

BSc Agriculture with Industrial Training UCAS code:
For students entering Part 1 in 2006

Awarding Institution:	The University of Reading
Teaching Institution:	The University of Reading Faculty of Life Sciences
Relevant QAA Subject Benchmarking Groups:	Agriculture, Food and Forestry
Programme Length:	4 years
Date of Specification:	September 2008
Programme Director:	Dr M J Gooding
Board of Studies:	Agriculture

Summary of programme aims

The programme aims to provide students with a thorough degree-level education in agriculture with emphasis on:

- scientific and economic principles underpinning agricultural production and land use
- appropriate husbandry adopted by farmers and others to apply agricultural knowledge profitably
- modern business management techniques
- providing relevant industrial training

Students will undertake 12 months work experience with a relevant organisation. This will develop the practical skills and in-depth industrial knowledge that employers demand of graduates.

Transferable skills

The University's Strategy for Teaching and Learning has identified a number of generic transferable skills which all students are expected to have developed by the end of their degree programme. In following this programme, students will have had the opportunity to gain experience and show competence in the following transferable skills:

- Career management
- Time management
- Communication (both written and oral)
- Information handling
- Numeracy
- Problem-solving
- Team working
- Use of Information Technology (word processing, using standard and specialist software)
- Use of information sources (internet, library)
- Business awareness

Programme content

The profile that follows states which modules must be taken (the compulsory modules) together with lists of modules from which students must make a selection (the optional modules). Students must choose such optional modules as they wish, in consultation with their tutor and their programme adviser, to select 120 credits in each Part. It is possible, through option selection, to study a foreign language, throughout the whole programme. The number of credits for each module is shown after the title.

Part 1 (three terms, 120 credits) 2005/6

Compulsory Modules (70 Credits)

	Credits	Level	Term
AP1A02 Introduction to Agricultural & Food Systems	10	C	2
AP1A03 Introduction to Livestock Systems	10	C	1
AP1A08 British Agriculture in Practice	10	C	1,2&3
AP1A12 Introduction to Crop Production	10	C	2
AP1EE3 Economics 1A	10	C	1
AP1SB1 Introduction to Management	10	C	1
AP1A10 Countryside and the Environment	10	C	2

Optional Modules (guided choice of 50 Credits)

	Credits	Level	Term
AP1EF1 The UK Food Chain	10	C	1
AP1EM1 Introduction to Marketing	10	C	2
AM1C13 Digestion & Nutrition	10	C	2
AM1C14 Biochemistry and Metabolism	10	C	2
BI1C10 Cell Biology & Biochemistry	10	C	1
BI1C11 Genetics & Molecular Biology	10	C	2
BI1M10 Biodiversity	10	C	1
AP1DV2 International Development: Global & Local Issues	10	C/I	1
IWLP Language Programme	20	C/I	1&2
PS1AB2 Physical Ecology	10	C	2
SS1A2 Soil, Land and Environment	10	C	2
PS1BA1 Plant World	10	C	1
PS1BA2 Plant Development	10	C	2
PS1BC2 Introductory Botany	10	C	2
PS1HS1 Soil Use & Management	10	C	1

Part 2 (three terms, 120 credits) 2006/7

Compulsory Modules (80 Credits)

	Credits	Level	Term
AP2A20 Study Tour (including Career Management Skills)	10	I	3
AP2A27 Visits and Reports (Agriculture and ABM)	10	I	4,5&6
AP2A33 Agricultural Mechanisation	10	I	4
AP2SB1 Business Management	10	I	4
AP2SB2 Financial Management	10	I	5
AS2A1 Statistics for Life Sciences	10	I	4
AP2A42 Agronomy of Root and Tuber Crops	10	I	5*

AP2A36 Animal Production	10	I	5
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*Offered in Part 2 or Part 3 in alternate years

¹ Level:

C = Certificate, which is Part 1 level

I = Intermediate, which is Part 2 level

H = Higher, which is Part 3 level

³ Level:

Optional Modules (guided choice of 40 Credits)

