



# Plant Production and Protection Program

## Program Bulletin



2023

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## **1. Plant Production and Protection program description**

The Department of Plant Production and Protection was established in its current state in 1424 AH (2003 AD) to replace five academic departments were established earlier in 1403 AH (1982 AD) with the foundation of the college. These departments are orchards and forests, plant protection, soil and water, crops and pastures, extension and agricultural economics.

The department's current academic program has been developed to include two tracks, one for plant production and another for plant protection in an ambitious way to improve the learning outcomes of the department and help to achieve outstanding quality in performance and effective contribution to achieving the Kingdom's vision 2030 and to achieve educational, research and community goals to serve the development plans for plant wealth to increase plant production as well. In this program, students enrolled in the department are allocated to two tracks after the fourth level according to the conditions established by the department council.

The department also offers a postgraduate program for a master's degree in plant production and plant protection.

The department aims to graduate national cadres trained to work in the field of plant production and protection, who are familiar with the knowledge, skills and qualified competencies to support the national labour market in plant production/plant protection in a way that contributes to sustainable agricultural development.

The department's graduates of agricultural researchers are characterized by their ability to compete in the labour market with their technical ability to manage and develop plant production / plant protection projects, and absorb knowledge of all that is new in the field of plant production and protection.

Note that the graduates of the department are appointed according to the classification approved by the Ministry of Civil Service.

## **2. Employment opportunities for graduates**

Graduates of this Department are qualified to work in several organizations and diverse Agricultural activities including:

- 1- Best graduates are selected to work as teaching Assistants in the Department.
- 2- Ministry of Agriculture and Research Centers.
- 3- Agriculture Banks.
- 4- Ministry of Municipal and Rural Affairs.
- 5- Agriculture Establishments and Companies.
- 6- Saudi Agency for protecting and developing wild life.
- 7- Ministry of Education.
- 8- Grain Storage Silos and Flour Mills.
- 9- Agency of Specifications and Standards.
- 10- Institutes of Agriculture Education.
- 11- Customs and Agriculture Quarantine.

## **3. Department Vision**

A nationally distinctive department in education, community service and applied research in the field of plant production and protection.

## **4. Program Mission**

Preparation of qualified graduates to support the national agricultural job market in the fields of plant production/plant protection by providing the students with the required knowledge, skills and competences using effective teaching, applied research and community services, contributing to the development of sustainable agriculture and achievement of the college and the university missions.

## **5. Program Goals**

1. Provide students with the basics of Agricultural Sciences.
2. Provide students with the applied skills in the field of agricultural sciences.

3. Provide students with the required competences for carrying out applied research, community serving and performing real-life works in authorities and enterprises of agricultural sector.

## 6. Scientific Degree of the Department

### 6.1 Bachelor of Agricultural Sciences Degree (B. Sc.) in Plant Production and Protection specialization

The student study basic courses in the first stages of specialization, which qualify him for the following stages of applied agricultural courses. Students are trained theoretically and practically on the methods of modern plant production in vegetables, fruits, ornamental, field crops and fodder. Also, student study agricultural pests and diseases that affecting the crops and methods of protection and control. The department provides opportunities for field training for students. Bachelor's degree awarded to a student is specialized in plant production and protection. 146 credit hours are required for graduation in this program divided into eight levels (semesters).

#### a) Study plan structure

#### The overall structure for each track (146 credit hours or units)

Requirements			Units	Percentage (%)	Total percentage (%)
University requirements			12	8.2	35.6
College requirements		Obligatory	34	23.3	
		Elective	6	4.1	
Department requirements	External department		10	6.9	60.3
	Internal	Obligatory	66	45.2	
		Elective	12	8.2	
Free courses			6	4.1	4.3
Total			146	100	100

#### University requirements for both tracks (12 units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	

IC	101	Introduction to Islamic Culture	2	-	2	-
ARAB	101	Language Skills	2	-	2	-
IC	102	Islam and Construction of Society	2	-	2	IC101
IC	103	Economic System in Islam	2	-	2	IC 101
ARAB	103	Expository Writing	2	-	2	-
IC	104	Principles of Islamic Political System	2	-	2	IC101
Total units			12	-	12	

## Faculty requirements for both tracks

### 1. Obligatory courses for both tracks (34 Units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
ZOOL	101	General Zoology	3	1	4	-
CHEM	103	Principles of General Chemistry	2	1	3	-
MATH	165	Introduction to Calculus	3	-	3	-
ENG	101	English Language	3	-	3	-
STAT	122	Introduction to Statistics	1	1	2	-
AGEC	202	Principles of Agric. Economics	2	-	2	-
PHYS	105	Principles of Physics	2	1	3	-
CHEM	301	Basics of biochemistry	2	1	3	247 CHEM
MGMT	103	Communication skills	2	-	2	
PSYC	101	Thinking skills and learning styles	2	-	2	
BOT	101	General Botany	3	1	4	-
CHEM	247	General Organic Chemistry	2	1	3	103 CHEM
Total units			27	7	34	

### 2. Elective courses for both tracks: Each student chooses (6 Units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	217	Principals of Crop Protection	1	1	2	103 CHEM
PAP	218	Agriculture Environment and Climate	1	1	2	103 PHYS
PAP	219	Principals of Biotechnology	1	1	2	-
APP	380	Production of Ornamental Animals and Birds	1	1	2	211 APP
APP	480	Organic Production of Animals	1	1	2	211 APP
APP	381	Administration of Animal Production Farms	1	1	2	101 ZOOL
FSNU	313	Food Safety	1	1	2	103 CHEM
FSNU	341	Human Nutrition and Immunity	1	1	2	103 CHEM
FSNU	352	Functional Food	1	1	2	103 CHEM
VMD	349	Tissue Culture	1	1	2	103 CHEM

VMD	496	Health and Rearing wild Animals	1	1	2	103 CHEM
VMD	348	Molecular Biology	1	1	2	103 CHEM

## Department requirements (88 Units)

### 1. External obligatory courses for both tracks (10 Units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
FSNU	221	Principles of food Manufacturing	1	1	2	-
APP	211	Principles of Animal Production	2	1	3	-
FSNU	328	Dates and their Products	1	1	2	221 FSNU
BIO	271	General Plant Physiology	2	1	3	101 BOT
Total units			6	2	10	

