

**PROGRAMME SPECIFICATION**

<b>1</b>	<b>Awarding Institution</b>	Newcastle University
<b>2</b>	<b>Teaching Institution</b>	Newcastle University
<b>3</b>	<b>Final Award</b>	BSc Honours
<b>4</b>	<b>Programme Title</b>	Agriculture with Honours in Agronomy, Animal Production Science, Farm Business Management, Rural Resource Management
<b>5</b>	<b>UCAS/Programme Code</b>	D400 (deferred choice), D444 Agronomy, D422 Animal Production Science, D402 Farm Business Management.
<b>6</b>	<b>Programme Accreditation</b>	NA
<b>7</b>	<b>QAA Subject Benchmark(s)</b>	Agriculture, forestry, agricultural sciences, food sciences and consumer sciences.
<b>8</b>	<b>FHEQ Level</b>	H
<b>9</b>	<b>Last updated</b>	February 2014

**10 Programme Aims**

1. To develop students' knowledge and understanding of the principles of agriculture in terms of science and practice, by laying a broad foundation in applied animal and plant biology and aspects of economics and management of farming and agricultural systems that is informed by research.
2. To stimulate an informed interest in, and critical analysis of, the development and progress of agriculture and its relevance to the diverse range of human needs and expectations at national and international levels.
3. To build upon and consolidate the knowledge of science, management, economics and data analysis and manipulation as a basis for possible more advanced, post-graduate studies in appropriate fields of agriculture.
4. To develop and improve students' key skills.
5. To provide a programme which meets the FHEQ at Honours level and which takes appropriate account of the subject benchmark statements in Agriculture, forestry, agricultural sciences, food sciences and consumer sciences.
6. To produce graduates that:
  - a) have a sound knowledge and understanding of agriculture that is informed by current research and professional input, coupled with appropriate subject specific skills, to equip them for a wide range of careers in the industry or for post-graduate study. Key areas of employment include farm and business management, commerce, advisory and consultancy work, environmental conservation, scientific research, technical journalism and teaching.
  - b. Possess well developed key skills in parallel with their academic and technical proficiency. These key skills include: effective communication using a range of media, competent use of Information Technology and library resources, the ability to work individually and in a team, the use of initiative and problem solving, efficient time management and work prioritisation.
  - c. Are highly employable in non-agriculturally orientated careers as well as in careers directly involved in the agriculture and ancillary industries.

## **11 Learning Outcomes**

The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.  
The programme outcomes have references to the benchmark statements for agriculture, forestry, agricultural sciences, food sciences and consumer sciences.

### **Knowledge and Understanding**

On completing the programme students should have gained and be able to demonstrate:

A1. The scientific and practical principles of agriculture based on a foundation of animal and plant biology and quantitative studies including economics and biometrics

A2. The applied aspects of animal and crop production, economics, marketing and management in the context of individual enterprises, agricultural systems and farm businesses

A3. The physical, environmental, social, financial and political factors that shape agriculture and its various components.

A4. The relevance of agriculture to increasingly diverse human needs and expectations at the local, national, international and global levels that stimulates informed interest and critical analysis.

A5 The inter-relationship between agriculture and other activities in the rural environment, the reasons for conflict and possible solutions and alternative forms of land use as the priorities for agriculture change and the concept of a sustainable agriculture involving conventional and organic systems of production.

A6 The pursuit of new knowledge and understanding in the various disciplines generated and informed by current research

After Stages 1 and 2 students will have gained a bank of knowledge and understanding which provides them with a sound platform and the confidence to pursue one of the specific final year honours options in Stage 3.

By the end of the programme the process and results of accumulating and consolidating knowledge and understanding of the areas outlined above will provide a sound basis for possible more advanced, post-graduate studies in appropriate fields of agriculture.

