


<b>PROGRAMME SPECIFICATION</b>	 <b>Newcastle University</b>
--------------------------------	---

<b>1 Awarding Institution</b>	Newcastle University
<b>2 Teaching Institutions</b>	Newcastle University National Agricultural Research Foundation in Greece (NAGREF)
<b>3 Final Award</b>	MSc
<b>4 Programme Title</b>	Ecological Farming and Food Production Systems
<b>5 UCAS/Programme Code</b>	5161F
<b>6 Programme Accreditation</b>	N/A
<b>7 QAA Subject Benchmark(s)</b>	none
<b>8 FHEQ Level</b>	7
<b>9 Date written/revised</b>	01-03-2011

<b>10 Programme Aims</b>
<ol style="list-style-type: none"> <li>1. to provide learning opportunities to enable graduates to acquire the knowledge and understanding, skills and aptitudes necessary to undertake applied and strategic research underpinning the development of ecological and sustainable farming and food production</li> <li>2. to produce graduates capable of understanding, improving and managing ecological farming and food production units/businesses in different macroclimatic, agronomic and market contexts</li> <li>3. to encourage abstract, creative and multi-factorial thinking and critical analysis</li> <li>4. to equip graduates with a suite of key skills including the ability to communicate effectively, to employ IT and library resources appropriately, to prioritise work and meet deadlines, to use initiative and solve problems</li> <li>5. to meet the expectation of the Framework for Higher Education Qualifications as at Level 7</li> </ol>

<b>11 Learning Outcomes</b>
The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas.
<b>Knowledge and Understanding</b>
On completing the programme students should:
<b>A1</b> understand the agronomic (soil, crop and livestock management) approaches used in ecological/biological/organic/sustainable food production systems
<b>A2</b> have an in depth knowledge of the underlying principles and standards of ecological/biological/organic/sustainable food production, processing and retailing/marketing systems
<b>A3</b> understand the main applied and strategic R&D methodologies used to improve ecological and sustainable food production systems.
<b>A4</b> understand approaches, mechanisms and challenges for technology transfer into the ecological/biological/organic/sustainable food production, processing and retailing/marketing sector.
<b>Teaching and Learning Methods</b>
<b>A1–A4</b> are achieved by lectures, seminars and laboratory classes. Under A1 field courses based at experimental and commercial farms are integrated into the curriculum to provide state-of-the-art agronomic knowledge and practical R&D skills (see also <b>B1–B5</b> below). In the cases of A1 and A3 lectures and seminars are also accompanied by practical sessions in data handling and quantitative statistical analyses. The teaching strategy for A2 and A4 includes lectures to set out baseline knowledge, principles and standards, and small group discussions, group exercises and seminars where current knowledge and R&D outputs are

presented and examined from a range of perspectives.

Students will acquire knowledge through team work, case studies, presentations, and independent study and research. Some modules include short problem solving exercises.

### **Assessment Strategy**

**Intended learning outcomes** (see A1 to A4 above) regarding knowledge and understanding are assessed based on course work involving both written and oral communications at the individual or team level. This will include a variety of continuous forms of assessment including essays, problem-solving exercises, laboratory reports and case studies and provide both formative and summative assessment through relevant examples. The interactive learning environment, Blackboard, will be used for both formative and summative assessments.

**A2 and A3** For certain optional modules focused on A2 and A3 closed book examinations are a complementary means of assessing factual knowledge.

### **Intellectual Skills**

On completing the programme students should be able to:

- B1** synthesise key findings and knowledge from across natural and social sciences, in particular those relating to ecological and sustainable food production, processing and marketing
- B2** critically evaluate the quality of data and information offered from different sources
- B3** define and formulate applied and strategic R&D problems, questions and hypotheses
- B4** plan and conduct applied and strategic R&D projects either individually or as a team and critically evaluate results
- B5** develop technology transfer strategies aimed at improving components of ecological and sustainable food production systems based on R&D results

### **Teaching and Learning Methods**

Intellectual skills (**B1-B5**) are developed progressively throughout the programme in modules containing seminars and case studies.

Throughout the programme, students will develop intellectual skills by participating in group discussions, case studies and at scientific conferences to enhance their **(a)** analytical and interpretative faculties and **(b)** ability to formulate objective and coherent arguments.

Field visits and associated team problem solving exercises are the main method used to enhance intellectual skills related to technology transfer capabilities.

Design, execution, statistical analysis and reporting of the final dissertation project enhance the learning of these skills in a focused manner.

