MSc/Diploma Tropical Agricultural Development (Crop Protection)

Awarding Institution:	The University of Reading
Teaching Institution:	The University of Reading Faculty of Life Sciences
Programme length:	12 months (MSc/Diploma)
Relevance and applicability:	For students entering in 2003
Date of specification:	May 2003
Programme Director:	Dr T R Wheeler
Board of Studies:	MSc Tropical Agricultural Development
Accreditation:	

Summary of programme aims

The aim of the Tropical Agricultural Development (Crop Protection) MSc Course is to provide an understanding of the different physical, economic and social environments in which the agriculture of developing countries is managed and improved. Also, to provide knowledge of the ways in which insects, pathogens and weeds affect crop plants and the ways in which these organisms damage crops, either in the field or in storage in tropical regions, and how these losses may be contained.

Transferable skills

The programme develops skills in:

- written and oral communication
- collection, summary and criticism of information in a specific field of interest
- working as a member of a team
- statistical methods for agricultural research
- applications of standard software packages (spreadsheets, word processing and presentation software)
- writing technical reports

Programme content

The taught part of the course comprises nine compulsory modules and three optional modules, spread between the Autumn and Spring Terms.

Module Code	*Module Title*	*Credits*	*Level*	*Term*
	Compulsory			
APMA41	Agricultural Production in the Tropics	10	M	1
SSM20	Tropical Environments	10	M	1
APMA44	Seminars in Agricultural Development	10	M	2
ASMB01	Quantitative Methods for the Life Sciences	10	M	1&2
APMA62	Nematology	10	M	1
PSMHV8	Practical Pest Management	10	M	
PSMAB5	Crop Pests and Integrated Protection	10	M	
PSMAE7	Weed Management	10	M	
APMA80	Dissertation	60	M	

Module Code	*Module Title*	*Credits*	*Level*	*Term*

	Optional			
PS1A1B	Crop Breeding and Biotechnology	10	M	2
PSMH3A	Chemical Control Strategies	10	M	
APMA33	Seed Science and Technology	10	M	1
APMA45	Organic Farming	10	M	2
APMA40	Crop Experimentation	10	M	2
IDM005	Comparative Extension	10	M	1
APMA46	Tropical Crops	10	M	2
PSMHD4	Crop Disease and Control	10	M	
IDM020	Participatory Learning and Action (PLA) in Development and Extension	10	M	1

Notes on module listing

For MSc students
Students must complete all nine compulsory modules and choose three optional modules. A dissertation worth 60 credits must be completed by the end of August.

For Diploma students
Students must complete all nine compulsory modules, then the following two routes are available:

Either:
Students must choose three optional modules
Or:
Students complete an extended essay worth 30 credits by the end of June.

Part-time/Modular arrangements
The MSc programme can be undertaken on a part-time basis over two years with students dividing the modules equally between years.

Progression requirements
Candidates reaching a creditable standard (50% or more in the taught modules) at the first attempt proceed to the MSc course which is completed by the preparation of the MSc dissertation.

Summary of teaching and assessment
The taught component of the course comprises 12 modules:

1. The 5 core modules cover different aspects of Tropical Agricultural Development and are taught to the three MSc Tropical Agricultural Development courses. They are compulsory.

2. The 4 required specialised modules develop specific knowledge in the protection of tropical crops. They are compulsory.

3. The optional specialised modules are chosen from a wide range of topics within the broad area of agricultural development. Three such modules are chosen.

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 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 be less than 60 credits.*

Students who gain an average mark of 70 or more overall including a mark of 70 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 60 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. 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 be less than 60 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 eligible for a Merit.

For PG Certificate
To pass the Postgraduate Certificate students must gain an average mark of 50 or more. In addition the total credit value of all modules marked below 40 must not exceed 10 credits.*

*The provision to permit a candidate to be passed overall with a profile containing marks below 40 is made subject to the condition that there is evidence that the candidate applied his or herself to the work of those modules with reasonable diligence and has not been absent from the examination without reasonable cause.

Oral examination of some or all the candidates will be held at the Examiners' Meeting in September. During the oral examination, candidates are expected to show an understanding both of the background to their dissertation and of the general course work.