### **Teaching and Learning Methods**

Lectures are the main way of imparting knowledge and understanding (A1-A6) but seminars and small group tutorials are also used: seminars and tutorials are led by staff and/or students and occasionally by visiting speakers. Practical classes feature predominantly in Stage 1 with visits to the University farms. Visits to the University and other farms, food processing plants and research stations are more frequent at Stages 2 and 3. Workshops introducing and applying computer software packages or specific case studies also feature, and some of these are led by specialists from the industry.

Students are encouraged to contribute to their own learning experience by independent reading. They are provided with references to books, scientific papers and other learning materials to enhance their understanding of specific subject areas. Group work exercises encourage a collective approach and responsibility for gathering knowledge and the sharing of understanding. The Induction Week programme includes exercises that introduce and practice various learning methods and strategies appropriate to each stage of the programme.

<b>Assessment Strategy</b>
Primarily assessed by unseen, written examinations supported by a variety of different forms of coursework that includes essays, projects, case studies and other exercises. Most modules include coursework, thus ensuring an element of formative as well as summative assessment. Seminar, tutorial and poster presentation exercises assess knowledge and understanding that is demonstrated verbally. The general paper and dissertation module at Stage 3, (which are not directly supported by lectures or seminars) assess students' abilities to independently acquire knowledge and understanding (A4-A6).
<b>Intellectual Skills</b>
On completing the programme students should be able to:
<b>B1</b> Critically analyse arguments and evidence derived from a range of sources
<b>B2</b> Solve problems based on information either gathered or presented. Data analysis and interpretation
<b>B3</b> Gather, extract and evaluate relevant information
<b>B4</b> Evaluate the contribution of individuals to the learning experience by peer assessment.
<b>Teaching and Learning Methods</b>
Seminars provide the main opportunity for students to evaluate evidence and formulate objective and coherent arguments (B1-B4). Problem solving skills (B2) are developed in tandem with the range of activities described above that are designed to develop their subject-specific/professional skills. Students are directed to a range of information sources that enhance their analytical and interpretative faculties. Students learn through problem-solving, handling data and discussion. Students are encouraged to justify their opinions in discussion, in case studies and in their dissertation where they practice production of reasoned arguments and analysis.
<b>Assessment Strategy</b>
The range of methods described in both A and C also provides an opportunity to assess cognitive skills (B1-B4): in the form of seminars (B1, B3 and B4), case studies (B2 and B4) and essay writing (B1 and B3). The dissertation module ACE3098 is a major vehicle for the assessment of all the cognitive skills (B1-B4).
<b>Practical Skills</b>
On completing the programme students should be able to:
<b>C1.</b> Undertake laboratory and field experimentation, record agricultural data and undertake the design and sampling of experiments, both desk based and in practice, crop walking for pest and disease identification, animal behaviour studies
<b>C2.</b> Analyse a range of physical and financial data arising from agricultural enterprises, conventional and organic farming systems, research experiments, climatic and soil maps
<b>C3.</b> Prepare and present advisory reports, case studies.
<b>C4.</b> Communicate with professionals involved in the industry.
<b>C5.</b> Use specific computer software for crop and animal enterprise recording and management, ration formulation, resource use.

