

No.	Name	Credit Hours	Prerequisite
50101	Agriculture In Palestine	3	---
Agriculture In Arabic World. Geographical & Climatic Factors Affecting Agricultural In Palestine. Modern History Of Agriculture Development In Palestine, Water Resources, Plant Production Sector, Animal Production Sector, Beekeeping, Food Processing. Agricultural Marketing.			
50102*	Principles Of Agricultural Machines	3	---
Machines & Equipments Used In Agricultural Production: Importance, Structure & Function & Uses Of Machines Hydraulic, Power Hausa Formation & Efficiency Of Use Of Machines. Tractor & Tools Used For Soil Preparation, Sowing & Plantation, Harvesting. Spraying & Fertilizer Application.			
51100	House Gardening	3	---
The course will cover the importance of house gardening, principles of planning, garden divisions, landscaping, garden components, soil preparation, plants used including: fruit trees, vegetables, medicinal and aromatic plants, timber trees, shrubs, hedges, climbing plants, lawns, annual flowers, thorne plants, and watery plants), plants environmental requirements, managements, propagation, and main principles of landscape design			
51201	Principles Of Plant Production	3	44101
The Aim Of This Course Is To Give The Students The Fundamentals Of Plant Production, Since It Covers The Following: Relationships Between Humans And Plants, The Development Of Plant Usages, The Structure And Functions Of Different Plant Parts, Methods Of Plant Propagation, Plant Classification, Growth Regulators, Environmental Factors (Soil, Temperature, Water, And Light) And Its Effects On Plant Production, Photosynthesis, Respiration And Translocation. The Effects Of Pests And Weeds. The Plant Productions Systems.			
51202	Principles Of Plant Protection	3	44101
This Course Include Two Sections: Plant. Diseases: Agriculture, Plant Diseases And Human History. Causes Of Plant Diseases. Development Of Plant Diseases. Management Of Plant Diseases. Chemical Control Of Plant Diseases. Integrated Pest Management. Biotechnology. Plant Pests: Naming & Classification Of Living Things, Arthropods. Insects. Pest. Agricultural Ecosystem. Pest Status Development, Pest Damage To Crop Plants. Methods Of Pest Control. Forecasting Pest Attack.			
51203	Plant Physiology	3	51201
This Course Covers The Basic Concepts Of Fundamental Knowledge Of Plant Physiology: Water Absorption And Diffusion, Transpiration And Translocation, Mineral Nutrition, Photosynthesis And Respiration, And The Effect Of Hormones On Plant Metabolism.			
51204	Plant Physiology Lab.	3	+51203
This Course Includes Several Important Experiments Such As: Seed Viability Testing, Permeability Of Cell Membranes, Water Potential, Photosynthesis And Respiration, Transpiration And Hormones (3 Hours Per Week).			
51205	Modern Genetics	3	44101

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This Course Includes The Basic Concepts Of Genetics And Organism, Mendel Ian Analysis Chromosomes Theory And Inheritance, Constancy And Variation Of DNA. DNA Structure, Function And Regulation, Extrancuclear Genome, Principle Of Gene Mapping, Population Genetics, Quantitative Genetics, Cytogenesis.			
*51206	Mycology	3	44102
This Course Study Fungi In Respect To Its Characteristics, Nutrition, Reproduction, Importance And Classification According To Different Parameters, It Includes Studying A Wide Group Of Fungi In Details Including Biology, Life Cycle And Classification. Mycology Lab. Culturing Includes Learning All Basic Techniques In Dealing With Fungi In Respect To Culming,. Isolation And Looking At Morphology And Classification Of A Wide Group Of Fungal Examples.			
51207*	Plant Science: Anatomy & Morphology	3	44101
Introduction to plants and botany, Plant kingdom, Plant cell, Growth and development of cells, Plant tissues and primary growth of stems, Stems, Leaves, Roots, Structure of woody plants, and Flowers & reproduction			
*51301	Plant Breeding	3	51205
This Course Covers: Plant Propagation Particularly By Seeds, Plant Breeding Methods And Techniques, Principles Of Genetic That Related To Breeding Practice And Relationship Between Breeding And Biotechnology. This Course Requires 3 Hours Lab Per 2 Weeks.			
51302	Plant Taxonomy	3	*51207
Study and scope of plant taxonomy, general characters of organisms, plant identification and naming, flora, taxonomic characteristics, development of systems of plant taxonomy, kingdom plantae, seed plants (angiosperm and gymnosperm), origin and revolution of flowering plants			
51308	Green Forages	3	51201
This Course Cover The Definition Of Forage Crops, Composition And Nutritive Value, Types Of Forage Crops, Forage Crops Description And Classification, The Cultural Practices For The Most Important Forage Crops, And Uses Of Forage Crops.			
*51311	Vegetable Production	3	51201
This Course Cover The Economic Importance And The Nutritive Value Of Vegetable Crops, The Suitable Environmental Conditions, The Different Agricultural Practices That Includes: Land Preparation, Fertilization, Pest And Weed Control, Irrigation, Seeding Production, Protected Agriculture And Planting In The Open Field, For The Most Important Vegetable Crops That Include Roots, Stem, Leaves, Flowers, Fruits, And Seeds. Crop Rotation And Intercropping, Harvesting, Storage And Marketing. This Course Includes Labs That Cover Vegetable Classification And Description Of Plant Structure.			
*51321	Field Crops Production	3	51201
This Course Covers Several Aspects Of Cereals, Legumes, Industrial Crops, Oil Crops And Forages, Including Their Economic Importance, Production Areas, Environmental Requirements, Nutritive Value, Methods And Techniques To Increase The Productivity Of Field Crops Under Rain Fed And Irrigated Conditions. Lab Includes: Classification And Plant Description.			
51322	Seed Production	3	---
This Course Covers: Seed Classification, Seed Formation, Development, Germination & Dormancy. Seed Viability Testing. Chemical Composition, Foundation Seeds. Registered Seeds. Certified Seeds. Distribution Strong & Marketing. Lab.: Lab Sessions Are Needed To Practice The Above Maternal Tests. Example. Germination. Viability Composition & Storage.			
* 51331	Fruit Trees Production	3	51201