### **Assessment Strategy**

**B1-B5** are assessed through individual and/or group R&D and technology transfer proposal preparation exercises and through individual dissertation proposals and theses

**B1-B3** are also assessed via oral presentations and assessed essays, mainly in compulsory modules

**B1 and B2** are also assessed in certain optional modules by closed book examinations

The interactive learning environment, Blackboard, will be used for both formative and summative assessments.

### **Practical Skills**

On completing the programme students should be able to:

- C1** demonstrate bibliographic and key IT skills appropriate to R&D at Master's level
- C2** use a wide range of analytical laboratory methods (e.g. in the areas of soil, crop, livestock, environmental and food sciences)
- C3** collect data using a variety of methods and sources, including farmer and industry participatory approaches
- C4** manage and critically analyse data using appropriate spreadsheet and statistical

<p>software</p> <p><b>C5</b> prepare and present information, in both written and verbal formats, to stakeholders (e.g. farmers, processors, advisors and consumers) with contrasting levels of knowledge and understanding</p>
<p><b>Teaching and Learning Methods</b></p>
<p>Practical Skills (<b>C1-C5</b>) are primarily obtained through course work, practical laboratory classes, assignments and the research project.</p> <p>Bibliographic and IT skills (<b>C1</b>) will be transferred through specific components (data handling, statistical and computing skills practical classes) which are included in all seven compulsory modules.</p>
<p><b>Assessment Strategy</b></p>
<p>The assessment of practical skills (<b>C1-C5</b>) will be based on <b>(a)</b> bibliographies produced as part of essays, seminar presentations and the final project thesis, <b>(b)</b> data handling and analyses carried out as part of problem solving exercises and the project thesis and <b>(c)</b> presentations to farmer and other stakeholder groups as part of industry workshops and the annual postgraduate conferences.</p>
<p><b>Transferable/Key Skills</b></p>
<p>On completing the programme students should be able to:</p> <p><b>D1</b> communicate and present research findings (including those from their dissertation) to academic and stakeholder/industry audiences</p> <p><b>D2</b> produce effective written communications and presentations using state-of-the-art software packages</p> <p><b>D3</b> manage R&amp;D and technology transfer, including writing proposals, planning of projects and implementation</p> <p><b>D4</b> use effective time and resource management practices</p> <p><b>D5</b> work effectively as a member of teams both subject specific and multidisciplinary</p>
<p><b>Teaching and Learning Methods</b></p>
<p>Transferable/Key skills <b>D1-D5</b> are developed through the programme of course work, field visits, final dissertation and the industry and postgraduate workshops.</p>
<p><b>Assessment Strategy</b></p>
<p>Key skills are not independently assessed. However, <b>D1-D5</b> are indirectly assessed through coursework, team and individual presentations, research papers and the dissertation.</p>

<p><b>12 Programme Curriculum, Structure and Features</b></p>
<p><b>Basic structure of the programme</b></p>
<p>The programme curriculum will be delivered by the <b>Newcastle University</b> and all but 3 modules will be taught exclusively in the teaching and laboratory facilities at the main Newcastle University campus in the city centre and at the University's Nafferton experimental farm.</p> <p>However, students will be able to study for a period during semester 2 in Crete, Greece where components of 3 modules on Mediterranean crop production systems will be offered. This will enable students to gain expertise in both Northern and Southern European Ecological and Sustainable Farming systems within a one year MSc course.</p> <p>Major support for the delivery of 3 modules (ACE8070, ACE8071, ACE8072) focused on Mediterranean crop production systems delivered in semester 2 will be provided by staff from the National Agricultural Research Foundation of Greece (NAGREF) in Crete.</p> <p>The programme consists of</p> <p><b>1. Compulsory modules :</b></p>

- a **10 credit taught modules** which covers **soil management practices** used in **ecological and sustainable farming and food production** systems
- a **10 credit taught modules** which covers **crop management practices** used in **ecological and sustainable farming and food production** systems
  - the soil and crop management modules are closely integrated with the
    - (a) livestock management module taught at Newcastle University or
    - (b) perennial crop management module taught partly in Crete and partly in Newcastle University in semester 2
- a **10 credit module** which covers **standards, certification and quality assurance** systems used in **ecological and sustainable farming and food production**
- a **10 credit food marketing module** (which also includes specific units on consumer expectations and marketing of organic foods)
- a **10 credit field course module** to provide access to state-of-the-art examples of (a) soil, crop and livestock management practices, (b) marketing approaches, and (c) implementation of ecological and other farming standards in commercial practice
- a **90 credit dissertation** module
- one of the following 2 modules:
  - a **livestock management ecological and sustainable farming and food production** systems module (taught during the first part of semester 2 in Newcastle)
  - a **perennial crop management practices in ecological and sustainable farming and food production** systems module taught partly in Crete and partly in Newcastle University in semester 2

All modules (except for the food marketing module available at Newcastle University only) were specifically developed for the MSc course in Ecological Farming and Food production Systems. These modules comprise a total of 150 credits.

