

## BSc Agriculture

**UCAS Code D400**

**Awarding Institution**  
**Teaching Institution**  
**Relevant QAA Subject Benchmarking Groups**

The University of Reading  
The University of Reading  
Agriculture, Food and Forestry  
Faculty of Life Sciences  
For students entering Part 1 in 2002  
3 years  
April 2004  
Dr M J Bryant  
Agriculture

**Relevance and applicability:**  
**Programme Length:**  
**Date of Specification:**  
**Programme Director:**  
**Board of Studies:**

### Summary of programme aims and learning outcomes

Aims to equip students with a 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, including information technology & communication skills

The testable learning outcomes will be the ability, either in continuous assessment or in examination, to:

- Use modern business management techniques, including use of IT and communication skills
- Explain the main political, social and environmental issues affecting agriculture
- Demonstrate transferable life skills
- Describe and evaluate the main scientific and biological principles underlying agriculture

### Note

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 selected modules). Students must choose such additional 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, if desired, throughout the whole programme. The number of credits for each module is shown in brackets after the title.

### Transferable Key Skills

The degree course aims to allow the student to enhance a number of transferable skills. The skills will be delivered both within the modules listed as well as via other methods:

1. Communicate effectively, using a variety of means, with a wide range of individuals.
2. Use problem-solving skills in a range of professional and practical situations.
3. Manage change effectively responding to changing demands
4. Take charge of Personal Development and Career Planning
5. Manage time, prioritise workloads, recognise and manage personal emotions and stress
6. IT skills, including the use of the Internet resource.

### Programme Content

#### Part 1 (three terms 120 credits) 2002/3

<i>Compulsory Module (60 Credits)</i>	<i>Credits</i>	<i>Level</i>	<i>Term</i>
AP1A02 <i>Introduction to Agricultural &amp; Food Systems</i>	10	C	1

AP1A11	<i>Biology and Production of Crop Plants</i>	10	C	2
AP1A03	<i>Introduction to Livestock Production Systems</i>	10	C	1
AG1A08	<i>British Agriculture in Practice (A)</i>	10	C	1
AP1EE1	<i>Economics I</i>	20	C	1&2

**Optional Modules (guided choice of 60 Credits)**

AP1EF1	<i>The UK Food Chain</i>	10	C	1
PS1AB2	<i>Physical Ecology</i>	10	C	2
BI1C10	<i>Cell Biology &amp; Biochemistry</i>	10	C	1
SS1C1	<i>Soil Use &amp; Management</i>	10	C	1
AP1A10	<i>The Countryside and the Environment</i>	10	C	2
BI1C11	<i>Genetics &amp; Molecular Biology</i>	10	C	2
AM1S10	<i>Introduction to Biology</i>	10	C	1
AM1C13	<i>Digestion &amp; Nutrition</i>	10	C	2
AP1EB1	<i>Business Management and Marketing</i>	20	C	1&2
BI1M10	<i>Biodiversity</i>	10	C	1
FB1EM1	<i>Maths and Computing for Life Sciences</i>	20	C	1&2
SS1 A2	<i>Soil, Land and Environment</i>	10	C	2
AP1EE2	<i>Applied Economics and Business Workshops</i>	10	C	2
AM1C14	<i>Biochemistry and Metabolism</i>	10	C	2
PS1HQ2	<i>Applied Plant Physiology</i>	10	C	2
	<i>Institution Wide Language Programme</i>	20	C/I/H	

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

**Part 2 (three terms 120 credits) 2003/4**

**Compulsory Modules (80 Credits)**

		Credits	Level	Term
AP2A20	<i>Agriculture Field Course</i>	10	I	3 Wk10
AP2SB1	<i>Business Management</i>	10	I	4
AP2SB2	<i>Financial Management</i>	10	I	5
AS2A1	<i>Statistics for Life Sciences</i>	10	I	4
AP2A36	<i>Animal Production</i>	10	I	5
AP2A33	<i>Agricultural Machinery &amp; Buildings</i>	10	I	4
AP2A27	<i>Visits and Reports (Agriculture and ABM)</i>	10	I	4&5
AP2A32	<i>Arable Crop Protection</i>	10	I	5