<p>This Course Covers The Basic Scientific Information About Evergreen And Deciduous Fruit Trees Production Which Include: Stone Fruit, Poem Fruit, Nut Fruits, Citrus, Olive, Banana, Grapes And Gigs. The Course Cover The Root Stocks, Cultivars, Training And Pruning, Harvesting And Marketing, Disease And Insect Control, Pollination And Fertilization, In Addition To Its Environmental Requirement. The Lab (Equal To One Credit Hour) Covers Fruit Trees Classification, Plant Description, Fruit Trees Propagation.</p>			
51332	Deciduous Fruit Trees	3	*51331
<p>Environmental requirements for deciduous fruit trees, methods of planting, cultivation and training, pruning, groups of deciduous fruit trees: grape, pome fruits, stone fruits, fig and mulberry, persimmons, deciduous nut trees.</p>			
51333	Evergreen Fruit Trees	3	*51331
<p>Planting, Cultivation and management of evergreen fruit trees, groups of evergreen fruit trees: Dicotyledonous Orchards; citrus, olive, evergreen nut trees, papaya, annonas, mango and cashew) Monocotyledonous Orchards; palm, banana, and pineapple.</p>			
*51341	Floriculture And Landscape Of Gardens	3	51201
<p>This Course Includes Indoor And Outdoor Ornamental Plants. The First Part Covers Cut Flowers And Flowering Pot Plants, In Addition To Foliage Pot Plants For Different Plant Species. Studying Flowering Plants Which Is Propagated By Bulbs, Corms, Tubers. The Second Part Covers Establishment And Maintenance Of Ground Covers, Producing Trees And Shrubs Which Used In Garden Landscaping, Some General Garden Landscaping Systems Such As Aquatic Garden, Rock Garden And Others. This Course Include A One Credit Hour Lab.</p>			
*51351	Principles Of Forestry	3	51201
<p>This Course Covers The Following: The History Of Forestry Development And Other Related Sciences, The Aims And Principles Of Forestry, The Classification Of Forest Trees, Identify And Study The Different Varieties That Suitable To Palestine. Also The Course Cover The Forest Ecology, The Ecological Factors And Its Effects On Forest Growth, The Principle Of Forest Development, Forest Nurseries And Methods Of A Forestation, Forest Measurement, Forest Protection, And The Natural Forest In Palestine. The Course Include A One Credit Hour Lab.</p>			
*51361	Entomology	3	51202
<p>Importance & Diversity Of Insects, Classification, Nomenclature & Identification, Phylum Arthropod. Class Insecta. External Anatomy, Internal Anatomy & Physiology. Insect Development & Life Histories, Reproduction, Insect & Plants Relationships. Lab: Field Trips & Lab Sessions To Collect. Preserved Identify Of Insects.</p>			
*51362	Bee Keeping	3	--
<p>Basic Facts About Bees, Starting Beekeeping, Working The Colony, The Bee Year, Honey Plants. Bee Diseases & Predators. Bee Poisoning. Lab. Field Trips To Apiaries In The Region, Inspecting Honey Bee Hives, Identification Of Hive Parts, Identification Of Honey Bee Casts, Lifecycle, Diseases & Predators Of Honey Bee. Extraction Of Honey, Feeding & Taking Care Of Honey Bee.</p>			
51363	Principles Of Biological Control	3	*51361
<p>Pests, Pesticides And Biological Control. Natural Enemies. Biological Control Ecology. Maximizing Biological Control Through Research. Utilization By Public. Other Biological Control Methods.</p>			
51371	Plant Pathology	3	+51206