### ❖ For plant production track

### 2. Obligatory courses for Plant Production Track (66 Units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	215	Agriculture Extension	1	1	2	-
PAP	211	Principles of Soil Science	2	1	3	103 CHEM + 103 PHYS
PAP	213	Principles of Plant Production	2	1	3	101 BOT
PAP	212	Agricultural Microbiology	2	1	3	101 BOT
PAP	216	Genetics	1	1	2	101 BOT
PAP	314	Application of Computer in Agric.	1	1	2	-
PAP	214	Principles of Plant Protection	2	1	3	101 BOT + 101 ZOOL
PAP	442	Weeds and Weed Control	1	1	2	213 PAP + 214 PAP
PAP	322	Production of Field Crops	2	1	3	213 PAP
PAP	321	Principles of Plant breeding	1	1	2	216 PAP
PAP	335	Production of Vegetable Crops	2	1	3	213 PAP
PAP	434	Greenhouse Agriculture techniques	1	1	2	213 PAP
PAP	333	Production of Fruit Crops	2	1	3	213 PAP
PAP	331	Nurseries and Plant Propagation methods	1	1	2	213 PAP
PAP	432	Date Palm Production	1	1	2	213 PAP
PAP	336	Production of Flowers and Ornamental Plants	1	1	2	213 PAP
PAP	437	Gardens and cities Landscaping	1	1	2	336 PAP

PAP	436	Desertification and Arborculturing of Arid Lands	1	1	2	336 PAP
PAP	325	Classification of Range plants and their Management	1	1	2	213 PAP
PAP	311	Soil Fertility and Plant Nutrition	2	1	3	211 PAP
PAP	461	Analysis of Soil, Water and Plant	-	1	1	211 PAP + 311 PAP
PAP	312	Irrigation and Drainage systems	1	1	2	211 PAP
PAP	313	Mechanization of Agric. Operations	1	1	2	165 MATH
PAP	457	Pests of Field and Horticultural Crops	2	1	3	214 PAP
PAP	412	Management of Agricultural Projects	1	-	1	-
PAP	438	Soilless Agriculture	-	1	1	434 PAP
PAP	481	Graduation project + Exit Exam	-	2	2	332 PAP+ 333PAP+ 335 PAP+ 336 PAP
PAP	480	Cooperative Training	-	-	6	When the student passes at least 100 credit hours
Total					66	

### 3. Elective courses for Plant Production track: Each student chooses (12 Units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	421	Forage Crops	1	1	2	101 BOT
PAP	422	Production and Examination of seeds	1	1	2	322 PAP
PAP	435	Handling and Marketing of Horticulture Crops	1	1	2	333 PAP
PAP	430	Production of Medicinal and aromatic Crops	1	1	2	336 PAP
PAP	431	Lawns and Internal landscaping	1	1	2	336 PAP
PAP	433	Organic Farming	1	1	2	335 PAP
PAP	411	Fertilizers and Fertilization	1	1	2	311 PAP
PAP	410	Design and Analysis of Agriculture Experiment	1	1	2	122 STAT
PAP	413	Classification of Flowering Plants	1	1	2	101 BOT
PAP	414	Applications of Biotechnology	1	1	2	216 PAP

#### ❖ For plant protection track

### 2. Obligatory courses for Plant Protection Track (66 Units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	215	Agriculture Extension	1	1	2	-



Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	211	Principles of Soil Science	2	1	3	103 CHEM + 103 PHYS
PAP	213	Principles of Plant Production	2	1	3	101 BOT
PAP	212	Agricultural Microbiology	2	1	3	101 BOT
PAP	216	Genetics	1	1	2	101 BOT
PAP	314	Application of Computer in Agric.	1	1	2	-
PAP	214	Principles of Plant Protection	2	1	3	101 BOT + 101 ZOOL
PAP	442	Weeds and Weed Control	1	1	2	213 PAP + 214 PAP
PAP	324	Production of Field and Horticulture Crops	2	1	3	231 PAP
PAP	352	Fungal Plant Diseases	2	1	3	212 PAP + 214 PAP
PAP	354	Bacterial and Viral Plant Disease	2	1	3	212 PAP + 214 PAP
PAP	351	Nematode Plant Diseases	2	1	3	214 PAP
PAP	361	Principals of Entomology	2	1	3	101 ZOOL
PAP	362	Economical Entomology	2	1	3	214 PAP
PAP	464	Bee and Silk Worm Production	1	1	2	362 PAP
PAP	353	Pests of Grains and Stored Materials	-	1	1	214 PAP
PAP	371	General Pesticides	2	1	3	247 CHEM
PAP	473	Analysis of Pesticides Residues	2	1	3	371 PAP
PAP	474	Pesticides Toxicity	1	1	2	371 PAP
PAP	363	Animal Pests and Mites	1	1	2	214 PAP
PAP	464	Pests and Diseases of Date Palm	1	1	2	324 PAP
PAP	472	Pest Control Machines	1	1	2	371 PAP
PAP	476	Agriculture Quarantine	1	-	1	352 PAP + 362 PAP
PAP	475	Biological Control	1	1	2	217 PAP+ 362 PAP
PAP	485	Graduation Project	-	2	2	217 PAP+ 352 PAP + 362 PAP +363 PAP
PAP	484	Cooperative Training	-	-	6	When the student passes at least 100 credit hours
Total					66	

### 3. Elective courses for Plant Protection track: Each student chooses (12 Units)

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	466	Medical and Veterinary Insects	1	1	2	361 PAP
PAP	467	Economic Acarology	1	1	2	363 PAP
PAP	451	Applied Plant Pathology	1	1	2	352 PAP
PAP	477	Fungicides	1	1	2	352 PAP+ 372 PAP
PAP	434	Technology of Protected Agriculture	1	1	2	213 PAP
PAP	478	Pesticides Preparation and Evaluation	1	1	2	371 PAP
PAP	452	Diseases of Greenhouse Plants	1	1	2	352 PAP
PAP	432	Production of Date Palm	1	1	2	213 PAO
PAP	410	Design and Analysis of Agricultural Experiments	1	1	2	122 STAT
PAP	479	Pollution and Environment Protection	1	1	2	371 PAP
PAP	453	Physiological Plant Diseases and Parasitic Plants	1	1	2	214 PAP

### Free courses for both tracks (6 Units)

Each student chooses 6 units of free courses from colleges of Qassim University

#### b) Levels table

### Levels for both tracks (levels 1 - 4)

#### Level 1

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
IC	101	Introduction to Islamic Culture	2	-	2	-
ARAB	101	Language Skills	2	-	2	-
CHEM	103	Principles of General Chemistry	2	1	3	-
ZOOL	101	General Zoology	3	1	4	-
ENG	101	English Language	3	-	3	-
MATH	165	Introduction to Calculus	3	-	3	-
PSYC	101	Thinking skills and learning styles	2	-	2	-
Total units			17	2	19	

#### Level 2

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
BOT	101	General Botany	3	1	4	-
PHYS	105	Principles of Physics	2	1	3	-

IC	102	Islam and Construction of Society	2	-	2	IC101
STAT	122	Introduction to Statistics	1	1	2	-
CHEM	247	General Organic Chemistry	2	1	3	103 CHEM
APP	211	Principles of Animal Production	2	1	3	-
		College requirement: Elective course (1)	1	1	2	
Total units			13	6	19	