<b>Teaching and Learning Methods</b>
Professional skills relevant to agricultural applications are demonstrated in specific lectures, seminars, laboratory classes, computing sessions, workshops and field visits (C1-C5). Module leaders and demonstrators facilitate development of these skills. Students acquire skills (C1-C5) through a 'hands-on' approach in the most applied modules.
<b>Assessment Strategy</b>
The methods outlined in A also test the development of subject-specific/professional skills (C1-C5). The use of case-studies and report writing and presentation as major methods of assessment not only enhances knowledge and understanding but also improves subject specific and professional skills (C1-C5). As well as being practised skills may be assessed as an integral part of the assessment programme. For example, students may produce advisory and business plans relevant to agricultural businesses (C2,C3), develop software applications (C5), design experiments and collect and analyse physical and financial data (C1).
<b>Transferable/Key Skills</b>
On completing the programme students should be able to:  <b>D1</b> Work effectively as part of a team  <b>D2</b> Exhibit computer literacy in the gathering of information from a wide range of sources together with the processing and interpretation of numerical information.  <b>D3</b> Communicate effectively both in the form of oral presentations to large and small groups, and via the written word in essays, reports and in poster presentations  <b>D4</b> Show the ability to work independently, to manage time effectively, to use initiative and be adaptable.
<b>Teaching and Learning Methods</b>
The use of PCs and data analysis (D2) feature throughout all three Stages of the programme and are complemented with a range of computer simulation exercises (D2). As well as contributing directly to key skills, they also contribute to the other learning outcomes A, B and C. Oral communication and presentational skills (D3) are practised, particularly in seminars and tutorials, with increasing frequency from Stage 1 to Stage 3. Several modules involve teamwork (D1). All modules involve independent, student-centred work requiring completion by specific deadlines (D4). Students learn through the production of essays, reports, case studies etc. Emphasis is placed on time management throughout the programme and in particular during initial induction sessions.
<b>Assessment Strategy</b>
The strategy and methods used to assess learning outcomes A, B and C provide an integrated approach to the development of key skills D1-D4 from a broad base. The dissertation module AGR399 is also a major vehicle for the assessment of key skills (D2-D4).

## **12 Programme Curriculum, Structure and Features**

### **Basic structure of the programme**

Stages 1 and 2 give a foundation in all of these areas and are the same for all students on the programme. In Stage 3, students choose one of the three Honours options - D444 Agronomy, D422 Animal Production Science and D402 Farm Business Management. The title of the degree awarded depends on the final honours option e.g. BSc in Agriculture with Honours in Agronomy, Animal Production Science or Farm Business Management..

Stage 1 is multidisciplinary, considering all aspects of the subject and provides the scientific and quantitative foundation upon which the more applied and specialised study at Stages 2 and 3 respectively is based. Modules cover crop and soil science, animal physiology, genetics, microbiology and biochemistry, economics, agriculture and farm mechanisation and the use of personal computers (PCs) and data analysis. There is a combination of lectures, laboratory practicals, PC workshops and visits to the two University Farms, Cockle Park and Nafferton.

Stage 2 focuses on the three main strands of animal production, crop production and farm business management and their interdependence, applying the knowledge and understanding gained at Stage 1 and building on the key skills which have been introduced. Production is considered in the wider context of management, socio-economics and its relationship with the rural environment as a whole.

At Stage 3, students specialise and take one of the three Honours options-- D444 Agronomy, D422 Animal Production Science and D402 Farm Business Management. In each option there are 70-80 compulsory credits (including a 20-credit dissertation) that define the subject area. Modules to a total credit value of 40-50 are chosen from a range on offer that includes most of the compulsory modules for each honours option and many others from across the Faculty. This allows students to choose modules that make up one third of their final year study and so formulate a programme that concentrates on their major interests. In Stage 3 there is also an additional examination (General Paper) for students in all options, for which there is no formal teaching. It counts as a 13<sup>th</sup> module and has a valency of 10 credits and the examination asks questions of a type that any student graduating with an honours degree in Agriculture should be expected to answer.

### **Key features of the programme (including what makes the programme distinctive)**

The programme is studied over three year's full time. The academic year consists of two 15-week semesters, with 12 weeks of teaching and 2 or 3 weeks for the assessment programme. At each Stage, modules to a total credit value of 120 are studied. The distribution of these 120 credits between the semesters may be 60:60, 50:70 or 70:50.

A 10-credit module consists of 100 hours of student effort composed of attendance at lectures, seminars and small group tutorials, practical sessions, private study and revision and the completion of coursework. Modules are usually 10 or 20 credits with most 10-credit modules being completed in a semester, while most 20 credit modules continue over both semesters. Modules are examined at the end of the semester in which they are completed.

The programme provides a thorough coverage of the main scientific, environmental and economic aspects of agriculture, the science of animal and crop production and the economics of farm business management.

