ENVM3001 Principles of Wildlife Management	**Required for major**

Students can choose electives from Part B or Part C of the BAppSc course list.

Where can I work?

Graduates find employment in:

- wildlife sanctuaries and zoos
- vertebrate pest and game management
- government agencies
- ecotourism
- marine resource organisations
- conservation organisations

Bachelor of Applied Science – Agronomy

Introduction to Agronomy – Single Major (2012-2014)

Agronomy deals with the science and technologies involved in cultivating plants for sustainable agricultural systems, crop production and pastures.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
AGRC1021 Applied Plant Biology	**Compulsory for program**
YEAR 1 SEMESTER 2	
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
YEAR 2 SEMESTER 1	
AGRC1014 Plant Production Principles	**Required for major**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] Please contact Faculty for further advice	
YEAR 2 SEMESTER 2	
CHEM1004 Chemistry	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
AGRC2040 Agroecology *(replaced AGRC2020)*	**Required for major**
YEAR 4 SEMESTER 1	
See course list for available electives	**Elective**
See course list for available electives	**Elective**
YEAR 4 SEMESTER 2	
PLNT2002 Plant Physiology	**Required for major**
PLNT2011 Plant and Environmental Health	**Required for major**
YEAR 5 SEMESTER 1	
LAND3007 Land Use and Management	**Required for major**
STAT1201 Analysis for Scientific Data *(replaced STAT2701)*	**Compulsory for program**

YEAR 5 SEMESTER 2	
AGRC2043 Molecular and Quantitative Plant Genetics *(replaced AGRC3017 and GNET3002)*	**Compulsory for program**
AGRC3002 Crop Production Science	**Compulsory for program**

YEAR 6 SEMESTER 1	
LAND3005 Soil Plant Relationships	**Required for major**
See course list for available electives	**Elective**

YEAR 6 SEMESTER 2	
AGRC3006 Pasture Science	**Compulsory for program**
See course list for available electives	**Elective**

Students can choose electives from Part B or Part C of the BAppSc course list.

What will I study?

Agronomy is the science and technology of producing and using plants for food, fuel, feed, fibre, and reclamation. Agronomy encompasses work in the areas of plant genetics, plant physiology, meteorology, and soil science. Agronomy is the application of a combination of sciences like biology, chemistry, economics, ecology, earth science, and genetics. Agronomists today are involved with many issues including producing food, creating healthier food, managing environmental impact of agriculture, and creating energy from plants. Agronomists often specialise in areas such as crop rotation, irrigation and drainage, plant breeding, plant physiology, soil classification, soil fertility, weed control, insect and pest control.

Where can I work?

Due to the continued growth of the global population—and the consequent expanding need for study of food crops and agriculture in general—the outlook for agronomy and agronomists is excellent. Past agricultural research has created higher yielding crops, crops with better resistance to pests and plant pathogens, and more effective fertilizers and pesticides. Research is still necessary, however, particularly as insects and diseases continue to adapt to pesticides and as soil fertility and water quality continue to need improvement.

Emerging biotechnologies will play an ever larger role in agricultural research. Scientists will be needed to apply these technologies to the creation of new food products and other advances. Moreover, increasing demand is expected for biofuels and other agricultural products used in industrial processes. Agricultural scientists will be needed to find ways to increase the output of crops used in these products.

Agronomists will also be needed to balance increased agricultural output with protection and preservation of soil, water, and ecosystems. They increasingly encourage the practice of sustainable agriculture by developing and implementing plans to manage pests, crops, soil fertility and erosion, and animal waste in ways that reduce the use of harmful chemicals and do little damage to farms and the natural environment. Most agronomists are consultants, researchers, or teachers. Many work for agricultural experiment stations, federal or state government agencies, industrial firms, or universities. Agronomists also serve in such international organizations as the Agency for International Development, and the Food and Agriculture Organization of the United Nations.

Agronomy major graduates find employment in:

- Agronomy in government and industry

- Crop nutrition, physiology and modelling
- Extension specialisation and consultation
- Plant science
- Pathology
- Plant protection, extension and consultancy services
- Research and development
- Teaching (on completion of a Graduate Diploma in Education)
- Seed production.

