MSc in Horticulture
For students entering in October 2009

Awarding Institution: The University of Reading
Teaching Institution: The University of Reading
                                                 Faculty of Life Sciences
Programme length: 12 months
Date of specification: April 2009
Programme Director: Dr Andrew Daymond
Board of Studies: MSc Horticulture

Summary of programme aims

The aim of the course is to provide advanced instruction in horticulture and, through a series of options, specialisation in one or more of the following areas: temperate horticultural crop production, tropical horticultural crop production, amenity horticulture/ social horticulture or horticultural crop protection.

The expected outcomes are that students should acquire and demonstrate:

➢ An understanding of the principles and theoretical background knowledge needed for an understanding of horticulture.

➢ A working knowledge of the practical techniques used in horticulture.

➢ An appreciation of the environmental and ethical issues associated with growing horticultural crops.

➢ An understanding of the aims and needs of horticultural enterprises to develop new products.

➢ A capacity to undertake research in horticulture.

Transferable skills

As part of this programme students are expected to gain or enhance their experience and competences in the following skills: IT (word-processing, use of spreadsheets and databases, use of Web resources), data analysis, scientific writing, oral presentations, team working, problem solving, use of library resources and time management.

Programme content

Module Code	Module Title	Credits	Level
Compulsory modules *(120 credits)*			
BIMES3P	Practical Horticulture and Field Course	10	7
BIMEG5	Horticultural Crop Production	10	7
BIMER8	Organic and Sustainable Horticulture	10	7

BIMEH1	Principles of Horticulture and Seminar Series	10	7
ASMC01	Quantitative Methods for the Life Sciences	10	7
BIMEC8	Quality Management Systems	10	7
BIMHPR	Research Project	60	7

Optional modules *(60 credits)*
Choose six modules from one of the three course options.*
At least 30 credits must be from PS or BI modules.
* It may, with the permission of the Programme Director, be possible for students to choose some modules from another option.

Crop Production in Temperate and Tropical Regions:

APMA41	Agriculture in the Tropics	10	7
BIMEB4	Arboriculture and Ornamental Crops	10	7
AP3A82	Business Planning and Control	20	7
APMA90	Climate Change and Food Systems	10	7
BIMES8	Controlled Environment Technology	10	7
FBMQAS	Food Quality Assurance and Safety	20	6
AP2A26	Forestry and Woodlands	10	5
BIMEW7	Horticultural Crop Technology	10	7
BIMEH8	Plant Biotechnology for Post Harvest Quality	10	7
BIMEV8	Biotechnology for Plant Breeding	10	7
BIMEL7	Plants and Climate	10	7
FBMFRA	Risk Analysis in the Food Chain	10	7
BIMEI1	Soil, Principles and Management	10	7
BIMHA1	Tropical Environments	10	7
APMA89	Water, Agriculture and Irrigation	10	7

Amenity Horticulture and Social Horticulture:

BIMEB4	Arboriculture and Ornamental Crops	10	7
AP3A82	Business Planning and Control	20	6
BIMEX7	Community and Landscape	10	7
BIMEA7	Environmental and Ecological Weed Management	10	7
AP2A26	Forestry and Woodlands	10	5
BIMEM5	Landscapes for Amenity and Sport	10	7
BIMEV8	Biotechnology for Plant Breeding	10	7
BIMEL7	Plants and Climate	10	7
BIMEI1	Soil, Principles and Management	10	7
BIMHA1	Tropical Environments	10	7
BIMEY8	Living Landscapes	10	7

Horticultural Crop Protection:

AP3A82	Business Planning and Control	20	6
APMA90	Climate Change and Food Systems	10	7
BI2EX5	Introduction to Entomology	10	5
BIMEC4	Ecology and Management of Plant Diseases	10	7
FBMQAS	Food Quality Assurance and Safety	20	7

BIMEW7	Horticultural Crop Technology	10	7
APMA62	Nematology	10	7
BIMEZ7	Pests and Diseases of Horticultural Crops	10	7
BIMEV8	Biotechnology for Plant Breeding	10	7
AP3A76	Principles and Practice of Biological Control	10	6
FBMFRA	Risk Analysis in the Food Chain	10	7
BIMEA7	Environmental and Ecological Weed Management	10	7

Please note: To be eligible for MSc, at least 120 credits of your 180-credit programme must be taken at level 7.

Part-time/Modular arrangements

The modules may be taken on a part-time basis over two or more years with students normally dividing the modules equally between years. The research project must be submitted by a specified date in September in the final year.

Summary of teaching and assessment

The teaching is organised in modules (totalling 180 credits) that involve a combination of lectures, tutorials, workshops, seminars, and practical sessions. Twelve modules taken largely in the autumn and spring terms (120 credits) will be assessed by a mixture of coursework and formal examinations. The assessment of the remaining 60 credits will be of the practical project and dissertation report.

The University's taught postgraduate marks classification is as follows:

Mark	Interpretation
70 – 100%	Distinction
60 – 69%	Merit
50 – 59%	Good standard (Pass)

Failing categories:

40 – 49%	Work below threshold standard
0 – 39%	Unsatisfactory work

For Masters Degrees

To pass the MSc students must gain an average mark of 50 or more overall in 180 credits, including a mark of 50 or more for the dissertation. In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits.

