

Study Plan
Faculty of Agriculture
MASTER in Plant Protection
(Thesis Track)

First: GENERAL RULES & CONDITIONS:

Plan Number			2013
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1. This plan confirms to the valid regulations of programs of graduate studies.
2. Specialties of Admission:
 - The First priority: Bachelor's of Plant Protection or any of its fields.
 - The Second priority: Bachelor's of Horticulture and Plant Protection or any of its fields.
 - The Third priority: Bachelor's of Plant Production or any of its fields.
 - The Fourth priority: Bachelor's of Agricultural Sciences or any of its fields.
 - The Fifth priority: Bachelor's of Biological Sciences or any of its fields.
3. Admission policies: The Third Policy

Second: SPECIAL CONDITIONS: None.

Third: STUDY PLAN: Studying (33) Credit hours as follows:

1. Obligatory Courses : Studying (18) credit hours successfully:

Course No.	Course Title	Credit Hours	Theory	Prac.	Prerequisite
0601701	Experimental Design and Analysis	3	3	-	
0606711	Integrated Pest Management	3	3	-	
0606712	Pesticide Chemistry	3	3	-	
0606715	Insect Structure & Function	3	3	-	
0606722	Diagnosis of Plant Diseases	3	2	1	
0606731	Weed Management	3	3	-	

2. Elective Courses: Studying (6) Credit hours successfully from the following:

Course No.	Course Title	Credit Hours	Theory	Prac.	Prerequisite
0606714	Insect Behavior	3	3	-	
0606724	Identification of Viral Diseases	3	2	1	
0606725	Identification of Phytopathogenic Bacteria	3	2	1	
0606756	Economic Acarology	3	3	-	
0606761	Fungal Diseases	3	3	-	
0606762	Economic Nematology	3	3	-	
0606771	Parasitic Flowering Plants	3	3	-	

3. Thesis: (9) Credit hours # (0606799).

Course Description
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(0601701) Experimental Design and Analysis (3 Credit Hours)

This course covers linear and multiple regression and correlation, analysis of variance and basic experimental design analysis. Mean separation procedures, Duncan's Multiple Range Test (DMRT), Turkey's W. procedure, Least Significant Difference (LSD), and Orthogonal contrasts. Students will be exposed to the uses of PC in experimental design and analysis.

(0606711) Integrated Pest Management (3 Credit Hours)

This course deals with the principles of integrated pest management, (concepts, ecological aspects, and economics of pest-management), tactics(emphasis on the cultural and biological means and the judicious use of pesticides), and strategies (proper sampling, measurements, analysis and modeling of pest populations).

(0606712) Pesticides Chemistry (3 Credit Hours)

This course deals with structure, isomerization and biological activity of the following pesticides groups: insecticides, fungicides and acaricides. It also includes study of chemical structure and biological activities of phermones, insect growth regulators, insect sterilants and repellents.

(0606714) Insect Behavior (3 Credit Hours)

The course emphasize the basic principles of insect behavior and insect behavior, resulting from function of various systems. Examples of applied nature of insect behavior in relation to control measures will be discussed.

(0606715) Insect Structure and Function (3 Credit Hours)

This course deals with the study of the structure and function of insects heads thorax, abdomen and their appendages. The study of the structure and function of the internal systems of insects and the blood, hormones and phermones.

(0606722) Diagnoses of Plant Diseases (3 Credit Hours)

This course deals with identification of plant diseases caused by various agents (fungi, bacteria, viruses and nematodes ...etc.) in the field and laboratory. Its also includes diagnostic by symptoms of diseases and study of host pathogen-environment relationship.

(0606724) Identification of Viral Diseases (3 Credit Hours)

This course provides the students with the theoretical and practical information regarding identification methods of plant viruses including the use of electron microscopy, serological and biological techniques. The course will be based on problematic approach that is intended to enhance effective utilization of several techniques to achieve identification of viruses on various crops.

(0606725) Identification of Phytopathogenic Bacteria (3 Credit Hours)

This course aims to give the student information on techniques used for isolation and identification of phytopathogenic bacteria using morphological methods, biochemical, serological and physiological tests, in order to distinguish between the different genera, species and subspecies, species and subspecies of phytopathogenic bacteria.

(0606731) Weed Management (3 Credit Hours)

The course deals with the socioeconomic impact of weeds, review of various control methods, integrating them at the farm level, especially in small farming systems. The rational use of cultivation activities towards better weed management. Study of the biology of some common weeds and examples on their management with the available methods and recent means. The course include field study cases and presentation of research papers.

(0606756) Economic Acarology (3 Credit Hours)

This course deals with the study of mites in relation to economic crops, animals and man. Students study the mite population, methods of estimation and evaluation of mite population on the life history, damage and losses to major economic crops. Practical period might be given.

(0606761) Fungal Diseases (3 Credit Hours)

This course deals with the study of groups of fungal diseases (Damping-off, root-rots, wilt diseases, powdery mildew, downy mildew, leaf spots, blight diseases, anthracnose, cankers, rusts and smut diseases) including their causal agents, symptoms, environmental factors affecting their development and dissemination, and their control. Student will be exposed to recent relevant research topics.

(0606762) Economic Nematology (3 Credit Hours)

This course deals with historical background, economic aspects of crop losses, nematode diseases of major crops, ecological and epidemiological factors influencing diseases attributed to nematodes, methods of nematode control through integration of biological, cultural, chemical and regulatory means.

(0606771) Parasitic Flowering Plants (3 Credit Hours)

The course deals with parasitic flowering plants and their distribution worldwide, their impact on their hosts, specially on the strategic crops. Physiology of parasitism, growth of the parasitic plants, means of management, with emphasis on parasitic plants in Jordan. The course includes conducting some laboratories, field study cases, literature surveys and presentation of research papers.