Bachelor of Applied Science – Animal Production

Introduction to Animal Production – Single Major (2012-2014)

Animal Production covers animal behaviour, welfare, microbiology, anatomy and physiology, biochemistry, nutrition, health and genetics which underpin animal production and their application to the major livestock industries in Australia and elsewhere.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] Please contact Faculty for further advice	
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
AGRC1021 Applied Plant Biology	**Compulsory for program**
ANIM1014 Animal Welfare, Behaviour and Handling	**Required for major**
YEAR 2 SEMESTER 2	
ANIM1018 Livestock Industries	**Recommended elective**
CHEM1004 Chemistry	**Compulsory for program**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
ANIM2051 Animal Anatomy and Physiology I	**Required for major**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 4 SEMESTER 1	
ANIM2053 Animal Nutrition	**Required for major**
See course list for available electives	**Elective**
YEAR 4 SEMESTER 2	
ANIM2030 Molecular and Quantitative Animal Genetics *(replaced ANIM3046)*	**Compulsory for program**
ANIM3006 Animal Health and Epidemiology	**Compulsory for program**
YEAR 5 SEMESTER 1	
ANIM2044 Intensive Animal Production	**Required for major**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**

YEAR 5 SEMESTER 2	
AGRC3006 Pasture Science	**Compulsory for program**
ANIM2054 Grazing Animal Production	**Required for major**

YEAR 6 SEMESTER 1	
See course list for available electives	**Elective**
See course list for available electives	**Elective**

YEAR 6 SEMESTER 2	
ANIM3045 Livestock Enterprise Management	**Required for major**
See course list for available electives	**Elective**

Students can choose electives from Part B or Part C of the BAppSc course list.

Where can I work?

This major leads to careers in the livestock industries in Australia and overseas, as well as allied industries.

Graduates find employment as:

- Managers and section leaders in livestock enterprises
- Instructors at agricultural colleges
- Extension and animal welfare officers with government departments
- Officers with the Australian Quarantine and Inspection Services, and Customs
- Technical officers and managers with allied industries, such as feed milling and stock equipment manufacturers and animal health companies

Bachelor of Applied Science – Equine Management

Introduction to Equine Management – Single Major (2012-2014)

Equine Management involves the study of horse nutrition, breeding, exercise physiology, health, equitation and rehabilitation as well as welfare and behaviour.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
AGRC1021 Applied Plant Biology	**Compulsory for program**
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] Please contact Faculty for further advice	
See course list for available electives	**Elective**
YEAR 2 SEMESTER 2	
ANIM1006 Equine Husbandry and Equitation I	**Required for major**
CHEM1004 Chemistry	**Compulsory for program**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 4 SEMESTER 1	
ANIM2024 Equine Behaviour and Handling	**Required for major**
ANIM2051 Animal Anatomy and Physiology I	**Required for major**
YEAR 4 SEMESTER 2	
ANIM2030 Molecular and Quantitative Animal Genetics *(replaced ANIM3046)*	**Compulsory for program**
ANIM2039 Equine Breeding and Stud Management	**Required for major**
YEAR 5 SEMESTER 1	

ANIM3019 Animal Reproduction	**Recommended elective**
See course list for available electives	**Elective**

YEAR 5 SEMESTER 2	
AGRC3006 Pasture Science	**Required for major**
ANIM3030 Equine Nutrition and Health	**Required for major**

YEAR 6 SEMESTER 1	
ANIM3039 Equine Exercise and Rehabilitation	**Required for major**
See course list for available electives	**Elective**

YEAR 6 SEMESTER 2	
ANIM3006 Animal Health and Epidemiology	**Required for major**
See course list for available electives	**Elective**

Students can choose electives from Part B or Part C of the BAppSc course list.

What will I study?

The equine science major gives you experience in basic animal science, as well as a scientific basis and practical aspects of equine management and performance. There is ample elective space for students to pursue interests in related fields.

Where can I work?

UQ's Equine Graduates have established careers in Australia, Germany, Britain, the United States of America and New Zealand at every level of the horse industry. With experience, many progress to supervisory and management positions.