	Credits	Level	Term
AP2A5 IT and e business in Agriculture	10	I	5
AP2A24 Applied Animal Nutrition	10	I	4
AP2A25 Grassland Management	10	I	4
AP2A26 Forestry and Woodland	10	I	4
AP2A31 Farm Business Administration	10	I	4
AP2A34 Animal Breeding and Reproductive Technology	10	I	5
AP2A35 Animal Health and Welfare	10	I	5
AP2A37 Practical Nature Conservation	10	I	5
AP2A38 Organic Farming	10	I	4
AP2A39 Environment and the Farm Business	10	I	5
AP2EB3 Management of the Non-Profit Organisations	10	I	5
AP2EM1 Marketing Management	10	I	5
IWLP Language Programme	20	C/I	4&5
PS2AA5 Plant Genetics	10	I	5
PS2AB4 Weed Biology and Control	10	I	4
RE2TVR Taxation & Valuation	10	I	4
SS2D5 Sustainable Land Management	10	I	5

Placement Year

Compulsory Module

AP2ST1 Industrial Training	120	I	7,8 & 9
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Part 3 (three terms, 120 credits) 2007/8

Compulsory modules (50 credits)

	Credits	Level ³	Term
AP3A81 Dissertation	40	H	10&11
AP3A47 Cereal Management and Marketing	10	H	10

Optional modules (guided choice of 70 credits)

	Credits	Level	Term
AP3A40 Geographic Information Systems and Simulation Modelling	10	H	10
AP3A44 Approaches to Sustainable Development	10	H	11
AP3A45 Agricultural Systems in the Tropics	10	H	10
AP3A48 Crop Growth & Development	10	H	10
AP3A49 Seed Science & Technology	10	H	10
AP3A79 Animal Products: Meat and Milk	10	H	11
AP3A54 Business Management (Case Studies)	10	H	10&11
AP3A82 Business Planning and Control	10	H	10&11
AP3A58 Crops and Water	10	H	11

AP3A80 Animal Growth and Lactation	10	H	10
AP3A64 Human Resource Management	10	H	11
AP3A67 Animal Welfare	10	H	10
AP3A66 Horses, Dogs and Cats	10	H	10
AP3A68 Wildlife in the Farming Environment	10	H	11
AP3A74 Business Entrepreneurship	10	H	11
AP3A75 Equine Management	10	H	6
AP3A76 Principles & Practice in Biological Control	10	H	11
AP3EB1 Business Strategy	10	H	11
AP3EM1 Marketing Strategy	10	H	10
AP3EP3 Rural Policy and Countryside Planning	10	H	10
IWLP Institution Wide Language Programme	20	C/I/H	10&11
SS3A8 Management of Soil Fertility	10	H	11
AP3A77 Agronomy of Combinable Crops	10	H	11*

Other modules may be available in Part 3 across the University subject to timetable constraints.

Industrial Training

Students are expected to undertake a period of industrial training between Parts 2 and 3. The placement should be no shorter than 42 weeks and students will be assessed.

Part 1 Examination and Progression from Part 1 to Part 2

To gain a threshold performance at Part 1 a student shall normally be required to achieve an overall average of 40% over 120 credits taken in Part 1 and a mark of at least 30% in individual modules amounting to not less than 100 credits. In order to progress from Part 1 to Part 2 of this programme a student shall normally be required to achieve a threshold performance at Part 1, and achieve an average mark for Part 1 compulsory modules of not less than 40%.

If you gain a threshold performance at Part 1 and do not proceed to achieve a higher award, you are eligible to receive the award of Certificate of Higher Education. The Part 1 Examination does not contribute to the classification of your degree.

Part 2 Examination and Progression from Part 2 to Part 3

The Part 2 Examination is used to assess a student's suitability to proceed to Part 3 of their programme. It also determines eligibility for the Diploma of Higher Education. In addition, the marks achieved in the Part 2 Examination contribute to the classification of your degree.