### Level 3

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
IC	103	Economic System in Islam	2	-	2	IC 101
AGEC	202	Principles of Agric. Economics	2	-	2	-
PAP	212	Agricultural Microbiology	2	1	3	101 BOT
BIO	271	General Plant Physiology	2	1	3	101 BOT
FSNU	221	Principles of food Manufacturing	1	1	2	-
MGMT	103	Communication skills	2	-	2	
CHEM	301	Basics of biochemistry	2	1	3	247 CHEM
		College requirement: Elective course (2)	1	1	2	
Total units			14	5	19	

### Level 4

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
ARAB	103	Expository Writing	2	-	2	-
PAP	211	Principles of Soil Science	2	1	3	103 CHEM + 103 PHYS
PAP	213	Principles of Plant Production	2	1	3	101 BOT
PAP	214	Principles of Plant Protection	2	1	3	101 BOT + 101 ZOOL
PAP	215	Agriculture Extension	1	1	2	-
PAP	216	Genetics	1	1	2	101 BOT
FSNU	328	Dates and their Products	1	1	2	221 FSNU
		College requirement: Elective course (3)	1	1	2	

Total units	12	7	19	
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## Plant Production Track (level 5 - 8)

### Level 5

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
IC	104	Principles of Islamic Political System	2	-	2	IC101
PAP	311	Soil Fertility and Plant Nutrition	2	1	3	211 PAP
PAP	312	Irrigation and Drainage systems	1	1	2	211 PAP
PAP	313	Mechanization of Agric. Operations	1	1	2	165 MATH
PAP	321	Principles of Plant breeding	1	1	2	216 PAP
PAP	325	Classification of Range plants and their Management	1	1	2	213 PAP
PAP	331	Nurseries and Plant Propagation methods	1	1	2	213 PAP
		Department requirement: Elective course (1)	1	1	2	
Total units			10	7	17	

### Level 6

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	314	Application of Computer in Agric.	1	1	2	-
PAP	322	Production of Field Crops	2	1	3	213 PAP
PAP	335	Production of Vegetable Crops	2	1	3	213 PAP
PAP	333	Production of Fruit Crops	2	1	3	213 PAP
PAP	336	Production of Flowers and Ornamental Plants	1	1	2	213 PAP
		Department requirement: Elective course (2)	1	1	2	
Total units			9	6	15	

### Level 7

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	432	Date Palm Production	1	1	2	213 PAP
PAP	434	Greenhouse Agriculture techniques	1	1	2	213 PAP

PAP	436	Desertification and Arborculturing of Arid Lands	1	1	2	336 PAP
PAP	457	Pests of Field and Horticultural Crops	2	1	3	214 PAP
PAP	416	Analysis of Soil, Water and Plant	-	1	1	211 PAP + 311 PAP
		Free course (1)	2	1	3	
		Department requirement: Elective course (3)	1	1	2	
		Department requirement: Elective course (4)	1	1	2	
Total units			9	8	17	

## Level 8

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	442	Weeds and Weed Control	1	1	2	213 PAP + 214 PAP
PAP	412	Management of Agricultural Projects	1	-	1	-
PAP	437	Gardens and cities Landscaping	1	1	2	336 PAP
PAP	438	Soilless Agriculture	-	1	1	434 PAP
PAP	481	Graduation project + Exit Exam	-	2	2	332 PAP+ 333PAP+ 335 PAP+ 336 PAP
		Free course (2)	2	1	3	
		Department requirement: Elective course (5)	1	1	2	
		Department requirement: Elective course (6)	1	1	2	
Total units			7	8	15	

## Plant Protection Track (level 5 - 8)

### Level 5

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
IC	104	Principles of Islamic Political System	2	-	2	IC101

PAP	324	Production of Field and Horticulture Crops	2	1	3	213 PAP
PAP	351	Nematode Plant Diseases	2	1	3	214 PAP
PAP	361	Principals of Entomology	2	1	3	101 ZOOL
PAP	371	General Pesticides	2	1	3	247 CHEM
		Department requirement: Elective course (1)	1	1	2	
Total units			11	5	16	

## Level 6

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	352	Fungal Plant Diseases	2	1	3	212 AP+214 PAP
PAP	353	Pests of Grains and Stored Materials	1	1	2	214 PAP
PAP	354	Plant Bacterial and Viral Diseases	2	1	3	212 PAP + 214 PAP
PAP	362	Economical Entomology	2	1	3	214 PAP
PAP	363	Animal Pests and Mites	1	1	2	214 PAP
	424	Weeds and its Control	1	1	2	213 PAP + 214 PAP
		Elective Course			2	
Total units					17	

## Level 7

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	314	Computer Application in Agriculture	1	1	2	–
PAP	472	Pest Control Machines	1	1	2	371 PAP
PAP	473	Analysis of Pesticides Residues	2	1	3	371 PAP
PAP	476	Agriculture Quarantine	1		1	352 PAP + 362 PAP
PAP	465	Pests and Diseases of Date Palm	1	1	2	324 PAP
		Free Course			3	

		Elective Course			2	
		Elective Course			2	
Total units					17	

## Level 8

Courses			Units (credit hours)			Prerequisite
Code	No.	Title	Lec.	Lab.	Total	
PAP	464	Bee and Silk Worm Production	1	1	2	362 PAP
PAP	474	Pesticides Toxicity	1	1	2	317 PAP
PAP	475	Biological Control	1	1	2	217 PAP + 362 PAP
PAP	485	Graduation Project	-	2	2	
PAP		Free Course			3	
		Selective Course			2	
		Selective Course			2	
Total units					15	

### c) Course Descriptions

<b>Course name</b>	<b>General Zoology</b>
<b>Course code</b>	<b>ZOOL 101</b>
<b>Brief specification</b>	1- Cytology. 2- Histology. 3- Relations between different animals. 4- Reproduction in animals. 5- Animal kingdom.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Suliman Al-Rehyani</b> <b>Prof. Dr. Mahmoud Alazzazy</b>

<b>Course name</b>	<b>Principles of General Chemistry</b>
<b>Course code</b>	<b>CHEM 103</b>
<b>Brief specification</b>	Introduction to the principles of inorganic chemistry- dimensions and units- atomic and molecular structure- electronic structure and periodic table- types of chemical bonds- states of matter and gas laws- chemical calculations- solutions and mixtures- chemical equilibrium- Ionic equilibrium.
<b>Faculty member teaching the course</b>	<b>Dr. Fahad Al-Romian</b>

<b>Course name</b>	<b>Calculus</b>
<b>Course code</b>	<b>MATH 165</b>

<b>Brief specification</b>	Functions, Continuity, Differentiation of Algebraic, Trigonometric and Logarithmic functions , Applications of differentiation , Integration , methods of Integration, Definite Integral , Applications of Integration.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Ghonimy, Dr. Ahmed Alzoheiry</b>