**2. Three optional 10 credit modules** (from the existing programme of MSc modules available at Newcastle and in Crete/Newcastle).

Optional modules taught at **Newcastle** (in either semester 1 or 2) are available in the following areas:

- Ecology and environmental science
- Soil Science and water management,
- Crop and livestock nutrition
- Crop and livestock health management
- Environmental, rural resource, and farm economics
- Consumer studies and food marketing
- Wildlife conservation

**All modules have been developed as part of existing MSc courses available at Newcastle University**

Optional modules taught partly in **Crete, Greece and in Newcastle University** in Semester 2 are:

- Ecological and sustainable olive production
- economics and policy development in the ecological farming and food sector

All Mediterranean production system focused modules taught partly in Crete have been developed specifically for the MSc in Ecological Farming and Food Production systems

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

The programme allows an in depth specialisation in **Ecological Farming and Food Production Systems**. Ecological/Biological/Organic Farming is an area of the food and farming industry that has seen rapid growth in the last 20 years, but it is currently only marginally covered by existing BSc Degree programmes in the UK. Also there are currently no specialised MSc programmes on Ecological farming in England, while such programmes are available in Scotland and some European countries (Germany, Italy).

In line with the integrated/holistic approach defined by ecological farming standards/principles

the MSc course will provide an integrated delivery of soil, crop and livestock, and food supply chain management approaches used in ecological farming systems.

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

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

**13 Criteria for admission**

*Entry qualifications*

Good Honours Degree (2ii or higher) in an appropriate subject (agriculture, soil, crop, animal, food or environmental science; biology, geography, or rural, consumer, economic, business and/or marketing studies)

Other non-standard qualifications and relevant experience are also considered. This applies in particular to relevant work experience in the ecological farming and associated industries. Each application is considered individually by the course selector, and if appropriate will be made an offer.

*Admissions policy/selection tools*

As this programme requires a wide range of abilities and attributes, selection is not solely based on academic qualifications. Selectors seek evidence of motivation and commitment, supported by the personal statement and references.

*Level of English Language capability*

6.5 IELTS or equivalent. Students whose English ability does not meet this level may be recommended to attend appropriate pre-sessional English courses (e.g. INTO Newcastle University programme).

**14 Support for Student Learning**

*Induction*

During the first week of the first semester students attend an induction programme providing a general introduction to University life and their principle support services and general information about the MSc course, as described in the Degree Programme Handbook. They 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 and help with academic writing are available at the respective institutions.

*Academic support*

The initial point of contact for a student is with a lecturer or module leader, or their tutor (see below) for more generic issues. Thereafter the Degree Programme Director or Head of School may be consulted. Issues relating to the programme may be raised at the Staff-Student Committee, and/or at the Board of Studies.

*Pastoral support*

All students are assigned a personal tutor whose responsibility is to monitor the academic performance and overall well-being of their tutees. In addition the institutions offer a range of support services, including one-to-one counselling and guidance or group sessions/workshops on a range of topics, such as emotional issues eg. Stress and anxiety, student finance and budgeting, disability matters etc. There is specialist support available for students with dyslexia and mental health issues, and support for all students on a range of topics including housing, debt, legal issues etc.

*Support for students with disabilities*

Newcastle University's Disability Support Service 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 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. On-line access to an extensive range of electronic data bases, journals and books will be provided by Newcastle University for all students on the course.

### **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 School Teaching and Learning Committee and at the Board of Studies. Student opinion is sought at the Staff-Student Committee and/or the Board of Studies. New modules and major changes to existing modules are subject to approval by the Faculty Teaching and Learning Committee.

#### *Programme reviews*

The Board of Studies conducts an Annual Monitoring and Review of the degree programme and reports to Faculty Teaching and Learning Committee.

#### *External Examiner reports*

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

#### *Student evaluations*

All modules, and the degree programme, are subject to review by student questionnaires. Informal student evaluation is also obtained at the Staff-Student Committee, and the Board of Studies.

#### *Mechanisms for gaining student feedback*

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

#### *Faculty and University Review Mechanisms*

The programme is subject to the University's Internal Subject Review process. Every five years degree programmes in each subject area are subject to periodic review. This involves both the detailed consideration of a range of documentation, and a two-day review visit by a review team which includes an external subject specialist in addition to University and Faculty representatives. Following the review a report is produced, which forms the basis for a decision by University Teaching and Learning Committee on whether the programmes reviewed should be re-approved for a further five year period.