**Optional Modules (guided choice of 40 Credits)**

		Credits	Level	Term
AP2A25	<i>Grassland Management</i>	10	I	4
AP2A35	<i>Animal Health and Welfare</i>	10	I	5
AP2A24	<i>Applied Animal Nutrition</i>	10	I	4
AP2A34	<i>Animal Breeding and Reproductive Technology</i>	10	I	5
AP2EP2	<i>Agricultural and Rural Policy</i>	10	I	5
AP2EB1	<i>Business Management &amp; Marketing II</i>	20	I	4&5
AP2EE3	<i>Environmental Economics in the Agri-Food Sector I</i>	10	I	4
LM215	<i>Taxation &amp; Valuation</i>	10	I	

PS2AA2	<i>Crop Physiology &amp; Breeding</i>	10	I	4
AS2F1	<i>Statistics &amp; Experimental Design</i>	10	I	5
AP2A38	<i>Organic Farming</i>	10	I	4
LA1PF2	<i>Institution Wide Language Programme</i>	20	C/I/H	
AP2A5	<i>IT and e-business in Agriculture</i>	10	I	4
SS2A5	<i>Soil Conditions and Plant Growth</i>	10	I	5
PS2AB4	<i>Weed Biology and Control</i>	10	I	4
AP2A26	<i>Forestry and Woodland</i>	10	I	4
AP2A37	<i>Countryside Management</i>	10	I	5
AP2ER1	<i>Rural Sociology</i>	10	I	4
PS2AA5	<i>Plant Genetics</i>	10	I	5
SS2D5	<i>Sustainable Land Management</i>	10	I	5
AP2A31	<i>Farm Business Administration</i>	20	I	4&5
AP2EB3	<i>Public Sector Management</i>	10		5

### Part 3 (three terms, 120 credits) 2004/5

#### Compulsory modules (50 credits)

		Credits	Level <sup>1</sup>	Term
AP3A42	<i>AG and ABM 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>Rural Systems Modelling</i>	10	H	7
AP3A44	<i>Rural Environment &amp; Sustainability</i>	10	H	8
AP3A45	<i>Agricultural Systems in the Tropics</i>	10	H	7
AP3A48	<i>Crop Growth &amp; Development</i>	10	H	7
AP3A49	<i>Seed Science &amp; Technology</i>	10	H	7
AP3A50	<i>Crop Experimentation</i>	10	H	8
AP3A53	<i>Animal Growth and Meat Production</i>	10	H	7
AP3A54	<i>Business Management (Case Studies)</i>	10	H	7&8
AP3A55	<i>Business Management (Managerial Economic Principles)</i>	10	H	7
AP3A56	<i>Business Management (Planning Methods)</i>	10	H	7
AP3A58	<i>Crops and Water</i>	10	H	8
AP3A60	<i>Lactation and Milk Production</i>	10	H	8
AP3A63	<i>Break Crop Agronomy</i>	10	H	8
AP3A64	<i>Human Resource Management</i>	10	H	8
AP3A65	<i>Farm 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

<sup>1</sup> Level:

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

AP3A76	<i>Principles &amp; 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

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

## **Examinations and Progression Rules**

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

### **Part 1 Examination**

The Part 1 Examination is used to assess a student's suitability to proceed to Part 2 of the programme. It also determines eligibility for the Certificate of Higher Education. The Part 1 Examination does not contribute to the classification of your degree.

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.

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**

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.

In order to progress from Part 2 to Part 3 of the programme, you are required to:

- (a) achieve an overall average of 40% in 120 credits taken in Part 2 (of which not less than 100 credits should normally be at Intermediate level or above);
- (b) achieve not less than 30% in every module taken in Part 2, 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 2.

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 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 practicals. Modules are assessed by a mixture of coursework (which may include tests) and formal examination. The Part 3 Dissertation is assessed only as coursework.

### **Transferable Key Skills**

The degree course aims to supply the student with a number of transferable skills:

The skills will be delivered within the modules listed.

Communicate effectively, using a variety of means, with a wide range of individuals.

Use problem-solving skills in a range of professional and practical situations.

Manage change effectively, responding to changing demands

Take charge of Personal Development Planning

Manage time, prioritise workloads, recognise and manage personal emotions and stress

IT skills, including the use of the Internet resource.

