

BSc Agriculture

For students entering Part 1 in 2003

UCAS code: D400

Awarding Institution:	The University of Reading
Teaching Institution:	The University of Reading
Relevant QAA Subject Benchmarking Groups:	Agriculture, Food and Forestry Faculty of Life Sciences
Programme Length:	3 years
Date of Specification:	March 2005
Programme Director:	Dr M J Bryant
Board of Studies:	Agriculture

Summary of programme aims

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

(For a full statement of the programme aims and learning outcomes see below)

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) 2003/4

Compulsory Modules (60 Credits)		Credits	Level¹	Term
AP1A11	<i>Biology and Production of Crop Plants</i>	10	C	2
AG1A08	<i>British Agriculture in Practice</i>	10	C	1,2&3
AP1EE3	<i>Economics 1A</i>	10	C	1
AP1A02	<i>Introduction to Agricultural & Food Systems</i>	10	C	1
AP1A03	<i>Introduction to Livestock Systems</i>	10	C	1
AP1SB1	<i>Introduction to Management</i>	10	C	1

Optional Modules (guided choice of 60 Credits)

		Credits	Level	Term
AP1EE2	<i>Applied Economics and Business Workshops</i>	10	C	2
PS1HQ2	<i>Applied Plant Physiology</i>	10	C	2
AM1C14	<i>Biochemistry and Metabolism</i>	10	C	2
B11M10	<i>Biodiversity</i>	10	C	1
BI1C10	<i>Cell Biology & Biochemistry</i>	10	C	1
AM1C13	<i>Digestion & Nutrition</i>	10	C	2
BI1C11	<i>Genetics & Molecular Biology</i>	10	C	2
AM1S10	<i>Introduction to Biology</i>	10	C	1
AP1EM1	<i>Introduction to Marketing</i>	10	C	2
FB1EM1	<i>Maths and Computing for Life Sciences</i>	20	C	1&2
PS1AB2	<i>Physical Ecology</i>	10	C	2
SS1A2	<i>Soil, Land and Environment</i>	10	C	2
SS1C1	<i>Soil Use & Management</i>	10	C	1
AP1A10	<i>The Countryside and the Environment</i>	10	C	2
ID1DEV	<i>International Development: Global & Local Issues</i>	10	C/I	2
AP1EF1	<i>The UK Food Chain</i>	10	C	1
IWLP	<i>Language Programme</i>	20	C/I	1&2

Other modules may be available in Part 1 across the University subject to timetable constraints.

Part 2 (three terms, 120 credits) 2004/5

Compulsory Modules (80 Credits)		Credits	Level	Term
AP2A20	<i>Study Tour</i> (Including Career Management Skills)	10	I	3
AP2A27	<i>Visits and Reports (Agriculture and ABM)</i>	10	I	4,5&6
AP2A32	<i>Arable Crop Protection</i>	10	I	5
AP2A33	<i>Agricultural Machinery & Buildings</i>	10	I	4
AP2A36	<i>Animal Production</i>	10	I	5
AP2SB1	<i>Business Management</i>	10	I	4

¹ Level:

- C = Certificate, which is Part 1 level
- I = Intermediate, which is Part 2 level
- H = Higher, which is Part 3 level

AP2SB2	<i>Financial Management</i>	10	I	5
AS2A1	<i>Statistics for Life Sciences</i>	10	I	4
Optional Modules (guided choice of 40 Credits)		Credits	Level	Term
AP2A5	<i>IT and e business in Agriculture</i>	10	I	5
AP2A24	<i>Applied Animal Nutrition</i>	10	I	4
AP2A25	<i>Grassland Management</i>	10	I	4
AP2A26	<i>Forestry and Woodland</i>	10	I	4
AP2A31	<i>Farm Business Administration</i>	10	I	4
AP2A34	<i>Animal Breeding and Reproductive Technology</i>	10	I	5
AP2A35	<i>Animal Health and Welfare</i>	10	I	5
AP2A37	<i>Countryside Management</i>	10	I	5
AP2A38	<i>Organic Farming</i>	10	I	4
AP2A39	<i>Environmental Regulations and the Farm Business</i>	10	I	5
AP2EB3	<i>Management of Non-Profit Organisations</i>	10	I	5
AP2EM1	<i>Marketing Management</i>	10	I	5
AP2EP2	<i>Agricultural and Rural Policy</i>	10	I	5
IWLP	<i>Language Programme</i>	20	C/I	1&2
PS2AA4	<i>Crop Physiology & Breeding</i>	10	I	4
PS2AA5	<i>Plant Genetics</i>	10	I	5
PS2AB4	<i>Weed Biology and Control</i>	10	I	4
RE2TVR	<i>Taxation & Valuation</i>	10	I	4 or 5
SS2D5	<i>Sustainable Land Management</i>	10	I	5

Other modules may be available in Part 2 across the University subject to timetable constraints.

