DESCRIPTIONS OF UNDERGRADUATE COURSES for the Degree of Bachelor of Science in Agriculture

General Entomology and Pest Control (36-28-221) 3Cr.
General insect morphology, anatomy, physiology and classification of insects to order level and biology of representative pests in relation to pest control.

Plant Pathology (36-28-223) 3Cr.
This course concerns plant disease concepts, terminology and classes of causal infectious and noninfectious agents to understand how plants get infected, resist and defend themselves and how to control these diseases**.**
Prerequisite: Botany I (36-22-103) and Botany II (36-22-105)

Entomology (36-28-331) 3Cr.
Insect morphology and anatomy, introductory lectures in insect biology, physiology and behavior, principles and methods of classification of insects to family level with emphasis on their identification.
Prerequisite: Zoology (36-24-113) and General Entomology and Pest Control (36-28-221)

Mycology (36-28-337) 3Cr.
This course focuses on fungal world, terminologies, morphology, biology, physiology, cytogenetics, ontogeny and classification of fungi.
Prerequisite: Botany I (36-22-103) and Botany II (36-22-105)

Field Crop Pests (36-28-343) 3Cr.
Identification, biology and control of economic insects on field crops with emphasis on key pests.
Prerequisite: Entomology (36-28-331)

Field Crop Diseases (36-28-345) 3Cr.
Discusses important cereal (wheat, barley, rice, corn, etc), industrial (cotton, sugar beet, sugar cane, etc), and legume crop diseases, their distribution, economical importance and how to control these diseases.
Prerequisite: Plant Pathology (36-28-223)

Fruit Tree Pests (36-28-451**)** 3Cr.
Classification, morphology, biology, damage and management strategies of fruit tree pests with emphasis on deciduous tree fruits, citrus, nuts and small fruits.
Prerequisite: Entomology (36-28-331)

Fruit Tree diseases (36-28-453**)** 3Cr.
Studies the major diseases of pome fruits, stone fruits, grapes, berries, citrus plants, nuts, olives, tea and date-palm, their distribution, epidemiology, economical importance and methods of controlling these diseases.
Prerequisite: Plant Pathology (36-28-223)

Vegetable and Ornamental Crop Pests and Diseases (36-28-460**)** 3 Cr.
Economic importance, bioecology, epidemiology, classification and measures of prevention and control of the important pests and diseases of vegetables and ornamental plants.
Prerequisites: Entomology (36-28-331) and Plant Pathology (36-28-223)

Principles of Pest Control (36-28-340) 2Cr.
Applied ecology of pests, economic threshold, forecasting, use of resistant plants and other control tactics for pests.
Prerequisite: Entomology (36-28-331) and Ecology (36-22-411)

Principles of Plant Disease Control (36-28-342) 2Cr
Applied ecology of diseases, epidemiology, forecasting, use of resistant varieties and other plant disease control strategies.
Prerequisite: Plant Pathology (36-28-223)

Toxicology (36-28-447) 3Cr.
Chemical composition and reaction of insecticides on insect pests, fungicides and other pesticides, their use and safety application.
Prerequisite: Biochemistry (36-26-201), Experimental Design in Agriculture I (36-22-329)

Chemical Control Technology (36-28-455) 1Cr.
Sprayers, dusters, mist blowers, etc and their use in plant protection, the effect of droplet size, time of spraying, drifts, etc**.**
Prerequisite: Toxicology (36-28-447)

Plant Protection Seminar (36-28-449**)** 1Cr.
Students select scientific topics in the field of plant protection, do literature search, presentation and group discussion.
Prerequisite: Fourth Year Standing

Training in Plant Protection (36-22-490**)** 2Cr.
Students will be introduced to one of the agricultural organizations for training in the field of agriculture and plant protection.
Prerequisite: Third Year Standing.

Stored Product Pests (36-28-481) 2Cr.
General definition of stored products, economic importance of stored products in Iran, classification and biology of insects associated with stored products, control measures and fumigation practices in warehouses and silos**.**
Prerequisite: Entomology (36-28-331)

Acarology (36-28-485**)** 2 Cr.
Phylogeny, classification, morphology and biology of acari with emphasis on identification and control of economic important species.
Prerequisite: Zoology (36-24-113)

Nematology (36-28-467**)** 2Cr.
Morphology, anatomy, physiology and biology of nematodes, identification of plant parasitic nematodes, different control methods will be discussed.
Prerequisite: Zoology (36-24-113)

Pollinator Insects and Honey Bees (36-28-470) 2Cr.
Classification, morphology and biology of insect pollinators with emphasis on bees and their efficient agricultural use, biology and behavior of honey bees, colony management for production and utilization in agriculture.
Prerequisite: Entomology (36-28-331)

Principles of Insect Classification (36-28-472) 2Cr.
History and principles of insect classification, phylogeny of insects and other arthropods.
Prerequisite: Entomology (36-28-331)

Plant Physiological Disorders (36-28-483) 1Cr.
Discusses physiological disorders due to excess or deficiencies of macro and micro nutrients, heat and cold effects, chemical toxicities, excess and deficiencies of water, unfavorable pH and air pollution, their symptoms, importance and how to control them.
Prerequisite: Plant Pathology (36-28-223)

Plant Pathogenic Prokaryotes and Viruses (36-28-476) 3Cr.
Discusses viral and bacterial terminologies, general characteristics, transmission methods and symptoms of viral and bacterial diseases, their epidemiology, economical importance and how to control them.
Prerequisite: Plant Pathology (36-28-223)