### **Programme regulations (link to on-line version)**

<http://www.ncl.ac.uk/regulations/programme/>

### 13 Criteria for admission

#### *Entry qualifications*

*A-Level Subjects and Grades:* BBB equivalent to 280 points excluding General Studies.

*GCSEs required:* Biology and Chemistry (or Dual Award Science) if not offered at a higher level

*Scottish Highers:* ABBB including Biology and/or Chemistry. Combinations of Highers and Advanced Highers are accepted.

*International Baccalaureate:* 28 points with Higher Level Biology and/or Chemistry

*BTEC National Diploma:* Agriculture or Applied Science at overall DMM/MMM

*Access courses:* Modules in Chemistry and Biological Sciences essential, and Business Studies desirable.

#### *Admissions policy/selection tools*

Applicants are invited to attend a Programme Open Day and are given the option of an individual interview. We welcome applications from mature candidates and those with non-traditional qualifications.

#### *Non-standard Entry Requirements*

All other non-standard applications are considered on an individual basis. Applicants are encouraged to attend an Open Day and/or attend an interview with the Admissions Tutor.

#### *Additional Requirements*

Evidence of relevant agricultural experience is useful.

#### *Level of English Language capability*

IELTS 6.5 for International Students

### 14 Support for Student Learning

The Student Services portal provides links to key services and other information and is available at: <http://www.ncl.ac.uk/students/>

#### *Induction*

During the first week of the first semester students attend an induction programme. New students will be given a general introduction to University life and the University's principle support services and general information about the School and their programme, as described in the Degree Programme Handbook. New and continuing students will be given detailed programme information and the timetable of lectures/practicals/labs/ tutorials/etc. The International Office offers an additional induction programme for overseas students.

#### *Study skills support*

Students will learn a range of Personal Transferable Skills, including Study Skills, as outlined in the Programme Specification. Some of this material, e.g. time management is covered in the appropriate Induction Programme. Students are explicitly tutored on their approach to both group and individual projects.

Numeracy support is available through Maths Aid and help with academic writing is available from the Writing Development Centre (further information is available from the Robinson Library).

#### *Academic and Pastoral support*

Each undergraduate and taught postgraduate student will be assigned a personal tutor.\*

A personal tutor is one part of a wider network of advice and guidance available to students to support their personal and general academic development. The module leader acts as the first point of contact for subject-specific academic advice. Thereafter the Degree Programme Director or Head of School may be consulted. Issues relating to the programme may be raised at the Student-Staff Committee, and/or at the Board of Studies. Within the academic unit, students may also receive additional academic and pastoral advice from a range of other student-facing staff including degree programme directors, dissertation/project supervisors, and administrative support staff.

\*Arrangements may vary for students taking special types of provision.

The University also offers a wide range of institutional services and support upon which students can call, such as the Writing Development Centre, Careers Service and Student Wellbeing Service. This includes one-to-one counselling and guidance or group sessions / workshops on a range of topics, such as emotional issues e.g. stress and anxiety, student finance and budgeting, disability matters etc. There is specialist support available for students with dyslexia and mental health issues. Furthermore, the Student Union operates a Student Advice Centre, which can provide advocacy and support to students on a range of topics including housing, debt, legal issues etc.

#### *Support for students with disabilities*

The University's Disability Support team provides help and advice for disabled students at the University - and those thinking of coming to Newcastle. It provides individuals with: advice about the University's facilities, services and the accessibility of campus; details about the technical support available; guidance in study skills and advice on financial support arrangements; a resources room with equipment and software to assist students in their studies.

#### *Learning resources*

The University's main learning resources are provided by the Robinson and Walton Libraries (for books, journals, online resources), and Information Systems and Services, which supports campus-wide computing facilities.

All new students whose first language is not English are required to take an English Language Proficiency Test. This is administered by INTO Newcastle University Centre on behalf of Newcastle University. Where appropriate, in-session language training can be provided. The INTO Newcastle University Centre houses a range of resources which may be particularly appropriate for those interested in an Erasmus exchange.