<b>Course name</b>	<b>Introduction to Statistics</b>
<b>Course code</b>	<b>STAT 122</b>
<b>Brief specification</b>	Definition of statistics, view and summarize data, metadata standards, initial principles in probability theory, intermittent distributions, the normal distribution, the distribution of T, F distribution.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Motawei, Dr. Soleman Al-Otayk</b>

<b>Course name</b>	<b>Principles of Agric. Economics</b>
<b>Course code</b>	<b>AGEC 202</b>
<b>Brief specification</b>	Economy definition and types / Find economy approaches and steps / economic problem / tilt and methods of measurement and its importance / benefit / Roads utility / consumer balance measurement definition in the case of the use of one or two commodities, or more than two goods / definition of demand and supply and the factors influencing them / balance the market and excess supply and demand / elasticity of demand and supply and price / flexibility Medicine Aldkhalih / flexibility medicine Cross / definition production / key factors in the production process / product balance in the event of the use of productive element of one or two or more elements / stages of production / costs and types / kinds of market.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdulla Al-Kheraiji, Prof. Dr. Yossef Al-Seleem</b>

<b>Course name</b>	<b>Principle of physics</b>
<b>Course code</b>	<b>PHYS 105</b>
<b>Brief specification</b>	Physical quantities (units of measurement and dimensional), Types of motion, Newton's laws of motion, properties of matter (gas - liquid - solid), study physics of the atmosphere.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Ahmed Aggag, Dr. Abdul Aziz Bany , Prof. Dr. Esam Abdel Moneim</b>



<b>Course name</b>	<b>Basics of biochemistry</b>
<b>Course code</b>	<b>CHEM 301</b>
<b>Brief specification</b>	<p>a- Theoretical part</p> <p>Simple and Complex Carbohydrates - Lipids and Membranes - Amino Acids and Proteins – Enzymes - Vitamins and Cofactors - Nucleotides and Nucleic Acids.</p> <p>b- Practical part</p> <p>Carbohydrates (Molisch's Test - Barfoed's test - Benedict's test - Iodine Test - Osazone test - Seliwanoff's test)- Lipids (oil spot test- solubility test - Saponification Test) – Proteins and amino acids (millon's test - Biuret test - precipitation of proteins).</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Medhat Ramadan Rehan</b>

<b>Course name</b>	<b>General Botany</b>
<b>Course code</b>	<b>BOT 101</b>
<b>Brief specification</b>	<p>Studying the morphology of different plant species with an explanation of the various forms for each organ of the plant (roots, stems, leaves) - studying the anatomy of plant organs (roots – stems and leaves) of different plant species - studying of the plant kingdom (Taxonomy) and the stages of evolutionary between plant species with an explanation of taxonomy for some plant families.</p>
<b>Faculty member teaching the course</b>	<b>Dr. Adil Hassan, Dr. Khalid Elhassan, Dr. Mokded Rabhi</b>

<b>Course name</b>	<b>General Organic Chemistry</b>
<b>Course code</b>	<b>CHEM 247</b>
<b>Brief specification</b>	<p>The basic principles of organic chemistry and its importance in daily life and its importance in applied science. Know thoroughly the types of Chemical bonds, Type of reactions, interactions and the mechanism of occurrence and to identify the factions in all functional organic compounds groups and the course includes the following topics:</p> <ul style="list-style-type: none"> <li>- General introduction about the organic chemistry and the differences between organic and inorganic compounds.</li> <li>- The type of reactions in organic compounds and the mechanism of action.</li> </ul>

	<ul style="list-style-type: none"> <li>- Aliphatic hydrocarbons and its types.</li> <li>- Aliphatic and aromatic alkyl halides.</li> <li>- Organometallic compounds and its roles in organic compounds preparations.</li> <li>- The Alcohol and Phenols.</li> <li>- Aldehydes and Ketones.</li> <li>- Carboxylic acid (Fatty acid).</li> <li>- Aliphatic And Aromatic amines and its derivatives.</li> <li>- Aromatic hydrocarbons and its derivatives.</li> </ul>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Sherif Abdel Ghani Dr. Yassim Elghoul</b>

<b>Course name</b>	<b>Principles of Crop Protection</b>
<b>Course code</b>	<b>PAP 217</b>
<b>Brief specification</b>	Introduction about pests and pest control history/ components of pest management programs (biological and ecological aspects- economic thresholds natural control)/ pest control methods (agricultural- biological- mechanical- chemical- regulative and legislative) chemical pesticides/ pesticide formulations/ pesticide application/ safety measures/ microbial pesticides/ biochemical pesticides (plant extracts and oils).
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Sherif Abdel Ghani</b>

<b>Course name</b>	<b>Agriculture Environment and Climate</b>
<b>Course code</b>	<b>PAP 218</b>
<b>Brief specification</b>	Energy distribution on the earth's surface/ energy balance in the agricultural environment / distribution of solar radiation/ albedo/ heat exchange/ factors affecting evaporation and transpiration/ environmental modeling/ concept of climate change/ causes of climate change/ impact of climate change on the agricultural environment/ the potential outcomes for climate change/ strategies reduce the impact of climate change on the agricultural environment.
<b>Faculty member teaching the course</b>	<b>Dr. Abdulaziz Alharbi, Dr. Ahmed Alzoheiry</b>

<b>Course name</b>	<b>Principles of Biotechnology</b>
<b>Course code</b>	<b>PAP 219</b>
<b>Brief specification</b>	Basic of biotechnology in animal and plant, Basic of biotechnology of microorganisms, Role of genetics in biotechnology, Isolation and arrangement of the genetic

	material, DNA structures , DNA replication, transcription and translation, Genetic engineering, Commercial biotechnology applications of microorganisms, Applications of biotechnology on animal, Ethical issues in biotechnology
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdoulla Alsohim</b>

<b>Course name</b>	<b>Production of Ornamental Animals and Birds</b>
<b>Course code</b>	<b>APP 380</b>
<b>Brief specification</b>	Breeds of ornamental animals (cats, dogs, rabbit, fish, hamster, turtles)- Breeds of ornamental birds (canary, parrot, pigeon, doves, duck). Housing systems of ornamental animals and birds. Nutrition of ornamental animals and birds- Reproduction of ornamental animals and birds. Rearing and management of ornamental animals and birds. Environmental conditions and ornamental animals and birds. Marketing of ornamental animals and birds
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mostafa Zaitoun</b>

<b>Course name</b>	<b>Organic Production of Animals</b>
<b>Course code</b>	<b>APP 480</b>
<b>Brief specification</b>	Principles and practices of organic farming; farms as ecological systems; the certification process and agencies; organic matter management to support the soil food; managing biodiversity, crop rotations, plant competition, ground cover, differences between the conventional and the organic farm animal breeding, integrating crops and animals; organic animal husbandry practices , housing of birds and animals, marketing of organic animal products.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mostafa Zaitoun</b>

<b>Course name</b>	<b>Technical Management of Animal Production Farms</b>
<b>Course code</b>	<b>APP 381</b>
<b>Brief specification</b>	Introduction to Farm Management. Types of Animal Production farms. The best conditions of farms. Technical process. Aims and decision-making. Information collection and analysis. Functions performed by management science. Farm evaluation.

