

Deanship of Graduate studies
King Saud University



Ph.D. Program in Entomology

College of Food and Agricultural Sciences
Department of Plant Protection

Academic Year 1428/1429H

Introduction:

Entomology is one of the branches in the plant protection department. It has been playing a major role in its educational, research, and community services ever since. It is carried out by eight out of 19 faculty members.

The entomological branch offers M.Sc. degree in entomology. Twelve students obtained their M.Sc. degree, in addition to the currently enrolled students both from the Kingdom of Saudi Arabia (KSA) and other Arab countries.

Entomology branch includes many sub-branches in various specializations including economic entomology, biological control, medical and veterinary insects, acarology, and apiculture. Faculty members in entomology carry out researches related to the pests, their diagnosis and control in the kingdom level. Research projects are funded by the different scientific centers or departmental funds.

Degree Name:

Ph.D. in Entomology

Program Objectives:

The objectives of the program can be summarized as follows:

1. To provide opportunity for graduate studies within KSA to increase the number of specialists at an excellent level of specialization to meet the increasing demand for these specialists.
2. To qualify the local cadre in the fields of higher education and scientific research related to KSA agricultural production problems.
3. To support the departmental graduate study programs and to enrich the scientific research in the field of Entomology.

Admission Requirements:

1. Meeting the requirements for admission to the graduate school according to the unified regulations of graduate studies in KSA universities.
2. Student should obtain M.Sc. degree in Entomology or any other related fields.
3. Getting a minimum of 450 in TOEFL or 4.5 in IELTS or equivalent, alternatively, the M.Sc. degree of applicant should have been obtained from an institution where English language is the language of instructions, or on the departmental board suggestion.

Degree Requirements:

1. A minimum of 22 credit hours from courses offered by the department or by other related departments are required.
2. Passing the comprehensive exam.
3. Fulfill the dissertation requirements.

General Program Structure:

At least twenty two credit hours in addition to the dissertation are required.

Number & Type of Courses	Credit Hours
5 Core Courses	9
--- Elective Courses	13
700 dissertation	--
Total	22

Courses

1. Core Courses:

601 PLPT	Ecological Management of Insect Pests
605 PLPT	Selected Topics in Entomology
609 PLPT	Inter - Relationships Between Insects and Plants
694 PLPT	Seminar -1
695 PLPT	Seminar -2

2. Elective Courses (if Applicable):

612 PLPT	Immature Insect Taxonomy
615 PLPT	Agricultural Acarology
618 PLPT	Urban Entomology
621 PLPT	Insect Chemical Ecology
624 PLPT	Beekeeping Technology
691 PLPT	Special Studies in Entomology
-- -- -- --	Other courses offered by other graduate programs in the same department or other departments upon the approval of the departmental board.

Program Schedule:

First Semester

Course Code	Course Title	Credit Hours
601 PLPT	Ecological Management of Insect Pests	3
694 PLPT	Seminar- 1	1
----	Elective courses upon the approval of the departmental board.	7
Total		11

Second Semester

Course Code	Course Title	Credit Hours
605 PLPT	Selected Topics in Entomology	1
609 PLPT	Inter - Relationships Between Insects and Plants	3
695 PLPT	Seminar -2	1
----	Elective courses upon the approval of the departmental board.	6
Total		11

Courses Description

601 PLPT Ecological Management of Insect Pests 3 (3+0)

Insect-resistant cultivars (or insect resistant varieties), genetic engineered resistant plant varieties, heat unit requirements, pest management practices, reducing average favorability of the ecosystem, disrupting continuity of pest requisites, diverting pest populations away from the crop, and managing ecological backlash

605 PLPT Selected Topics in Entomology 1 (1+0)

Discussion and lectures in entomology topics that were not covered in other courses as instructed by the department.

609 PLPT Inter - Relationships Between Insects and Plants 3 (2+1)

Allelochemical interactions among plants, herbivores, and their predators; allelochemicals reflecting interactions between plants, and pests, role of plant allelochemicals in the survival strategy of herbivores, rare plant-insect relationships, plant stress, insect interactions.

612 PLPT Immature Insect Taxonomy 3 (1+2)

Principles and theories of taxonomy. Terminology and morphology of immature insects. Using taxonomic keys for identification of agriculture insects to the order and family levels. Collection, preserving, and rearing immature insects.

615 PLPT Agricultural Acarology 3(3+1)

Advance studies in morphology and ecology of important agricultural Acari with emphasis on the identification of important species.

618 PLPT Urban Entomology 3(2+1)

An advanced understanding of the theory and practice of major urban insect pests and the factors that contribute to their pest status. The biology, behavior, ecology, and identification of urban pests.

621 PLPT Insect Chemical Ecology 3 (2+1)

Glandular Secretions in insect communications (Pheromones, Allomones, Kiromones,...etc.). Source of secretion, function, and chemical nature. Neurophysiological basis of glandular secretions. Mechanisms of releasing, receiving, and dispersal. Other methods of communications in insects. Utilization of insect glandular secretions in IPM programs. Methods of chemical analysis for insect glandular secretions.

624 PLPT Beekeeping Technology 3 (2+1)

Management and production in honeybee keeping. Techniques of queen rearing and instrumental insemination. Selection and improvement of honeybee races. Diagnosis and control techniques of honeybee diseases and pests. Technology and manufacture, medical importance, chemical analysis of honeybee products. Potential effects of beekeeping on agriculture.

691 PLPT Special Studies in Entomology 1 (1+0)

Selected entomological study for an individual student related to his area of specialization under the direction of the advisor.

694 PLPT Seminar -1 1 (1+0)

Advanced topics in one of the diverse issues that are related to the student major.

695 PLPT Seminar -2 1 (1+0)

The student presents a report on one of the critical problems in the field of plant protection in Saudi Arabia under the supervision of his advisor.

700 PLPT Dissertation