### **15 Methods for evaluating and improving the quality and standards of teaching and learning**

#### *Module reviews*

All modules are subject to review by questionnaires which are considered by the Board of Studies. Changes to, or the introduction of new, modules are considered at the Board of Studies and/or the School Teaching and Learning Committee. Student opinion is sought at the Student-Staff Committee and/or the Board of Studies. New modules and major changes to existing modules are subject to approval by the Faculty Learning, Teaching and Student Experience Committee.

#### *Programme reviews*

The Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to Faculty Learning, Teaching and Student Experience Committee. The FLTSEC takes an overview of all programmes within the Faculty and reports any Faculty or institutional issues to the University Learning, Teaching and Student Experience Committee.

#### *External Examiner reports*

External Examiner reports are considered by the Board of Studies. The Board responds to these reports through Faculty Learning, Teaching and Student Experience Committee. External Examiner reports are shared with institutional student representatives, through the Student-Staff Committee.

### Student evaluations

All modules and stages\* are subject to review by student questionnaires. Informal student evaluation is also obtained at the Student-Staff Committee, and the Board of Studies. The National Student Survey is sent out every year to final-year undergraduate students, and consists of a set of questions seeking students' views on the quality of the learning and teaching. The results from student surveys are considered as part of the Annual Monitoring and Review of the programme and any arising actions are captured at programme and School / institutional level and reported to the appropriate body.

\*With the exception of intercalating years and the final stages of undergraduate programmes.

### *Mechanisms for gaining student feedback*

Feedback is channelled via the Student-Staff Committee and the Board of Studies.

### *Faculty and University Review Mechanisms*

Every six years degree programmes in each subject area undergo periodic review. This involves both the detailed consideration of a range of documentation, and a review visit by a review team (normally one day in duration) which includes an external subject specialist and a student representative. Following the review a report is produced, which forms the basis for a decision by University Learning, Teaching and Student Experience Committee on whether the programmes reviewed should be re-approved for a further six year period.

### *Accreditation reports*

### *Additional mechanisms*

## **16 Regulation of assessment**

### *Pass mark*

The pass mark is 40%

### *Course requirements*

Progression is subject to the University's Undergraduate Progress Regulations and Undergraduate Examination Conventions. In summary, students must pass, or be deemed to have passed, 120 credits at each Stage. Limited compensation up to 40 credits and down to a mark of 35% is possible at each Stage and there are re-assessment opportunities, with certain restrictions.

### *Weighting of stages*

The marks from Stages 2 and 3 will contribute to the final classification of the degree  
The weighting of marks contributing to the degree for Stages 2 is 25% and Stage 3 is 75%.

### *Common Marking Scheme*

The University employs a common marking scheme, which is specified in the Undergraduate Examination Conventions, namely

	<b>Modules used for degree classification (DC)</b>	<b>Modules not used for degree classification</b>
<40	Fail	Failing
40-49	Third Class	Basic
50-59	Second Class, Second Division	Good
60-69	Second Class, First Division	Very Good
70+	First Class	Excellent



*Role of the External Examiner*

An External Examiner, a distinguished member of the subject community, is appointed by Faculty Teaching and Learning Committee, following recommendation from the Board of Studies. The External Examiner is expected to:

- i. See and approve assessment papers
- ii. Moderate examination and coursework marking
- iii. Attend the Board of Examiners
- iv. Report to the University on the standards of the programme

In addition, information relating to the programme is provided in:

The University Prospectus: <http://www.ncl.ac.uk/undergraduate/>

The School Brochure: <http://www.ncl.ac.uk/marketing/services/print/publications/ordering/>

Degree Programme and University Regulations: <http://www.ncl.ac.uk/regulations/docs/>

The Degree Programme Handbook:

Please note. This specification provides a concise summary of the main features of the programme and of the learning outcomes that a typical student might reasonably be expected to achieve if she/he takes full advantage of the learning opportunities provided. The accuracy of the information contained is reviewed by the University and may be checked by the Quality Assurance Agency for Higher Education.