<p>The Course Include An Introduction, Study Of Parasitism And Diseases Development, Mechanism Of Disease Development And Plant's Defense System, Genetics Of Plant Disease, Influence Of Environmental Conditions On Disease Initiation And Development, Plant Disease Epidemiology And Control Strategies. Part Two Includes The Study In Details Of A Wide Range Of Infections And Non-Infectious Diseases Mainly Caused By Fungi, Bacteria, Mycoplasma, Parasitic Highly Plants, Viruses, Nematodes And Protozoa.</p> <p>Plant Pathology Lab. Includes Studying All Basic Techniques In Dealing With Plant Diseases In Respect To Isolation Of Causal Agents And Major Tools Of Disease Diagnosis.</p>			
51391	Pesticides	3	+43234
<p>General Consideration, Pesticide Formulations, Metabolism, Toxicity. Insecticides: Organo-Phosphorous, Carbomates, Organo-Chlorine, Pyrethroids & Other Related Compounds. Fungicides, Herbicides. Pesticide In The Environment.</p>			
*51402	Biotechnology & Genetic Engineering	3	51205
<p>Recombinant DNA Technology And Application Tools Of Genetic Engineering: Biological Material And General Techniques Molecular Biology PCR, Enzymes, Hybridization, Vectors, Gel Electrophoresis Of DNA, Probes, Cloning, Sequencing, Modification Of DNA. Genome Analysis, Gene Expression Analysis, Transgenic Plants And Animals: Principles, Procedures, And Examples. Objectives, Hazards On Human & Environment Laws & Ethics.</p>			
*51403	Plant Propagation & Nurseries	3	*51207
<p>This Course Covers The Basic Methods For Propagation Of Fruit Trees, Ornamental Plants, An Vegetative Propagation (I.E. Cutting, Layering, And Using Different Plant Organs For Tissue Culture). The Course Also Covers The Agricultural Structures Such As The Greenhouses And The Different Agricultural Media That Used For Plant Propagation. The Course Include One Credit Hour Lab.</p>			
*51409	Plant Tissue Culture	3	*51207
<p>This Course Consists Of Several Concepts: Types Of In Vitro Culture, Micro Propagation An Methods And Technologies, Genetic Manipulation And Transformation, Factors Affecting Success Of These Techniques Particularly Growth Regulators And Relationship Between Tissue Culture & Genetic Engineering.</p> <p>This Course Requires 3 Hours Lab Per 2 Weeks: To Provide Information About The Equipment, Media Preparation And Methods Of Sterilization.</p>			
51411	Protected Agriculture	3	+51311*
<p>This Course Cover The Importance Of Protected Agriculture, Types Of Structure And Protection Materials (Glass Houses, Wood Houses, Plastic Houses, Plastic Tunnels). The Design, Materials And Components, Arrangement, And Maintenance Of These Types. Methods Of Controlling The Environmental Factors Inside The Protected Houses. The Different Cultural Practices And The New Developed Techniques And Its Effects In Increasing The Productivity And Improving The Quality Of Crops. The Cultural Practices Under Protected Conditions For The Most Important Crops (Tomato, Cucumber, And Others.)</p>			
51461	Pests Of Field Crops	3	*51361
<p>Insect Pests Of corn; wheat and small grains; and legumes: Identification, lifecycle, symptoms of damage and management.</p>			
51462	Economic Entomology	3	51361
<p>Study Insect Pests Of Field Crop, Fruit Trees & Vegetables: Life Cycle, Damage, Method Of Control. It Cover Pests From The Following Orders: Homoptera, Hemiptera, Thysanoptera, Diptera, Coleopteran, Lepidoptera, Hymenoptera.</p> <p>Lab.: Field Trips & Lab Sessions That Include. Collection, Identification & Preserving Of Plant Pests.</p>			