<b>Faculty member teaching the course</b>	<b>Dr. Nasr El-Deen Pasha</b>
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<b>Course name</b>	<b>Food Safety</b>
<b>Course code</b>	<b>FSNU 313</b>
<b>Brief specification</b>	Introduction of different food safety hazards e.g. chemical, physical, and biological including food pathogenic diseases in food production – pre requisite programs for implementation of food safety systems in food establishment – HACCP and FSMS ISO 22000
<b>Faculty member teaching the course</b>	<b>Dr. Mohamed Al Roquaibah</b>

<b>Course name</b>	<b>Human Nutrition and Immunity</b>
<b>Course code</b>	<b>FSNU 341</b>
<b>Brief specification</b>	Theoretical: (Introduction to human immune system – Nutritional status and immune response – Deficiency of immune response among elderly and its relation with nutrition – Nutritional factors that modify immune response– Effect of breast and bottle feeding on immune system – Effect of macro - and micronutrients on immune system – Amino acids required for normal immune response – Effect of fatty acids on immune response – Reduction of disease risks through dietary modifications).
<b>Faculty member teaching the course</b>	<b>Dr. Thamer Al Getaily</b>

<b>Course name</b>	<b>Principles of food Manufacturing</b>
<b>Course code</b>	<b>FSNU 221</b>
<b>Brief specification</b>	a- Theoretical part Introduction for principles of food processing - Principles of food preservation with low temperature, refrigeration and freezing - Principles of food preservation with high temperature, pasteurization and sterilization - Principles of food preservation with dehydration - Principles of food concentration and new methods for concentrated foods processing - Food industrial fermentations - Processing steps of carbonated beverages - Principles of Sugar processing from sugar cane - Principles and steps of wheat flour and bread processing - Principles and types of confectionary and chocolate processing. b- Practical part

	Preparation of food solutions – Determination of food solution concentration – Preparation steps of carbonated beverages – Processing of starch and confectionary – Glucose quality tests – processing of concentrated foods - Chocolate processing.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Gad</b>

<b>Course name</b>	<b>Principles of Animal Production</b>
<b>Course code</b>	<b>APP 211</b>
<b>Brief specification</b>	Introduction to Animal and poultry Production importance worldwide and in Kingdom in particular – Animal Production problems in Kingdom - Animal and Poultry Classification and Breeds - Animal and Poultry husbandry – Establishment of animal and poultry farms - Principles of nutrition, physiology and Breeding – Milk, meat and egg Production - Daily and seasonal processes in Animal and Poultry farms - Developmental Programs in Kingdom.
<b>Faculty member teaching the course</b>	<b>Dr. Mohamed Shehab El-Deen</b>

<b>Course name</b>	<b>Dates and their Products</b>
<b>Course code</b>	<b>FSNU 328</b>
<b>Brief specification</b>	a- Theoretical part 1 - Introduction – Spiritual, economic and nutritional importance of Dates in Saudi Arabia and the world. 2 - Varieties of dates - Chemical composition and nutritive value of dates – therapeutic values of dates. 3 - Methods of packaging technology and storage of dates. 4 - Date products, including date paste, Dibs, Yeast and vinegar production using dates. b- Practical part 1 - Physical properties of dates (weight - size - color - taste - textures - odor ) 2 - Chemical properties of dates ( moisture content - total of soluble solids - acidity – total acidity and vitamin C ) 3 - Date products ( molasses - a paste of dates ) 4 - Meals with dates and famous for Saudi Arabia 5 - Production of pickled fruits dates.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Elsayed Attia</b>

<b>Course name</b>	<b>General Plant Physiology</b>
<b>Course code</b>	<b>BIO 271</b>

<b>Brief specification</b>	<p>Theoretical: - Plant cell/ solutions/ water relations (osmotic pressure, water potential, water relations) / soil and plant nutrition / transport across the plant (the movement of materials within the carrier elements) / photosynthesis and the factors affecting it / respiration (aerobic respiration - anaerobic - factors affecting) / plant hormones / enzymes / transformations of nitrogen / environmental physiology (environmental stress - environmental pollution - treatments).</p> <p>Practical: Preparation of different solutions / study plant cell microscopically / experiences of osmosis and diffusion / Photosynthesis in green plants/ demonstrate aerobic respiration and anaerobic respiration in plants / photosynthetic pigments / experiments illustrating the reaction of plant enzymes</p>
<b>Faculty member teaching the course</b>	<b>Dr. Mokded M. Rabhi</b>

<b>Course name</b>	<b>Agriculture extension</b>
<b>Course code</b>	<b>PAP 215</b>
<b>Brief specification</b>	<p>Extension study in terms of:</p> <p>Its importance - philosophy - objectives and scope - the communication process - spread and adoption of agricultural innovations - leadership and its importance - of personnel training in the agricultural extension system</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Ibrahim Alhomidi</b>

<b>Course name</b>	<b>Principles of Soil Science</b>
<b>Course code</b>	<b>PAP 211</b>
<b>Brief specification</b>	<ul style="list-style-type: none"> <li>- The basic components of soil (rock types and composition of the rocks- the classification of minerals according to its inception).</li> <li>- Physical properties of soil(bulk density and true porosity, surface specific and texture and structure of soil moisture, air humidity, soil constants soil temperature) survey and classification of soils.</li> <li>- Chemical properties of soil(soil interactions and soil salinity the ion exchange - cation exchange capacity ) - types of clay mineral sand its composition.</li> <li>- Saline, alkaline soils, sand and calcareous soil in the Kingdom (characteristics and treatment of problems.</li> </ul>

<b>Faculty member teaching the course</b>	<b>Prof. Dr. Essam Abd Elmoniem, Prof. Dr. Ahmed Aggag</b>
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<b>Course name</b>	<b>Principles of Plant Production</b>
<b>Course code</b>	<b>PAP 213</b>
<b>Brief specification</b>	Plant production and its importance – plant classification – environmental factors affecting growth and production of plants – nurseries – propagation methods - agricultural practices for field and horticulture crops – machineries and tools of soil preparation for field and horticultural crops – cropping and agriculture cycle – flowering and fruiting – harvest
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nasser Al-Ghumaiz, Prof. Dr. Abdelrahman AL-Wasel, Dr. Adil Hassan</b>

<b>Course name</b>	<b>Agricultural Microbiology</b>
<b>Course code</b>	<b>PAP 212</b>
<b>Brief specification</b>	History of microbiology, microbial theory- sterilization, culture media, methods of microbiology- agricultural microbial groups- fungi- bacteria- algae- protozoa- viruses- growth and reproduction of microbes- environment factors affecting microbes growth- applied microbiology
<b>Faculty member teaching the course</b>	<b>Prof Dr. Ahmad El-Turkey&amp; Prof Dr Ayman Faisal</b>