## Mapping of Intended Learning Outcomes onto Curriculum/Modules

### **A    *Knowledge and understanding***

**A1**     The scientific and practical principles of agriculture based on a foundation of animal and plant biology and quantitative studies including economics and biometrics

**ACE1012 Domestic Animal Physiology**

**ACE1013 Introduction to Genetics**

**ACE1017 Data Analysis and Presentation**

**ACE1021 Animal Health**

**ACE1022 Crop Pests**

**ACE1006 Agri-Business Economics**

**BIO1003 Plant Biology**

**ACE1030 Man's Uses of Plants**

**ACE2024 Principles of Agronomy and Crop Improvement**

**ACE2030 Data Analysis and Interpretation**

ACE3023 Combinable Crops (compulsory for D444 option)

ACE3027 Non-combinable Crops (compulsory for D444 option)

ACE3050 Animal Nutrition and Growth (compulsory for D422 option)

ACE3043 Livestock Reproduction (compulsory for D422 option)

ACE3025 Forage Utilisation (compulsory for D422 option)

**A2** The applied aspects of animal and crop production, economics, marketing and management in the context of individual enterprises, agricultural systems and farm businesses

**ACE1011 Applied Domestic Animal Physiology**

**ACE1016 Agriculture and Farm Mechanisation**

**ACE2018 Arable Crops**

**ACE2019 Grassland**

**ACE2020 Introduction to Farm Management**

**ACE2021 Ruminant Livestock**

**ACE2024 Principles of Agronomy and Crop Improvement**

**ACE2025 Animal Breeding**

**ACE2043 Non-ruminant Livestock**

**ACE2028 Animal Feed Science and Technology**

**ACE2006 Agricultural Economics**

**ACE2010 Agricultural Marketing**

ACE3029 Farm Business Planning and Control (compulsory for D402 option)

ACE3034 Applied Crop Protection (compulsory for D444 option)

ACE3036 Farm Management (compulsory for D402 option)

ACE3037 Crop Pest Field Course (compulsory for D444 option)

ACE3009 Estate Management (compulsory for D402 option)

**A3** The physical, environmental, social, financial and political factors that shape agriculture and its various components

**ACE1015 Soil Management for Crop and Animal Production**

**ACE1008 Environment and Land Resources**

**ACE2029 Agriculture and the Environment**

**ACE2006 Agricultural Economics**

**ACE2010 Agricultural Marketing**

ACE3029 Farm Business Planning and Control (compulsory for D402 option)

ACE3035 Sustainable Land Management

ACE3036 Farm Management (compulsory for D402 option)

**A4** The relevance of agriculture to increasingly diverse human needs and expectations at the local, national, international and global levels that stimulates informed interest and critical analysis

**ACE3029, 3030 and 3031 General Paper relating to each Honours Option**

ACE3022 Animal Welfare and Environment

ACE3028 Tropical Animal Production

ACE3039 Rural Enterprise Diversification

ACE3016 Countryside Management

**A5** The inter-relationship between agriculture and other activities in the rural environment, the reasons for conflict and possible solutions and alternative forms of land use as the priorities for agriculture change and the concept of a sustainable agriculture involving conventional and organic systems of production

**ACE1008 Environment and Land Resources**

**ACE2029 Agriculture and the Environment**

ACE3022 Animal Welfare and the Environment

ACE3026 Land Reclamation

ACE3039 Rural Enterprise Diversification

ACE3009 Estate Management (compulsory for D402 option)

**A6** The pursuit of new knowledge and understanding in the various disciplines generated and informed by current research

