MSc/Diploma in Horticulture
For students entering in October 2007

Awarding Institution: The University of Reading
Teaching Institution: The University of Reading
Faculty of Life Sciences Programme length: 12 months
Date of specification: September 2007
Programme Director: Professor P Hadley
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 temperate horticultural crop production, tropical horticultural crop production, amenity horticulture, social and therapeutic 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), scientific writing, oral presentations, team working, problem solving, use of library resources and time management.

Programme content

Mod Code	*Module Title*	*Credits*	*Level*
Compulsory modules (120 credits)			
PSMHB1	Principles of Horticulture and Seminar Series	10	M
PSMHC5	Ornamental Crop Production	10	M
ASMC01	Quantitative Methods for the Life Sciences	10	M
PSMHA5	Quality Management Systems	10	M
PSMHH3	Field Course	10	M

PSMHE2	Organic and Sustainable Horticulture	10	M
PSMH3C	Research Project	60	M

Optional modules *(60 credits, choose six modules from one of the course options)**

At least 30 credits must be from PS modules

* It may, with the permission of the Programme Director, be possible for students to choose some modules from another option

Temperate and Tropical Horticultural Crop Production Options

APMA41	Agriculture in the Tropics	10	M
PSMHC1	Arboriculture and Practical Horticulture	10	M
AP3A82	Business Planning and Control	20	H
APMA 90	Climate Change and Food Systems	10	M
PSMHA8	Controlled Environment Technology	10	M
FBGQAS	Food Quality Assurance and Safety	20	H
AP2A26	Forestry and Woodlands	10	I
PSMHB7	Horticultural Crop Physiology and Technology	10	M
FBMFM1	Introductory Food Microbiology	10	M
PSMHB4	Marketing and Product Development	10	M
PSMAJ8	Plant Biotechnology for Post Harvest Quality	10	M
PSMHH8	Plant Developmental Genetics and Physiology	10	M
PSMAF8	Plant Tissue Culture	10	M
PSMAB7	Plants and Climate	10	M
FBMFRA	Risk Analysis in the Food Chain	10	M
PSMA1A	Tropical Environments	10	M
APMA89	Water, Agriculture and Irrigation	10	M

Amenity Horticulture and Social and Therapeutic Horticulture Options

PSMHC2	Amenity Horticulture	10	M
PSMHC4	Amenity Turf Management	10	M
PSMHC1	Arboriculture and Practical Horticulture	10	M
PSMHM7	Community and Landscape	10	M
AP2A26	Forestry and Woodlands	10	I
PSMHK8	History of Landscape Design	10	M
PSMHM8	Horticultural Therapy	10	M
PSMP7	Landscape and Garden Design	10	M
PSMHN7	Landscape Ecology and Landscape Reclamation	10	M
PSMHB4	Marketing and Product Development	10	M
PSMHL5	Planting Design	10	M

Horticultural Crop Protection Options

AP3A56	Business Planning and Control	20	H
APMA90	Climate Change and Food Systems	10	M
PSMAB5	Crop Pests and Integrated Crop Protection	10	M
PSMHY4	Ecology and Management and Plant Disease	10	M

FBGQAS	Food Quality Assurance and Safety	20	H
PSMHB7	Horticultural Crop Physiology and Technology	10	M
FBMFM1	Introductory Food Microbiology	10	M
PSMHB4	Marketing and Product Development	10	M
APMA62	Nematology	10	M
PSMHS7	Pests and Diseases of Horticultural Crops	10	M
PSMAF8	Plant Tissue Culture	10	M
AP3A76	Principles and Practice of Biological Control	10	H
FBMFRA	Risk Analysis in the Food Chain	10	M
PSMAG8	Weed Ecology	10	M
PSMAE7	Weed Management	10	M

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

A Diploma may be obtained by completing the six compulsory modules, three additional optional modules and an extended essay worth 30 credits by the end of June (PSMH5C).

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 **19th September** in the final year.

Progression requirements
See appended progression requirements for students following a post-experience certificate.

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 or 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 50 or more overall including a mark of 60 or more for the dissertation and have no mark below 40 will be awarded eligible for a Merit.

For PG Diplomas
To pass the Postgraduate Diploma students must gain an average mark of 50 or more over 120 credits. 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 of 60 or more overall including a mark of 50 or more for the dissertation and have no mark below 40 will be awarded eligible for a Merit.

Admission requirements
Entrants to this programme are normally required to have obtained an honours degree in a biological subject, agriculture, horticulture, or environmental science, and persons with other qualifications as may be approved by senate. Applicants whose academic qualifications do not meet these requirements may in the first instant be admitted to a post-experience course; they may then transfer to MSc status if their performance during the first term is satisfactory.

Admissions Tutor: Professor P Hadley.

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 Programme Directors, the Careers Advisory Service, the University's Special Needs Advisor, Study Advisors, Hall Wardens and the Students' Union.

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:

1. apply, or adapt, practical instructions safely and accurately;
2. carry out a variety of experimental procedures in the laboratory;
3. interpret quantitatively the results of experiments undertaken by themselves or others;
4. devise experimental methods appropriate for tackling a particular problem.

Teaching/learning methods and strategies

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:

1. make use of IT (word processing, spreadsheets, web sources);
2. communicate scientific ideas;
3. give oral presentations;
4. work as part of a team;
5. use library resources;
6. manage time.

Teaching/learning methods and strategies

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 – 5 contribute to assessed coursework during the first two terms.

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 be expected 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 the module description and in the programme handbook. The University reserves the right to modify this specification in unforeseen circumstances, or where the process of academic development and feedback from students, quality assurance processes or external sources, such as professional bodies, requires a change to be made. In such circumstances, a revised specification will be issued.

Progression from Post-experience diploma to MSc course

Candidates admitted to a post-experience course who have followed the MSc programme during the Autumn term may, at the discretion of the Head of School, transfer to the MSc programme if their performance in the December/January School examination is satisfactory. The registration being back dated to the beginning of the Academic year.