<b>Course name</b>	<b>Application of Computer in Agric.</b>
<b>Course code</b>	<b>PAP 314</b>
<b>Brief specification</b>	Lecture: Commuter components - Numbering Systems- Calculation operations on the binary system- Introduction of Algorithms- Flowchart- Introduction to Programming Practical: PowerPoint Program- Excel program - Graphical representation of data - Measures of central values- Measures of variation - Deriving of statistical equations- Linear Regression
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Ghonimy</b>

<b>Course name</b>	<b>Principles of Plant Protection</b>
<b>Course code</b>	<b>PAP 214</b>

<b>Brief specification</b>	Theoretical: Introduction/ Principles of Plant Protection/ Basics of Entomology/ Basics of Plant diseases/ Basics of Agriculture Animal pests/ Basics of pesticides/ basics of plant pathology Practical: Samples of the most important pests and plant protection tools
<b>Faculty member teaching the course</b>	<b>Prof Dr. Nagdy F. Abdel-Baky&amp; Prof Dr Ayman Faisal&amp; Prof Dr. Sherif Abdel Ghani</b>

<b>Course name</b>	<b>Weeds and Weed Control</b>
<b>Course code</b>	<b>PAP 442</b>
<b>Brief specification</b>	Introduction to weeds and their economic importance/ Weeds' classification/ Natural Classification of weeds/ Artificial classification of weeds/ Biological aspects of weeds/ Crop-weed Interrelation/ Weed control methods/ Herbicides application/ Herbicides formulations/ Herbicides selectivity/ Weed resistance to herbicides.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nasser Al-Ghumaiz, Prof. Dr. Sherif Abdel Ghani</b>

<b>Course name</b>	<b>Production of Field Crops</b>
<b>Course code</b>	<b>PAP 322</b>
<b>Brief specification</b>	Theoretical: - This course covers various aspects of the production of most important field crops, economical importance and cultural practices for optimum crop production, ecology and management of selected Cereals , legumes, oil, fiber ,sugar,and Forage crops  Practical: Definition of agricultural operations and service operations include pre and post planting, cultivation methods, service operations during harvest. Machinery used to manage field crops Determine fertilizer account for a specific areas. Identify the morphology of field crops and the most important morphological differences) among crops within family plants.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nasser Al-Ghumaiz</b>

<b>Course name</b>	<b>Principles of Plant breeding</b>
<b>Course code</b>	<b>PAP 321</b>
<b>Brief specification</b>	Theoretical: - How to breed self-pollinated plants , how to breed cross pollinated plants, how to breed disease



	<p>resistant plants, polyploidy in plants, mutation breeding, genetic variation</p> <p>Practical: plant flower construction, how to cross between plants, make breeding plan for different crops</p>
<b>Faculty member teaching the course</b>	<b>Prof A Elwaseel</b>

<b>Course name</b>	<b>Production of Vegetable Crops</b>
<b>Course code</b>	<b>PAP 335</b>
<b>Brief specification</b>	<p>Theoretical: - Economical and nutritional values of vegetable crops, environmental requirements, cultural practices, maturity and ripening, harvesting and storage, cultivars, production problems, methods of protected cultivation for vegetable crops</p> <p>Practical: Introduction to Vegetable plants. Species and varieties of vegetable plants. Families, Plant Varieties of the most important vegetable crops in the kingdom. Agricultural field visits for private agricultural companies producing potatoes and onions. Different methods of irrigation and fertilization of vegetable crops. Protection and other agricultural practices for plants in the open field.</p>
<b>Faculty member teaching the course</b>	<b>Dr. Adil Hassan</b>

<b>Course name</b>	<b>Greenhouse Agriculture techniques</b>
<b>Course code</b>	<b>PAP 434</b>
<b>Brief specification</b>	<p>Theoretical: - Types of greenhouses and its managements, System of vegetables production under greenhouse and low tunnels. Systems of environmental control. Effect of production factors in greenhouse. Cultural practices, cultivars, production problems.</p> <p>Practical: Introduction to the types of greenhouses and tunnels. Forms and types of greenhouses. Methods of cooling and heating in greenhouses. Agricultural field visits for special projects for greenhouses. Different methods of irrigation used in greenhouses. Methods of fertilization in greenhouses. Breeding tomato and cucumber plants in greenhouses. Trim plants in greenhouses. All agricultural operations and service crop in greenhouses.</p>
<b>Faculty member teaching the course</b>	<b>Dr. Adil Hassan</b>

<b>Course name</b>	<b>Production of Fruit Crops</b>
<b>Course code</b>	<b>PAP 333</b>
<b>Brief specification</b>	<p>The economic importance of fruit trees.</p> <p>Classifying fruit trees in terms of their nature, growth conditions and the suitable environment.</p> <p>The most important types of fruit trees planted in the Kingdom of Saudi Arabia.</p> <p>The horticultural operations on fruit orchards.</p> <p>The most important cultivars and rootstocks of the fruit species planted in the Kingdom.</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdelrahman AL-Wasel</b>

<b>Course name</b>	<b>Nurseries and Plant Propagation methods</b>
<b>Course code</b>	<b>PAP 331</b>
<b>Brief specification</b>	<p>Importance of nurseries- Nursery objectives, the basic steps for nursery establishment. Types of nurseries and greenhouses. Varieties of date palm trees grown in the Kingdom. Nursery basic equipment and potting media. Sexual and vegetative methods of propagation. Propagation using tissue culture. Environmental factors affecting plant propagation. Cuttings, Budding and grafting types and techniques</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdelrahman AL-Wasel</b>

<b>Course name</b>	<b>Date Palm Production</b>
<b>Course code</b>	<b>PAP 432</b>
<b>Brief specification</b>	<p>Introduction to the Origin of date palm and its economical and nutritional importance. Growth habits, effects of environmental conditions on the production of date palm. Varieties of date palm trees grown in the Kingdom. Orchard establishment, irrigation and fertilization, cultural practices (pollination, pruning and thinning). Harvesting, fruit quality, and handling of dates.</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdelrahman AL-Wasel</b>

<b>Course name</b>	<b>Production of Flowers and Ornamental Plants</b>
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<b>Course code</b>	<b>PAP 336</b>
<b>Brief specification</b>	Importance and benefits of ornamental plants, the environmental and agricultural conditions affecting growth and production of flowers and ornamental plants, different groups of ornamental plants (herbaceous plants, hedges, shrubs, climbers, trees, palms, cacti and succulent plants, ground covers, indoor plants and aquatic plants). Production of the economic flowers.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdul-Rahman Al-Humaid</b>