**ACE3098 Dissertation**

**B Intellectual skills**

**B1** Critically analyse arguments and evidence derived from a range of sources

**ACE3098 Dissertation**

**B2** Solve problems based on information either gathered or presented. Data analysis and interpretation

**ACE1012 Domestic Animal Physiology**

**ACE1013 Introduction to Genetics**

**ACE1015 Soil Management for Crop and Animal Production**

**ACE1017 Data Analysis and Presentation**

**ACE1008 Environment and Land Resources**

**ACE1006 Agri-business Economics**

**BIO1003 Plant Biology**

**ACE1030 Man's Uses of Plants**

**ACE2018 Arable Crops**

**ACE2020 Introduction to Farm Management**

**ACE2024 Principles of Agronomy and Crop Improvement**

**ACE2043 Non-ruminant livestock**

**ACE2028 Animal Feed Science Technology**

**ACE2029 Agriculture and the Environment**

**ACE2030 Data Analysis and Interpretation**

LAW2053 Law and Land Use (compulsory for D402 option)

ACE3023 Combinable Crops (compulsory for D444 option)

ACE3029 Farm Business Planning and Control (compulsory for D402 option)

ACE3027 Non-combinable crops (compulsory for D444 option)

ACE3036 Farm Management (compulsory for D402 option)

ACE3037 Crop Pests Field Course (compulsory for D444 option)

ACE3009 Estate Management (compulsory for D402 option)

**B3** Gather, extract and evaluate relevant information

**ACE2019 Grassland**

**ACE2020 Introduction to Farm Management**

**ACE2025 Animal Breeding**

**ACE2028 Animal Feed Science Technology**

**ACE2029 Agriculture and the Environment**

ACE3022 Animal Welfare and Environment  
ACE3029 Farm Business Planning and Control (compulsory for D402 option)  
ACE3025 Forage Utilisation (compulsory for D422 option)  
ACE3036 Farm Management (compulsory for D402 option)  
**ACE3098 Dissertation**

**B4** Evaluate the contribution of individuals to the learning experience by peer assessment.

**ACE2028 Feed Science Technology**

ACE3023 Combinable Crops (compulsory for D444 option)  
ACE3024 Applied Crop Protection (compulsory for D444 option)  
ACE3027 Non-combinable crops (compulsory for D444 option)

**C Practical skills**

**C1** Record agricultural data and undertake the design and sampling of experiments, both desk based and in practice

**ACE1011 Applied Domestic Animal Physiology**

**ACE1012 Domestic Animal Physiology**

**ACE1013 Introduction to Genetics**

**ACE1015 Soil Management for Crop and Animal Production**

**ACE1017 Data Analysis and Presentation**

**ACE1022 Crop Pests**

**ACE1021 Animal Health**

**ACE2030 Data Analysis and Interpretation**

**ACE2028 Animal Feed Science Technology**

**ACE2029 Agriculture and the Environment**

ACE3023 Combinable Crops (compulsory for D444 option)  
ACE3037 Crop Pests Field Course (compulsory for D444 option)

**C2** Analyse a range of physical and financial data arising from agricultural enterprises, conventional and organic farming systems, research experiments, climatic and soil maps

**ACE2020 Introduction to Farm Management**

**ACE2028 Animal Feed Science Technology**

ACE3029 Farm Business Planning and Control (compulsory for D402 option)  
ACE3036 Farm Management (compulsory for D402 option)

**C3** Prepare and present advisory reports, case studies etc

**ACE2029 Agriculture and the Environment**

ACE3029 Farm Business Planning and Control (compulsory for D402 option)  
ACE3025 Forage Utilisation (compulsory for D422 option)  
ACE3028 Tropical Animal Production  
ACE3036 Farm Management (compulsory for D402 option)  
ACE3039 Rural Enterprise Diversification

**C4** Communicate with professionals involved in the industry

**ACE2025 Animal Breeding**

**ACE2029 Agriculture and the Environment**

ACE3039 Rural Enterprise Diversification  
ACE3036 Farm Management (compulsory for D402 option)  
ACE3047 Animal Health Conference