To gain a threshold performance at Part 2 a student shall normally be required to achieve: an overall average of 40% over 120 credits taken in Part 2 (of which not less than 100 credits should normally be at Intermediate level or above), and a mark of at least 30% in individual modules amounting to not less than 100 credits. Additionally, students must Pass their industrial training module by completing the placement, submitting a 5000 word report and receiving 40% in

their placement supervisor's report. Students who Fail the industrial placement must transfer to the 3 year course.

In order to progress from Part 2 to Part 3, a student shall normally be required to achieve a threshold performance at Part 2, and achieve an average mark for Part 2 compulsory modules of not less than 40%.

If you gain a threshold performance at Part 2 and do not proceed to achieve a higher award, you are eligible to receive the award of Diploma of Higher Education.

Progression from Part 2 to the placement year is dependent on successfully completing the application process set by the placement providers. You are ultimately responsible for finding a suitable placement, although the School will help to identify potential employers. The placement year module is assessed by coursework: including a presentation, reflective report and employer report; and does not contribute to your final degree mark, although recognition of the completion of an industrial placement will appear on your degree transcript. If you are unable to find a suitable placement, or if you progress from Part 2 to the placement year but fail to successfully complete the placement year module, you will be permitted to transfer to Part 3 of the BSc Agriculture.

Part 3 Examination

The classification of the degree will normally be based on the marks for Part 2 and Part 3 modules, weighted in a ratio of 1:2. Full details of classification conventions (that is, the rules for determining your final degree award) can be found in your Programme Handbook.

Summary of teaching and assessment

Teaching is organised in modules that typically involve both lectures and practical classes. Modules are assessed by a mixture of coursework (which may include tests) and formal examination. The Part 3 Dissertation is assessed only as coursework. The Placement year assessment is designed to encourage critical reflection of the experience.

Admission requirements

Entrants to this programme are normally required to have obtained:

- UCAS Tariff: Minimum 240 points including at least 2 full A Levels.
- Ideally Chemistry and Biology at full A Level but a mixture of arts and one of these particular sciences is acceptable.
- Irish Highers: BBCCC
- International Baccalaureate: 29 points
- HND Candidates who achieve good results in HND Agriculture can be exempted from the first year of the degree course allowing them to obtain an honours degree in two years.
- A special arrangement with Sparsholt College allows selected students to complete an honours degree in 3 terms after studying at Sparsholt.

- OND Applications with good results in appropriate OND science courses and in OND Agriculture will be considered as will mature applicants with unconventional qualifications.

Admissions Tutor: Dr M J Gooding

Support for students and their learning

University support for students and their learning falls into two categories. Learning support includes IT services, which has several hundred computers, and the University Library, which across its three sites holds over a million volumes, subscribes to around 4,000 current periodicals, has a range of electronic sources of information and houses the Student Access to Independent Learning (S@IL) computer-based teaching and learning facilities.

There are language laboratory resources both for those students studying on a language degree and for those taking modules on the Institution Wide Language Programme.

Student guidance and welfare support is provided by Personal Tutors, the Careers Advisory Service, the University's Special Needs Advisor, Hall Wardens and the Students' Union. Within the Department of Agriculture additional support is given through practical classes in IT.

There is a Programme Director to offer advice on choice of modules within the programme.

Practical experience

Due to the nature of the programme it is expected that students will have gained some practical experience of agriculture prior to commencement of the course. Further advice and information can be sought from the Programme Director. It is recommended that students get appropriate experience in each of the long vacations.

Career Prospects

The programme provides a sound base for graduates to pursue careers both in agriculture as well as in fields of expertise not directly related to agriculture. Graduates have followed careers in farming, technical, advisory and consultancy work in both the UK and abroad, accountancy, land agency, teaching or research. They have also done completely different things too. The placement year enables students to experience an aspect of a potential career. Many placement students are offered a position on the host company's Graduate Recruitment Scheme.

Opportunities to Study Abroad

The Department of Agriculture encourages students, provided they have passed Part 2, to consider the possibility of studying abroad for a term or a year.