Part 3 (three terms, 120 credits) 2005/6

Compulsory modules (50 credits)

		Credits	Level ²	Term
AP3A81	<i>Dissertation</i>	40	H	6,7&8
AP3A47	<i>Cereal Management and Marketing</i>	10	H	7

Optional modules (guided choice of 70 credits)

		Credits	Level	Term
AP3A40	<i>Geographic Information Systems and Simulation Modelling</i>	10	H	7
AP3A44	<i>Approaches to Sustainable Development</i>	10	H	8
AP3A45	<i>Agricultural Systems in the Tropics</i>	10	H	7
AP3A48	<i>Crop Growth & Development</i>	10	H	7
AP3A49	<i>Seed Science & Technology</i>	10	H	7

² Level:

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AP3A79	<i>Animal Products: Meat and Milk</i>	10	H	8
AP3A54	<i>Business Management (Case Studies)</i>	10	H	7&8
AP3A55	<i>Business Management (Principles of Managerial Economics)</i>	10	H	7
AP3A56	<i>Business Management (Planning Methods)</i>	10	H	7
AP3A58	<i>Crops and Water</i>	10	H	8
AP3A80	<i>Animal Growth and Lactation</i>	10	H	7
AP3A64	<i>Human Resource Management</i>	10	H	8
AP3A67	<i>Animal Welfare</i>	10	H	7
AP3A66	<i>Horses, Dogs and Cats</i>	10	H	7
AP3A68	<i>Wildlife in the Farming Environment</i>	10	H	8
AP3A74	<i>Business Entrepreneurship</i>	10	H	8
AP3A75	<i>Equine Management</i>	10	H	6
AP3A76	<i>Principles & Practice in Biological Control</i>	10	H	7
AP3EB1	<i>Business Strategy</i>	10	H	8
AP3EM1	<i>Marketing Strategy</i>	10	H	7
AP3EP3	<i>Rural Policy and Countryside Planning</i>	10	H	7
IWLP	<i>Institution Wide Language Programme</i>	20	C/I/H	7&8
SS3A8	<i>Management of Soil Fertility</i>	10	H	8
AP3A77	<i>Agronomy of Combinable Crops</i>	10	H	8*
AP3A78	<i>Agronomy of Root and Tuber Crops</i>	10	H	8*

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

*Offered in Part 2 or Part 3 in alternate years

Progression requirements

The function and requirements of the examinations for the three Parts of the degree programme are outlined below.

Part 1

In order to progress from Part 1 to Part 2 of the programme, you are required to:

- (a) achieve an overall average of 40% in 120 credits taken in Part 1; and
- (b) achieve not less than 30% in every module taken in Part 1, except that marks of less than 30% in a total of 20 credits may be condoned provided that the candidate has pursued the course for the module with reasonable diligence and has not been absent from the examination without reasonable cause; and
- (c) achieve an average of 40% in the core modules in Part 1.

The Part 1 Examination does not contribute to the classification of your degree.

If you fulfil the requirements for (a) and (b) and do not proceed to achieve a higher award, you are eligible to receive the award of Certificate of Higher Education.

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. 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.

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.

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 Bryant

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.

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

<p>A. Knowledge and understanding of:</p> <ol style="list-style-type: none">1. the fundamental concepts and techniques of maintaining and enhancing soil fertility2. the characteristics of farming systems and their interaction with the countryside and the environment3. the basis of crop and animal science. The importance of animal welfare4. biodiversity and the sustainability of agriculture worldwide5. the fundamentals of economics and business management, including human resource management6. the difficulties of managing profitable agricultural systems that appear to be at conflict with alternative views7. the place of numeracy and statistics in agricultural science.8. a selection of more specialised optional topics9. a language (optional)	<p>Teaching/learning methods and strategies</p> <p>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.</p> <p>In all parts these are supported by tutorials and practical classes through which students can obtain feedback on assessed and non-assessed work.</p> <p>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.</p> <p>Assessment</p> <p>Most knowledge is tested through a combination of coursework and unseen formal examinations. Dissertations and oral presentations also contribute.</p>
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Skills and other attributes

<p>B. Intellectual skills – able to:</p> <ol style="list-style-type: none">1. think logically2. analyse and solve problems3. organize tasks into a structured form4. understand the evolving state of knowledge in a rapidly changing area5. transfer appropriate knowledge and topics from one topic within the subject to another.6. plan, conduct and write reports on independent projects.	<p>Teaching/learning methods and strategies</p> <p>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 and knowledge transfer from one topic to another. These attributes are intrinsic to high-level performance in the programme.</p> <p>Assessment</p> <p>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.</p>
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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

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.

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 expect 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 module and programme handbooks.