Students who gain an average mark of 70 or more overall including a mark of 60 or more for the dissertation and have no mark below 40 will be eligible for a Distinction. Those gaining an average mark of 60 or more overall including a mark of 50 or more for the dissertation and have no mark below 40 will be eligible for a Merit.

Students failing to meet requirements of the Masters degree may be eligible for a Postgraduate Diploma or Certificate. For this, students must gain an average mark of 50 or more over 120

credits (Diploma) or 60 credits (Certificate). In addition the total credit value of all modules marked below 40 must not exceed 30 credits and for all modules marked below 50 must not exceed 55 credits.

In the case of the Diploma, students who gain an average mark of 70 or more and have no mark below 40 will be eligible for the award of Distinction. Those gaining an average of 60 and have no mark below 40 will be eligible for a Merit. Certificates can only be pass or fail.

Admission requirements

Entrants to this programme are normally required to have obtained at least a Second class Honours degree in a biological subject, agriculture, horticulture, or environmental science, and persons with other qualifications may be approved by senate.

Admissions Tutor: Dr Andrew Daymond

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 facilities both for those students studying on a language degree and for those taking modules offered by the Institution-wide Language Programme.

Student guidance and welfare support is provided by Personal Tutors, School Senior Tutors, the Students' Union, the Medical Practice and the Student Services Centre. The Student Services Centre is housed in the Carrington Building and includes the Careers Advisory Service, the Disability Advisory Service, Accommodation Advisory Team, Student Financial Support, Counselling and Study Advisors. Student Services has a Helpdesk available for enquiries made in person or online (www.risisweb.reading.ac.uk), or by calling the central enquiry number on (0118) 378 5555. Students can get key information and guidance from the team of Helpdesk Advisers, or make an appointment with a specialist adviser; Student Services also offer drop-in sessions on everything from accommodation to finance. The Carrington Building is open between 8:30 and 17:30 Monday to Thursday (17:00 Friday and during vacation periods). Further information can be found in the Student Diary (given to students at enrolment) or on the Student website (www.reading.ac.uk/student).

Career prospects

Graduates from the course are likely to find opportunities with industrial enterprises and institutions in the areas of commercial horticultural crop production, amenity horticulture, and horticultural therapy. Other opportunities exist at universities seeking graduates with pre-training for research to PhD level, and governmental, media and other organisations involved with horticulture.

Opportunities for study abroad or for placements

Students will be able to undertake the 60 credit project module at an approved institution or an appropriate industrial concern, but this will depend on having the necessary linguistic skills and finding a suitable placement, and appropriate supervisory arrangements being in place.

Educational aims of the programme

➤ An understanding of the principles and theoretical background knowledge needed for an understanding of horticulture.

➤ A working knowledge of the practical techniques used in horticulture.

➤ An appreciation of the environmental and ethical issues associated with growing horticultural crops.

➤ An understanding of the aims and needs of horticultural enterprises to develop new products.

➤ A capacity to undertake research in horticulture.

Programme Outcomes

Knowledge and Understanding

A. Knowledge and understanding of:	**Teaching/learning methods and strategies**
1. the concepts and techniques of horticulture and their application to commercial and amenity horticulture; 2. the scientific knowledge underpinning the development of current horticultural knowledge; 3. current advances in commercial, amenity and social aspects of horticulture.	The knowledge required is provided in formal lectures supported by practical work, seminars and presentations. Feedback on student work is provided by the discussion and return of work in tutorials and seminars. All practical work is marked and returned to the student. *Assessment* Most knowledge is tested through a combination of coursework, including oral presentations, and formal examinations, plus a written report of a practical-based project.

Skills and other attributes

B. Intellectual skills – able to:	**Teaching/learning methods and strategies**
1. think logically and evaluate critically research and advance scholarship in the discipline; 2. plan and implement tasks at a professional level to solve problems related to the discipline; 3. evaluate methodologies and where appropriate propose new hypotheses; 4. plan, conduct and write a report on an independent practical project.	Logical application of science and the critical appraisal of methodology are essential parts of the role of a horticulturist in the horticulture industry. These skills will underpin the lectures, practical and project work. *Assessment* 1 – 3 are assessed directly and indirectly in most parts of the course. 1 – 4 are assessed in the final research project report.

C. Practical skills – able to:	**Teaching/learning methods and strategies**
1. apply, or adapt, practical instructions safely and accurately; 2. carry out a variety of experimental procedures in the laboratory or greenhouse; 3. interpret quantitatively the results of experiments undertaken by themselves or others; 4. devise experimental methods appropriate for tackling a particular problem.	A range of detailed or outline practical instructions are used to allow students to develop a range of practical skills. Staff and postgraduate demonstrators are present during practical sessions to guide and help, to mark their reports and give feedback on their work. Students will work on their project under the guidance of one or more members of staff. *Assessment* 1 – 4 are assessed to different extents by the practical work associated with the various modules undertaken.
D. Transferable skills – able to:	**Teaching/learning methods and strategies**
1. make use of IT (word processing, spreadsheets, web sources); 2. communicate scientific ideas; 3. quantitatively analyse data; 4. give oral presentations; 5. work as part of a team; 6. use library resources; 7. manage time.	The use of IT is made throughout the programme. Team work is essential in the practical and seminar sessions associated with modules. Library resources are addressed in all the modules and during the project and work. Time management is essential for the timely and effective completion of the programme. *Assessment* 1 – 6 contribute to assessed coursework during the first two terms.