Educational Aims of the Programmes

The programme aims to provide a thorough degree-level education in Agriculture, with emphasis on the scientific and business aspects, along with courses in Information Technology. It aims to produce agriculturalists with the scope to tackle problems along the length of the food chain, dealing with difficult environmental, animal welfare, political, social and economic issues.

Programme Outcomes

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, skills, qualities and other attributes in the following areas:

Knowledge and Understanding

A. Knowledge and understanding of:

1. Fundamental concepts and techniques of maintaining and enhancing soil fertility
2. the characteristics of farming systems and their interaction with the countryside and the environment
3. the basis of crop and animal science. The importance of animal welfare
4. biodiversity and the sustainability of agriculture worldwide
5. the fundamentals of economics and business management, including human resource management
6. the difficulties of managing profitable agricultural systems that appear to be at conflict with alternative views
7. the place of numeracy and statistics in agricultural science.
8. a selection of more specialised optional topics
9. A language
10. Specific industrial careers via the placement scheme.

Skills and other attributes

B. Intellectual skills – able to:

1. think logically
2. analyse and solve problems
3. organize tasks into a structured form
4. understand the evolving state of knowledge in a rapidly changing area
5. transfer appropriate knowledge and topics from one topic within the subject another.
6. plan, conduct and write reports on level independent projects

Teaching/learning methods and strategies

The knowledge required for the basic topics is delineated in formal lectures, supported by practicals and projects, some carried out in groups, others by the students on their own. In all parts these are supported by tutorials and practical classes through which students can obtain feedback on assessed and non- assessed work. In later parts of the programme students are expected to work at additional problems on their own and in groups, seeking help when required, using the office hours of staff. Model solutions are provided of mathematical and other problems.

Assessment

Most knowledge is tested through a combination of coursework and unseen formal examinations. Dissertations and oral presentations also contribute.

Teaching/learning methods and strategies

As science is the fundamental basis of agriculture, logic is a fundamental part of its processes. Agricultural problems need solutions. The quality of a solution is substantially determined by the structure of that response: analysis, synthesis, problem solving to and knowledge transfer from one topic to another. These attributes are intrinsic to high performance in the programme.

Assessment

1 to 3 are assessed indirectly in most parts of the programme, while 5 contributes to the more successful work.

6 is assessed in the dissertation.

4 contributes to many modules.

C. Practical skills – able to:

1. understand and construct reports using word-processing, databases, spreadsheets, and presentation software
2. understand and construct farm and business accounts
3. analyse business accounts
4. formulate animal rations, cropping plans & rotations
5. choose appropriate seeds, treatments and fertilizer for a cereal crop
6. assess environmental, social and economic impacts of agriculture
7. understand the economic implications of agricultural policy
8. Perform in an industrial setting

Teaching/learning methods and strategies

Farming business and accounting is taught in Part 1 & 2 and reinforced in Practicals in Part 3.

Introduction to Livestock Production and other livestock modules are taught in lectures in Part 1 and 2.

Biology and Production of Crop Plants is taught in Part 1.

Students are taught about environmental, social and economic impacts of agriculture in various modules.

Economics is taught in Part 1.

The placement year will develop practical skills specific to the host organisation/industry.

Assessment

All 7 are tested either formatively in coursework or summatively in examinations

C. Transferable skills – able to:

1. use IT (word-processing, using standard and statistical software)
2. communicate scientific ideas
3. give oral presentations
4. work as part of a team
5. use library and other information resources
6. manage time
7. plan their career

Teaching/learning methods and strategies

The use of IT is embedded in many modules, as well as specialised modules offered in the programme.

Effective communication of scientific ideas, oral presentations and team work are embedded in modules from Part 1 onwards (e.g., British Agriculture in Practice)

Time management is essential for timely and effective submission of work and completion of the course.

Career management is part of a Part 2 Module and tutorial support is also available.

Library resources are required for many modules, especially the completion of the dissertation, and contribute to the best performances throughout.

Assessment

1-4 are assessed through coursework. 5-7 are

not directly assessed but their effective use enhances performance in modules.

Please note: This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each module can be found in the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance processes or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.