

MSc/Diploma in Horticulture

For students entering in October 2006

Awarding Institution:
Teaching Institution:
Faculty of Life Sciences
Date of specification: 7 June 06
Programme Director: Professor P Hadley
Board of Studies: MSc Horticulture

The University of Reading
The University of Reading
Programme length: 12 months

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

<i>Mod Code</i>	<i>Module Title</i>	<i>Credits</i>	<i>Level</i>
<i>Compulsory modules (120 credits)</i>			
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

PSMHB7	Horticultural Crop Physiology and Technology	10	M
PSMAB7	Crops and Climate	10	M
PSMAF8	Plant Tissue Culture	10	M
PSMAA7	Plant Biotechnology for Post Harvest Quality	10	M
PSMHH8	Plant Developmental Genetics and Physiology	10	M
PSMHA8	Controlled Environment Technology	10	M
APMA33	Seed Science and Technology	10	M
PSMHC1	Arboriculture and Practical Horticulture	10	M
PSMA1A	Tropical Environments	10	M
APMA43	Crops and Water	10	M
APMA41	Agriculture in the Tropics	10	M
PSMHB4	Marketing and Product Development	10	M
PSMHU2	Computing for Horticulture and Landscape	10	M
FB3GQA	Food Quality Assurance	10	H
FBMFCH	The Food Chain from Farm to Fork	10	M
FBMFM1	Introductory Food Microbiology	10	M
APME62	Multinational Food Business in Developed and Developing Countries	10	M
AP3A56	Business Management (Planning Methods)	10	H
AP3A55	Business Management (Principles of Managerial Economics)	10	H
AP3A39	Business Management (Business Control)	10	H
AP2A26	Forestry and Woodlands	10	I

Amenity Horticulture and Social and Therapeutic Horticulture Options

PSMHL5	Planting Design	10	M
PSMHL7	Garden Design	10	M
PSMHN7	Landscape Ecology and Landscape Reclamation	10	M
PSMHC4	Amenity Turf Management	10	M
PSMHC2	Amenity Horticulture	10	M
PSMHK8	History of Landscape Design	10	M
PSMHC1	Arboriculture and Practical Horticulture	10	M
PSMHM7	Community and Landscape	10	M
PSMHB4	Marketing and Product Development	10	M
PSMHU2	Computing for Horticulture and Landscape	10	M
PSMHM8	Horticultural Therapy	10	M
AP2A26	Forestry and Woodlands	10	I

Horticultural Crop Protection Options

PSMHB7	Horticultural Crop Physiology and Technology	10	M
PSMHV8	Practical Pest Management	10	M
PSMAF8	Plant Tissue Culture	10	M
PSMHD4	Crop Disease and its Control	10	M
PSMAB5	Crop Pests and Integrated Crop Protection	10	M
PSMAG8	Weed Ecology	10	M

PSMAE7	Weed Management	10	M
APMA62	Nematology	10	M
PSMHB4	Marketing and Product Development	10	M
PSMHS7	Pests and Diseases of Horticultural Crops	10	M
AP3A76	Principles and Practice of Biological Control	10	H
FB3GQA	Food Quality Assurance	10	H
FBMFCH	The Food Chain from Farm to Fork	10	M
FBMFM1	Introductory Food Microbiology	10	M
APME62	Multinational Food Business in Developed and Developing Countries	10	M
AP3A56	Business Management (Planning Methods)	10	H
AP3A55	Business Management (Principles of Managerial Economics)	10	H
AP3A39	Business Management (Business Control)	10	H

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 **20th 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:

<u>Mark</u>	<u>Interpretation</u>
70 – 100%	Distinction
60 – 69%	Merit
50 – 59%	Good standard (Pass)
<u>Failing categories:</u>	
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 (or an average of 48% over 180 credits and a mark of 50% or more in at least 90 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 (or an average of 66% or more over 180 credits, and a mark of 70% or more in at least 90 credits), 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 (or an average of 58% or more over 180 credits and a mark of 60% or more in at least 90 credits) including a mark of 50% or more for the dissertation and have no mark below 40% will be 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 and have no mark below 40% will be eligible for the award of a Distinction. Those gaining an average mark of 60% or more 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 a 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

<p>A. Knowledge and understanding of:</p> <ol style="list-style-type: none"> 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. 	<p>Teaching/learning methods and strategies</p> <p>The knowledge required is provided in formal lectures supported by practical work, seminars and presentations.</p> <p>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.</p> <p><i>Assessment</i> Most knowledge is tested through a combination of coursework, including oral presentations, and formal examinations, plus a written report of a practical-based project.</p>
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Skills and other attributes

<p>B. Intellectual skills – able to:</p> <ol style="list-style-type: none"> 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. 	<p>Teaching/learning methods and strategies</p> <p>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.</p> <p><i>Assessment</i> 1 – 3 are assessed directly and indirectly in most parts of the course. 1 – 4 are assessed in the final research project report.</p>
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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.

Appendix

Progression from Post-experience certificate 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.