<b>Course name</b>	<b>Gardens and cities Landscaping</b>
<b>Course code</b>	<b>PAP 437</b>
<b>Brief specification</b>	Importance and benefits of gardens, historical development of landscape gardening, type of gardens, factors affecting design and landscape of gardens, common styles of garden design – principles of landscape design, different components of gardens, public gardens, private gardens, botanical gardens, landscape of cities and streets
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdul-Rahman Al-Humaid</b>

<b>Course name</b>	<b>Desertification and Arborculturing of Arid Lands</b>
<b>Course code</b>	<b>PAP 436</b>
<b>Brief specification</b>	Desertification, its factors and methods of control, propagation of arid zone plants, problems of propagation and their control, trees and shrubs of arid zones, afforestations steps, stabilization of sands, wind break, productive afforestation and afforestation of cities
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdul-Rahman Al-Humaid</b>

<b>Course name</b>	<b>Classification of Range plants and their Management</b>
<b>Course code</b>	<b>PAP 325</b>
<b>Brief specification</b>	Introduction to rangeland and its importance-Monitoring of rangelands-Causes and impacts of rangeland degradation-Rangelands improvement- Ecological conservations- The most common rangeland species.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Motawei</b>

<b>Course name</b>	<b>Soil Fertility and Plant Nutrition</b>
<b>Course code</b>	<b>PAP 311</b>

<b>Brief specification</b>	<p>Theoretical: - Essential plant nutrients: forms, functions, and deficiency symptoms; Nutrients uptake by plants, transportation and assimilation by plants. Factors affecting soil fertility and plant nutrition: organic matter, soil reaction, clay and its properties, and ion exchange. Nitrogen in soil and plants. Phosphorus in soil and plants. Potassium in soil and plants. Sulfur, Calcium, and Magnesium in Soil and Plants. Micronutrients in Soil and Plants. Evaluation of Soil Fertility and Plant Nutrition.</p> <p>Practical:.Sampling of soil for physical and chemical analyses –sampling of plant samples from the field and preparation for analyses – extraction methods of some nutrients from the soil. Determination of some macronutrients in the soil: N, P, and K. Determination of micro- nutrients in the soil: Fe, Zn and Mn. Determination of soil fertility. Preparation of nutrient solutions.</p>
<b>Faculty member teaching the course</b>	<b>Dr. Fahad Al-Romian</b>

<b>Course name</b>	<b>Analysis of Soil, Water and Plant</b>
<b>Course code</b>	<b>PAP 461</b>
<b>Brief specification</b>	<p>Practical: - With the end of the course, students should be able to recognize methods of sampling soil, water, and plants for analysis, use of spectrophotometers, flame photometer, and atomic absorption instruments in chemical analysis, analyzes the soil and write the recommendation, analyzes water and judge its quality for irrigation, analyzes plants</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Essam Abd-Elmoniem</b>

<b>Course name</b>	<b>Irrigation and Drainage systems</b>
<b>Course code</b>	<b>PAP 312</b>
<b>Brief specification</b>	<p>Water resources in KSA/Types of Aquifer/Design and insulation of ground well/Hydraulic pumps/Water requirements/Components of sprinkler irrigation systems/Components of drip irrigation systems/Water movement in pressurized lines/Irrigation scheduling</p>
<b>Faculty member teaching the course</b>	<b>Dr. Ahmed Alzoheiry, Dr. Abdulaziz Alharbi</b>

<b>Course name</b>	<b>Mechanization of Agric. Operations</b>
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<b>Course code</b>	<b>PAP 313</b>
<b>Brief specification</b>	Advantages of Agricultural mechanization - Power sources available in the agriculture – Transmission tools – Operational principles of Agricultural unit – Tractor (Functions – Components – Classifications – Combustion cycles – Engine – parts and principles – Engine operational devices ; Fuel , cooling , lubrications , Air filters – Motion transmission systems - Power transmission systems - Contact devices) – Farm Machinery (Classifications- seed bed preparation machines– Planting machines - Service the developing crop machines – Harvesting machines - Crop preparation machines).
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Ghonimy</b>

<b>Course name</b>	<b>Pests of Field and Horticultural Crops</b>
<b>Course code</b>	<b>PAP 457</b>
<b>Brief specification</b>	<p>Theoretical: - Introduction to pests infested of Field Crops &amp; Horticulture / insect pests infested vegetable crops under field and greenhouses conditions/ insect pests infested fruit crops and field crops/ animal pests associated with vegetable crops in greenhouses and field crops / slugs and snails infested plants / economic important of rodents/ the wild birds/ principles of animal pests classification/ principles of IPM to pests.</p> <p>Practical: - Introduction to pests infested of Field Crops &amp; Horticulture / Identify the different forms of insect and animal pests / The work of glass slides for classification phytophagous mites/ classification of phytophagous mites and insects/ identification of different species mollusca infested plants/ the wild birds / Identify the rodent pests</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nagdy F. Abdel-Baky &amp; Prof Dr Ayman Faisal</b>

<b>Course name</b>	<b>Management of Agricultural Projects</b>
<b>Course code</b>	<b>PAP 412</b>
<b>Brief specification</b>	Definitions- Scope and functions of statistics ,Presentation and summarization of data, measurements of variation, descriptive measurements, binomial distribution, and normal distribution
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Yossef Al-Seleem</b>

<b>Course name</b>	<b>Soilless Agriculture</b>
<b>Course code</b>	<b>PAP 438</b>
<b>Brief specification</b>	<p>Theoretical: - Foundations and concepts learned agriculture without soil. - Brief nutrients - how to plant for the needs of Amoveh.4- elements prepare nutrient solutions used in agriculture without soil. - nutrient solutions farms - membranes nutrients and development of farms. Different types of farms solid environments. - Agriculture fiber environments.</p> <p>Practical: Identification of the laboratory and the greenhouse as a basis for the decision. - Draw and appreciate the good image of nutrients. - How to prepare nutrient solution. - Ways to create solutions feeder farms static and flowing. - Different ways to create membranes feeder farms. - Create and prepare sand farms. - The various methods used for irrigation in the Greens Farms - methods used for irrigation for the cultivation of plants in tubs. - Processing different types of farms solid environments. - Prepare the plants for planting in fiber environments. - Medicinal and aromatic plants are produced under conditions of agriculture without soil.</p>
<b>Faculty member teaching the course</b>	<b>Dr. Adil Hassan</b>

<b>Course name</b>	<b>Graduation project</b>
<b>Course code</b>	<b>PAP 481</b>
<b>Brief specification</b>	Field and practical training in area of plant production and contacting a research project related to one of the specialization of plant production track. Preparing student to perform the exit exam
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdelrahman AL-Wasel</b>

<b>Course name</b>	<b>Forage Crops</b>
<b>Course code</b>	<b>PAP 421</b>
<b>Brief specification</b>	<p>Theoretical: - This course covers various aspects of the production forage crops, Introduction and definitions of Forages crops , The impact of environmental conditions on the production of Forage crops , Legumes forage crops- Alfalfa and Egyptian clover Grass Forage Crops- Corn and Sudan grass , Methods of Forage</p>