**C5** Use specific computer software for crop and animal enterprise recording and management, ration formulation, resource use

**ACE2020 Introduction to Farm Management**

ACE3029 Farm Business Planning and Control (compulsory for D402 option)  
ACE3036 Farm Management (compulsory for D402 option)  
ACE3050 Animal Nutrition and Growth (compulsory for D422 option)

## **D Key (transferable) skills**

**D1** Work effectively as part of a team

**ACE1015 Soil Management for Crop and Animal Production**

**ACE2020 Introduction to Farm Management**

**ACE2043 Non-ruminant Livestock**

ACE3029 Farm Business Planning and Control (compulsory for D402 option)

ACE3039 Rural Enterprise Diversification

ACE3047 Animal Health Conference

ACE3043 Livestock Reproduction (compulsory for D422 option)

**ACE3029, 3030, 3031, General Paper relating to each Honours Option**

**D2** Exhibit computer literacy in the gathering of information from a wide range of sources together with the processing and interpretation of numerical information.

**ACE1012 Domestic Animal Physiology**

**ACE1013 Introduction to Genetics**

**ACE1015 Soil Management for Crop and Animal Production**

**ACE1017 Data Analysis and Presentation**

**ACE1006 Agri-business Economics**

**ACE1030 Man's Uses of Plants**

**ACE2020 Introduction to Farm Management**

**ACE2043 Non-ruminant Livestock**

**ACE2028 Animal Feed Science Technology**

**ACE2030 Data Analysis and Interpretation**

**ACE2006 Agricultural Economics**

ACE3023 Combinable Crops (compulsory for D444 option)

ACE3027 Non-combinable Crops (compulsory for D444 option)

ACE3024 Applied Crop Protection (compulsory for D444 option)

ACE3036 Farm Management (compulsory for D402 option)

ACE3037 Crop Pests Field Course (compulsory for D444 option)

**D3** Communicate effectively both in the form of oral presentations to large and small groups, and via the written word in essays, reports and in poster presentations

**ACE1012 Domestic Animal Physiology**

**ACE1017 Data Analysis and Presentation**

**ACE1022 Crop Pests**

**BIO1003 Plant Biology**

**ACE1008 Environment and Land Resources**

**ACE1006 Agri-business Economics**

**ACE2020 Introduction to Farm Management**

**ACE2021 Ruminant Livestock**

**ACE2024 Principles of Agronomy and Crop Improvement**

**ACE2043 Non-ruminant Livestock**

**ACE2029 Agriculture and the Environment**

**ACE2030 Data Analysis and Interpretation**

LAW2053 Law and Land Use (compulsory for D402 option)

ACE3022 Animal Welfare and Environment

ACE3023 Combinable Crops (compulsory for D444 option)

ACE3029 Farm Business Planning and Control (compulsory for D402 option)

ACE3025 Forage Utilisation (compulsory for D422)

ACE3027 Non-combinable Crops (compulsory for D444 option)

ACE3024 Applied Crop Protection (compulsory for D444 option)

ACE3037 Crop Pests Field Course (compulsory for D444 option)

ACE3039 Rural Enterprise Diversification

ACE3047 Animal Health Conference

ACE3009 Estate Management (compulsory for D402 option)

ACE3016 Countryside Management

**ACE3029, 3030 and 3031 General Paper relating to each Honours Option**

**ACE3098 Dissertation**

**D4** Show the ability to work independently, to manage time effectively, to use initiative and be adaptable

**ACE1015 Soil Management for Crop and Animal Production**

**BIO1003 Plant Biology**

**ACE2043 Non-ruminant Livestock**

**ACE2030 Data Analysis and Interpretation**

ACE3029 Farm Business Planning and Control (compulsory for D402 option)

ACE3043 Livestock Reproduction (compulsory for D422 option)

ACE3009 Estate Management (compulsory for D402 option)

LAW2053 Law and Land Use (compulsory for D402 option)

**ACE3098 Dissertation**