51463	Principles Of Integrated Pest Management	2	51202
Definition Of Pests, History Of Pest Control. Economics Of Pest Control. Philosophy Of Pest Control. Natural Ecosystem. Agricultural Ecosystem. Plant Resistant, Natural Enemies, Insecticide Attractants, Repellents, Sampling & Statistical Analysis. Strategies Of Integrated Pest Management.			
*51464	Economic Mites	3	51202
Mites & Its Relations To Arthropods. External Anatomy, Internal Anatomy. And Physiology. Classification Of Mites. Biology & Ecology Of Economic Mites Attacking Fruit Trees. Vegetables & Field Crops. Their Life Cycle, Damage & Methods Of Control. Lab: Field Trips & Lab Session To Collect, & Preserve Mites, Identification & Classification.			
51472	Plant Diseases Management	2	+51371*
Introduction, Diagnosis, Disease Epidemiology, Damage Assessments, Methods Of Disease Control Including Legislative, Cultural, Physical, Biological, Chemical Methods And Plant Disease Resistance.			
51473	Disease Of Fruit Trees	3	51371
Introduction; Diseases Of Pome Fruits, Stone Fruits, Grape, Fig And Olive Trees. Every Section Includes Studying Major Diseases Caused By Fungi, Bacteria, Phytoplasm And Viruses, Remades And A Biotic Diseases And Their Control. Practical Pant Includes Field Trips For Collection And Diagnosis Of Fruit Diseases In Addition To Lab. Examination Of Specimens.			
51474	Vegetable Diseases	3	51371
Introduction, Diseases Of Solanaceans Crops, Cucurbits, Crucifers, Legumes, Onion & Garlic, And Lettuce. Every Section Study Diseases Caused By Fungi. Bacteria, Viruses, Nematodes, In Addition To Noninfectious Diseases And Their Control. Practical Part Includes Field Trips For Collection And Diagnosis Of Vegetable Diseases Both In The Open Field And Under Protected System In Addition To Lab. Examination Of Specimens.			
51501	Seminar In Plant Production And Protection	1	Department Approval (1st Semester)
This Course Provide Opportunity For The Student To Give A Scientific Lecture About Certain Subject In Plant Production Or Protection, And Give The Student The Chance To Use The Journals And Other Scientific Sources In His Field Of Study, And To Learn The Scientific Method Of Research Writing, Summarize The Information, And Make Presentation.			
51502	Field Practices In Plant Production And Protection (I)	2	Department Approval (1st Semester)
Training The Student And Improve His Skills In Plant Production And Protection (Field Crops, Vegetables And Fruit Trees) Where A Piece Of Land At The University Farm Is Assigned For Each Student To Execute The Different Cultural Practices. The Student Will Apply What He Theoretically Learned During His Study In The College. In Addition, There Are Several Field Trips To Introduce The Student Into The Different Agricultural Systems Applied In Palestine.			
51503	Field Practices In Plant Production And Protection (II)	2	Department Approval (2nd Semester)
Training The Student And Improve His Skills In Plant Production And Protection (Field Crops, Vegetable And Fruit Trees) Where A Piece Of Land At The University Farm Is Assigned For Each Student To Execute The Different Cultural Practices. 'The Student Will Apply What He Theoretically Learned During His Study In The College. In Addition, There Are Several Field Trips To Introduce The Student Into The Different Agricultural Systems Applied In Palestine.			
51504	Special Topics	3	Department Approval
This Course Aims To Give The Student A Specialized Scientific Material, That Was Not Included In The Study Plan, And The Department Found It Important For The Students. The Course Taught By Invited Teacher Or By One Of The Faculty Members.			

51505	Research In Plant Production And Protection	3	Department Approval
This Course Is Given To The Senior Students To Conduct A Research About Certain Subject During One Semester, And It Should Be An Applied Research.			
51572	Plant Virology	3	51371
Introduction, Detection, Diagnosis And Purification Of Plant Viruses, Virus Structure, Replication, Dissemination, Symptom Logy, Virus Vectors, Ecology, Economic Damage And Control. Major Plant Viruses And Classification. Practical Part Includes Learning Various Methods Of Virus Transmission, Isolation & Purification, In Addition To Looking At Virus Morphology, Structure And Diagnosis.			
51573	Plant Nematology	3	51371
Introduction, Biology, Morphology And Classification Of Plant-Parasitic Nematodes, Ecology, Damage, And Control Of Major Diseases. Practical Part Includes The Study Of Major Plant-Parasitic Nematodes In Respect To Morphology, Isolation And Clarification; In Addition To Diagnosis Of Diseases Caused By Plant – Parasitic Nematodes.			
51574	Bacterial Plant Diseases	3	51371
Introduction, Morphology, Structure And Composition Of Bacterial Cell; Taxonomy, Nutrition, Genetics. Pathogenesis, Infection And Disease Development, Major Bacterial Diseases And Its Control. Practical Part Include Basic Bacterial Methodologies In Respect To Isolation, Culturing And Classification In Addition To Inoculation And Damacterization And Diagnosis Of Major Bacterial Diseases.			
*51581	Weeds & Weeds Control	3	51202
Weeds & Their Effect On Plant Growth, Development & Yield. Classification Of Weeds, Dispersal & Distribution, Methods Of Weed Control Including Chemical, Cultural & Biological Control Methods . Machines Used For Application Of Herbicides. Chemistry & Application Of Herbicides. Weeds & Their Control Of Important Crops. Lab.: Field Trips & Practices. Identification Of Weeds & Application Of Methods Of Control. Elaboration Of Sparing Machine.			

***: Note:** Course No. with (*) include practical or lab with one credit hour applied as 3 hours of lab or field practices.