Admission requirements
Entrants to this programme are normally required to have obtained:

A minimum of a second class honours degree (or its equivalent) in the agricultural or biological sciences. Applicants with other qualifications and substantial experience of tropical agriculture, will also be considered.

Admissions Tutor:
Dr T R Wheeler

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.

Within the Department of Agriculture additional support is given through practical classes in IT. There is a Programme Director to offer advice on choice of modules within the programme. All students are issued with a comprehensive Programme Handbook at the beginning of the degree, which includes a detailed outline of the programme, its constituent modules and assessment guidelines. Day to day queries (eg timetabling), should be addressed to the Postgraduate Student Office in the School of Agriculture, Policy and Development or, where necessary, the Programme Director.

Career prospects
Graduates of MSc Tropical Agricultural Development (Crop Protection) are well suited to careers in agricultural research within international and national institutions, in governmental and non-governmental organisations operating in the tropics, and in international development charities.

Opportunities for study abroad or for placements
The MSc dissertation may involve short periods of study in a research institute in the tropics. The MPhil thesis usually involves a placement in the tropics for about 12 months.

Educational aims of the programme
The Tropical Agricultural Development course is designed to provide an understanding of the different physical, economic and social environments in which the agriculture of developing countries is managed and improved. It also develops professional and practice-related skills in crop protection as applicable to tropical and sub-tropical regions.

The Tropical Agricultural Development (Crop Protection) course develops knowledge of the ways in which insects, pathogens and weeds affect crop plants and the ways in which these organisms damage crops, either in the field or in storage in tropical regions, and how these losses may be contained. An understanding of the reasons for differing types and level of damage under different conditions, whether geographic, climatic or associated with agricultural practices, is also developed.

Programme Outcomes

Knowledge and Understanding

A. Knowledge and understanding of:	**Teaching/learning methods and strategies**
1. The processes by which weeds, pests, and diseases affect crop plants. 2. How losses due to weeds, pest and diseases may be contained. 3. Agricultural development in tropical regions and the contribution of crop science to development. 4. The inter-associations among crop protection practices and rural economics, extension and social systems in the tropics. 5. The effects of climate, geography, and agricultural practices on the damage imposed by crop pests and diseases, and by weeds.	Knowledge and understanding of 1-5 is achieved through lectures, seminars and laboratory sessions. An individual student's learning concerned with item 3 can be directed by selection of optional modules. *Assessment* Knowledge is tested through written assignments, laboratory reports, examinations and oral presentations.

Skills and other attributes

B. Intellectual skills – able to:	**Teaching/learning methods and strategies**
1. Apply knowledge and understanding gained to new situations and applications. 2. Analyse and solve problems. 3. Show initiative in independent problem-solving. 4. Critically review and evaluate published information.	1, 2 and 4 are developed through coursework, seminars, feedback sessions during modules, and the dissertation. Coursework also develops the skills listed in 3. The dissertation builds further on 3 and 4. *Assessment* 1, 2 and 4 are mainly assessed through coursework and examinations. 3 is largely assessed through the dissertation and coursework presentations.

C. Practical skills – able to:	**Teaching/learning methods and strategies**
1. Research, conduct and report on investigations using literature or data sources. 2. Undertake laboratory (plant sciences or computer) investigations using appropriate methods.	Much coursework involves the skills listed under 1. Laboratory classes, involving experiments with crop plants or PC-based, develop skills in 1 and 2. These skills may be developed further in the dissertation. *Assessment* 1 and 2 are assessed through coursework, practical reports and the dissertation.

D. Transferable skills – able to:

1. Communicate knowledge effectively through written and oral presentations.
2. Work as a member of a team and develop interpersonal skills.
3. Research and retrieve information efficiently through the development of library skills.
4. Develop independent research skills.

Teaching/learning methods and strategies
Skills listed under 1 and 3 are developed through most of the programme, but particularly in written assignments, dissertation preparation and specific literature searches. Item 4 is further developed during the dissertation. Research and presentation of development projects within teams effectively develops the skills listed in 3

Assessment

Item 1 is assessed through course work, examinations and the dissertation. Item 3 is assessed through course work and the dissertation. The skills listed under 4 are developed during the dissertation. Specific modules on the programme use assessments of team projects to address item 2.

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 expect 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 module and programme handbooks.