### **Admission Requirements**

Normally A2 & AS levels 240 points (equivalent to CCC at present A level) with a minimum of 2 at A2 level science (eg chemistry, biology, maths, geography, environmental science).

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.

GCSE/O Mathematics, Biology or Chemistry (or combined dual certificate) required if not taken at A2 or AS level.

Admissions Tutor: Dr M J Bryant

### **Support for students & 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 three sites, holds over a million volumes, subscribes to around 4000 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 Learning Programme. Student guidance and welfare support is provided by Personal Tutors, the Careers Advisory Service, the University Special Needs Adviser, Hall Wardens and the Students Union. Within the Department of Agriculture additional support is given through practical classes in IT. There is a Course Adviser to offer advice on choice of modules within the programme.

### **Practical Experience**

Due to the nature of the course 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 Course Director/Admissions Tutor. It is recommended that students' get appropriate experience for at least 8 weeks in each of the long vacations.

### **Career Prospects**

The BSc Agriculture degree course emphasises the integration of science and technology with economics and management and therefore provides a sound base for graduates to pursue careers both in agriculture as well as in fields of expertise not directly related to agriculture.

Whilst some graduates may return to family farms at least on a part-time basis, many graduates are drawn to areas of technical, advisory and consultancy work in both the UK and abroad. Some take postgraduate training before entering professions such as accountancy, land agency, teaching or research. Many of these graduates combine the high salary earning capacity gained this way with starting or continuing family farming. There is also increasing scope for careers in the related sectors such as retail management and information technology.

### **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, alongside courses in IT. It will produce worldwise agriculturalists with the scope to tackle problems along the length of the food chain, dealing with difficult environmental, welfare, political 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.

#### **A. Knowledge and Understanding of :**

1. The fundamental concepts and techniques of maintaining and enhancing soil fertility, the characteristics of farming systems and their interaction with the countryside and the environment. The basis of crop and animal science. The importance of animal welfare, biodiversity and the sustainability of agriculture worldwide. The fundamentals of economics and business management, including human resource management. The difficulties of managing profitable agricultural systems that appear to be at conflict with alternative views. The place of numeracy and statistics in agricultural science.
2. A selection of more specialised optional topics
3. A language (optional)

#### **Knowledge & Understanding: 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.

### **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 to another.
6. plan, conduct and write reports on independent projects.

#### **Intellectual Skills: 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 response needs a structure: analysis, synthesis, problem solving and knowledge transfer from one topic to another. These attributes are intrinsic to high-level performance in the programme.

1 to 3 are assessed indirectly in most work handed in, 5 contributes to the more successful work. 6 is assessed in the dissertation. 4 contributes to many modules

#### **C. Practical Skills**

Understand and construct reports using word-processing, databases, spreadsheets, and presentation software.

Understand and construct farm and business accounts

Analyse business accounts.

Formulate animal rations, cropping plans & rotations.

Choose appropriate seeds, treatments and fertilizer for a cereal crop

Assess environmental impacts of agriculture.

Understand the economic implications of agricultural policy

#### **Practical Skills: Teaching/Learning Methods and Strategies**

Animal nutrition (optional) is taught in lectures in Part 1 and 2 and reinforced in practicals in Part 2.

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

Economics is taught in Part 1 & 2, with (optionally) reinforcing and testing seminars and practicals.

#### **D. Transferable Skills**

Able to

Use IT (word-processing, using standard and statistical software)

Communicate scientific ideas

Give oral presentations

Work as part of a team

Use library and other information resources

Manage time

Plan their career

**D: Transferable Skills: Teaching/Learning Methods and Strategies**

The use of IT is embedded in many modules, but there are specialised modules offered as well in the course. In addition, there are a wide range of extra short courses available on campus. Microsoft Office software is currently available on the several hundred computers on the campus, available 24 hours a day, seven days a week. Where appropriate computers are used to teach a various topics, including, for example, farm planning, animal nutrition, demography, plant growth and statistics. Career management is part of a Part 2 Module and tutorial support is also available. Time management is essential for timely and effective submission of work and completion of the course. There is a balance of group and individual project work. Library resources are required for many modules, especially the completion of the dissertation, and contribute to the best performances throughout.

**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.