#### *Accreditation reports*

- not applicable;
- endorsement by Ecological farming bodies and organisations providing low-input/integrated farming certification standards/services may be obtained
- however, the course management team feels that accreditation by such bodies would impede the independence of curriculum development

#### *Additional mechanisms*

An ecological food producers advisory panel will be established to advise the course

management team on industry needs regarding the knowledge and skills transferred on the MSc programme

## 16 Regulation of assessment

### *Pass mark*

The pass mark is 50 (Postgraduate programmes)

### *Course requirements*

Progression is subject to the University's Masters Degree Progress Regulations, Taught and Research and Examination Conventions for Taught Masters Degrees. Limited compensation up to 40 credits of the taught element and down to a mark of 40 is possible and there are reassessment opportunities, with certain restrictions.

### *Common Marking Scheme*

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

#### **Summary description applicable to postgraduate Masters programmes**

<50	Fail
50-59	Pass
60-69	Pass with Merit
70 or above	Pass with Distinction

#### **Summary description applicable to postgraduate Certificate and Diploma programmes**

<50	Fail
50 or above	Pass

### *Role of the External Examiner*

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

The External Examiner is expected to:

- See and approve examination papers
- Moderate examination and coursework marking
- Attend the Board of Examiners
- Report to the University on the standards of the programme

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

The University Prospectus (see <http://www.ncl.ac.uk/postgraduate/>)

The School Brochure (contact [enquiries@ncl.ac.uk](mailto:enquiries@ncl.ac.uk))

The University Regulations (see <http://www.ncl.ac.uk/regulations/docs/2009.html>)

The Degree Programme Handbook ( see <http://www.ncl.ac.uk/afrd/postgrad/taught/> )

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.

# ANNEX 1. Mapping of Intended Learning Outcomes onto Curriculum/Modules

Module	Type	Intended Learning Outcomes			
		A	B	C	D
<b>Compulsory modules</b>					
<b>ACE8062</b> Soil Management in Ecological and Sustainable Farming Systems	Compulsory	1,2,3,4	1,2,3,5	1,2,3,4	1,2,3,4,5
<b>ACE8063</b> Ecological and Sustainable Livestock Production Systems	Compulsory	1,2,3,4	1,2,3,5	1,2,4,5	1,2,3,4,5
<b>ACE8064</b> Ecological and Sustainable Farming Standards and Quality Assurance	Compulsory	2,4	1,2,5	1,3,5	2,3,4,5
<b>ACE8065</b> Ecological and Sustainable Farming and Food Production: Field Course	Compulsory	1,4	3,4,5	3,5	1,2,3,5
<b>ACE8066</b> Individual Research Project and Dissertation	Compulsory	3,4	1,2,3,4,5	1,2,3,4,5	1,2,3,4,5
<b>ACE8067</b> Ecological and Sustainable Crop Production Systems	Compulsory	1,2,3,4	1,2,3,5	1,2,3,4,5	1,2,3,4,5
<b>ACE8072</b> Ecological and Sustainable Perennial Crop Production Systems	Compulsory	1,2,3,4	1,2,3,5	1,2,3,4,5	1,2,3,4,5
<b>ACE8073</b> Essentials of Food Marketing	Compulsory	2,4	1,2,3,5	1,3,4,5	1,2,3,4,5
<b>Optional Modules</b>					
<b>ACE8021</b> Sustainable Development and Environmental Change	Optional	1,2,3	1,2,3	1,3,4	1,2,4,5
<b>ACE8022</b> Quantitative Techniques, Experimental Design and Data Analysis	Optional	3	2,3,4	1,4	3,4
<b>ACE8025</b> Tropical Animal Production	Optional	1,3	1,2,3	1,2,3,4	1,2,4,5
<b>ACE8041</b> Ecosystem Management	Optional	3	1,2,3	1,3,4,5	1,2,4,5
<b>ACE8042</b> Biodiversity Conservation: Policy and Practice	Optional	3	1,2,3	1,3,4,5	1,2,4,5
<b>ACE8060</b> Land-Water Interface	Optional	1	1,2,3	1,2,3,4	1,2,4,5
<b>ACE8061</b> Global Ecosystems and Environmental Change	Optional	1,2,3	1,2,3	1,2,4	1,2,4,5
<b>ACE8070</b> Ecological and Sustainable Olive Production	Optional	1,2,3,4	1,2,3,5	1,2,3,4,5	1,2,3,4,5
<b>ACE8071</b> Economics and Policy Development in Ecological Farming and Food Production	Optional	2,4	1,2,3,5	1,3,4,5	1,2,3,4,5