Areas of employment include:

- horse studs
- agistment
- preconditioning and training establishments
- racing and competition stables
- statutory bodies administering racing and trotting
- bloodstock agencies, agribusiness firms
- breed societies, pastoral enterprises, equestrian centres and riding schools
- sales and marketing
- animal nutrition and animal health companies
- equine journalism
- veterinary assistants
- equine industry organisations and educational institutions.

Bachelor of Applied Science – Horticulture

Introduction to Horticulture – Single Major (2012-2014)

Horticulture covers science and technologies involved in producing fruit, vegetable, nursery and floricultural crops. Horticulturists work and conduct research in the disciplines of plant propagation and cultivation, crop production, plant breeding and genetic engineering, plant biochemistry, and plant physiology. The work involves fruits, berries, nuts, vegetables, flowers, trees, shrubs, and turf. Horticulturists work to improve crop yield, quality, nutritional value, and resistance to insects, diseases, and environmental stresses. Horticultural crops are usually managed more intensively than agricultural crops.

Part-time or External Study Plan

Last updated – 6 February 2017.

YEAR 1 SEMESTER 1	
AGRC1020 Applied Animal Biology	**Compulsory for program**
AGRC1021 Applied Plant Biology	**Compulsory for program**
YEAR 1 SEMESTER 2	
AGRC1040 Food for a Healthy Planet *(replaced AGRC1010)*	**Compulsory for program**
AGRC1031 Australia's Bio-physical Environment	**Compulsory for program**
YEAR 2 SEMESTER 1	
AGRC1014 Plant Production Principles	**Required for major**
Elective in lieu of MATH1040 [1]	**Compulsory for program**
[1] *Please contact Faculty for further advice*	
YEAR 2 SEMESTER 2	
CHEM1004 Chemistry	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 3 SEMESTER 1	
AGRC2001 Agricultural Biochemistry	**Compulsory for program**
See course list for available electives	**Elective**
YEAR 3 SEMESTER 2	
AGRC2013 Agricultural Microbiology and Gene Technology	**Compulsory for program**
PLNT2011 Plant and Environmental Health	**Required for major**
YEAR 4 SEMESTER 1	
HORT2007 Horticultural Science	**Required for major**
See course list for available electives	**Elective**
YEAR 4 SEMESTER 2	
PLNT2002 Plant Physiology	**Required for major**
STAT1201 Analysis of Scientific Data *(replaced STAT2701)*	**Compulsory for program**
YEAR 5 SEMESTER 1	

LAND3005 Soil Plant Relationships	**Required for major**
See course list for available electives	**Elective**
YEAR 5 SEMESTER 2	
AGRC2043 Molecular and Quantitative Plant Genetics *(replaced AGRC3017 and GNET3002)*	**Compulsory for program**
HORT3003 Production Horticulture	**Required for major**
YEAR 6 SEMESTER 1	
AGRC3036 Precision Plant and Animal Relationship *(replaced HORT3010 and BIOL3227)*	**Required for major**
See course list for available electives	**Elective**
YEAR 6 SEMESTER 2	
HORT3009 Horticultural Science *2 (replaced HORT3008)*	**Required for major**
See course list for available electives	**Elective**

Students can choose electives from Part B or Part C of the BAppSc course list.

What will I study?

The Horticulture major focuses on enhancing food security and economic development, while conserving the natural environment. Horticulture is a technological and fast-moving career option. Due to significant skill shortages in these areas, UQ graduates are in high demand across the agricultural and horticultural industries. You will study the development of new technologies needed to manage the growing, post-harvest management and marketing of horticultural crops. Graduates have the skills and knowledge to improve environmental aspects of urban areas.

Where can I work?

Due to the continued growth of the global population—and the consequent expanding need for study of food crops and agriculture in general—the outlook for horticulturalists is excellent. Past agricultural research has created higher yielding crops, crops with better resistance to pests and plant pathogens, and more effective fertilizers and pesticides. Research is still necessary, however, particularly as insects and diseases continue to adapt to pesticides and as soil fertility and water quality continue to need improvement.

Emerging biotechnologies will play an ever larger role in agricultural research. Scientists will be needed to apply these technologies to the creation of new food products and other advances. Moreover, increasing demand is expected for biofuels and other agricultural products used in industrial processes. Agricultural scientists will be needed to find ways to increase the output of crops used in these products.