

DESCRIPTIONS OF GRADUATE COURSES for Agricultural Entomology

Insect Morphology (36-28-501) 3Cr.

Evolution of the arthropod structures, metamorphosis, cephalization and tagmosis, structure of insect egg and embryonic development, integument and muscles, head and its appendages with emphasis on mouth parts, structure of thorax, abdomen and their appendages, structure of alimentary canal, respiratory system, circulatory system, fat body, nervous system, reproductive system and sense organs.

Insect Physiology (36-28-603) 3Cr.

Insects nutrition, digestion and absorption, hemolymph, blood circulation and functions, molting and cuticle formation, functions of cuticle, insect respiration, excretion and reproduction, physiology of nervous system and sense organs and functions of hormones.

Prerequisite: Insect Morphology (36-28-501)

Insect Ecology (36-28-503) 3Cr.

Trophic relationships, populations and population dynamics of predators and parasites, ecological genetics, coexistence and competition, communities and distribution, etc.

Biological Control of Insects (36-28-607) 2Cr.

Philosophy and fundamental principles of biological control, classical and applied biological control, Lectures on biology, behavior and other characteristics of predators, parasites, parasitoids and pathogens.

Prerequisite: Insect Ecology (36-28-503)

Pest Management (36-28-605) 2Cr.

Advanced lectures on principles of integrated pest management such as ecological basis of IPM, economic threshold, crop loss assessment, monitoring and modern insect control tactics.

Prerequisite: Ecology (36-22-411)

Advanced Acarology (36-28-505) 3Cr.

Classification of Chelicerata and their phylogenic relationships, relation of acari to other animals and plants, identification of acari to family and genus level.

Seminar I (9010502-36) 1Cr.

Literature search on a topic related to their research program by students, presentation of seminar and group discussions.

Seminar II (9010504-36) Cr.

Literature search on a topic by students, presentation of seminar and group discussions.

Insect Systematic (36-28-601) 3Cr.

Theory and philosophy of insect taxonomy, phylogeny of insect orders, kinds of insect identification keys and their construction, principles and methods of classification of insect orders up to family and subfamily levels, identification of insect samples up to species level.

Prerequisite: Insect Morphology (36-28-501)

Advanced Toxicology (36-28-609) 3Cr.

Principles and methods of bioassay, mechanism of effect and metabolism of pesticides, resistance mechanism of insects to pesticides, synergism and antagonism by pesticides, pesticide residues in

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food and environment, formulation technology of pesticides, pesticide regulation and laws, different methods for determination of LD50, LC50, LT50 and residue determination.

Prerequisite: Insect Physiology (36-28-603)