	<p>Preservation- Hay and Silage , Nutritive Value of Forages , Forage Mixtures</p> <p>Practical: Definition of agricultural operations and service operations include pre and post planting, cultivation methods, service operations during harvest. Machinery used to manage forage crops Determine. Identify the morphology of forage crops and the most important morphological differences) among crops within family plants. Instruments used analyzing forage quality, Determine botanical composition of Forage Mixtures.</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nasser Al-Ghumaiz</b>

<b>Course name</b>	<b>Production and Examination of seeds</b>
<b>Course code</b>	<b>PAP 422</b>
<b>Brief specification</b>	<p>Theoretical: Introduction and definition of seed production, Factors affecting seed production, Biological and morphological characteristics of the seed, Cultural practices in seed production, Environmental factors of seed storage, Production of hybrid seed</p> <p>Practical: Tests of seed quality, Seed quality and its labeling, Supervision of seed production and recognition of seed crops and vegetables</p>
<b>Faculty member teaching the course</b>	<b>Dr. Souliman Al-Otayk</b>

<b>Course name</b>	<b>Handling and Marketing of Horticulture Crops</b>
<b>Course code</b>	<b>PAP 435</b>
<b>Brief specification</b>	<p>Knowing the contents of the course. The objectives and advantages of postharvest handling. Sources of information available in the internet. Physiological and chemical changes in the fruits. Maturity indices and ripening. The Role of Ethylene in fruit ripening. Biological and environmental factors affecting fruit ripening. Fruit harvesting, handling , and packing methods. Fast cooling and fruit quality standard. Quality control of fruits. Modified and controlled atmosphere technology. Control of physiological and microbial diseases.</p>
<b>Faculty member teaching the course</b>	<b>Dr. Adil Hassan, Dr. Ahmed Alzoheiry</b>

<b>Course name</b>	<b>Production of Medicinal and aromatic Crops</b>
<b>Course code</b>	<b>PAP 430</b>
<b>Brief specification</b>	Importance of medicinal and aromatic plants, classification of medicinal and aromatic plants, factors affecting production of medicinal and aromatic plants, the agricultural practices for medicinal and aromatic plants, postharvest treatments, the medically effective components, the essential oils and their extraction and components, production of the most important medicinal and aromatic plants
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdul-Rahman Al-Humaid</b>

<b>Course name</b>	<b>Lawns and Internal landscaping</b>
<b>Course code</b>	<b>PAP 431</b>
<b>Brief specification</b>	Turf grasses and their importance, types of turf grasses, propagation and production of turf grasses, environmental and agricultural requirements and maintenance operations for turf grasses, problems facing turf grasses and their control, indoor plants and their importance, types of indoor plants, propagation and production methods of indoor plants, the environmental conditions affecting growth of indoor plants, maintenance operations for indoor plants, problems facing indoor plants and their control
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Abdul-Rahman Al-Humaid</b>

<b>Course name</b>	<b>Organic Farming</b>
<b>Course code</b>	<b>PAP 433</b>
<b>Brief specification</b>	Theoretical: - Introduction to organic farming- Conception of organic farming - Objectives of organic farming- Recent world status of organic farming- Progress of organic farming in the Kingdom. Plant production under organic farming systems. Steps of converting to organic farming. Registration and certifying for farms and products. Organic fertilization. Biological control. Organic farming in greenhouses. Quality standards of organic farming. Practical: Objectives of organic farming- Recent world status of organic farming- Plant production under organic farming systems. Steps of converting to organic farming. Registration and certifying for farms and products. Organic fertilization. Biological control. Organic farming in greenhouses. Quality standards of organic farming



<b>Faculty member teaching the course</b>	<b>Dr. Adil Hassan</b>
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<b>Course name</b>	<b>Fertilizers and Fertilization</b>
<b>Course code</b>	<b>PAP 411</b>
<b>Brief specification</b>	<p>Theoretical: - Introduction, a division of fertilizers, fertilizers and global food production, fertilizers and its impact on the environment, The manufacture of chemical fertilizers, organic fertilizer manufacturing. Integrated programs in fertilization, behavior of fertilizers in soils, methods of fertilizer application, fertilization under stress, the interpretation of the test results and fertilizer recommendations.</p> <p>Practical: Descriptive analysis of fertilizers - quantification of chemical fertilizers- quantification of organic fertilizer - the behavior of fertilizers in soil- estimate fertilizer's requirements.</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Essam Abd-Elmoniem</b>

<b>Course name</b>	<b>Organic Farming</b>
<b>Course code</b>	<b>PAP 433</b>
<b>Brief specification</b>	<p>Theoretical: - Introduction to organic farming- Conception of organic farming - Objectives of organic farming- Recent world status of organic farming- Progress of organic farming in the Kingdom. Plant production under organic farming systems. Steps of converting to organic farming. Registration and certifying for farms and products. Organic fertilization. Biological control. Organic farming in greenhouses. Quality standards of organic farming.</p> <p>Practical:. Objectives of organic farming- Recent world status of organic farming- Plant production under organic farming systems. Steps of converting to organic farming. Registration and certifying for farms and products. Organic fertilization. Biological control. Organic farming in greenhouses. Quality standards of organic farming</p>
<b>Faculty member teaching the course</b>	<b>Dr. Adil Hassan</b>

<b>Course name</b>	<b>Design and Analysis of Agriculture Experiment</b>
<b>Course code</b>	<b>PAP 410</b>
<b>Brief specification</b>	Definitions- Scope and functions of statistics and experimental design/ Principles of experimental designs / T- test in Paris & group / F- test / Experimental Designs / Chi Square / Correlation / Simple regression.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Motawei</b>

<b>Course name</b>	<b>Applications of Biotechnology</b>
<b>Course code</b>	<b>PAP 414</b>
<b>Brief specification</b>	Nucleic acids and Amino acids / Protein isolation / Gel Electrophoresis and Hybridization Techniques / PCR Technology / DNA Sequencing / Molecular markers and their applications / Recombinant DNA technology / Plant transformation / Plant transformation
<b>Faculty member teaching the course</b>	<b>Prof Dr. Abdoulla Alsohim</b>

<b>Course name</b>	<b>Production of Field and Horticulture Crops</b>
<b>Course code</b>	<b>PAP 324</b>
<b>Brief specification</b>	<p>Theoretical: - This course covers various aspects of the production of most important field and horticulture crops, economical importance and cultural practices for optimum crop production, ecology and management of selected Cereals , legumes, oil, fiber ,sugar, and forage crops. Horticulture crops included: Vegetable, fruits and flower and ornamental plants</p> <p>Practical: Identify the morphology of field and horticulture crops and the most important morphological differences) among crops within family plants.</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nasser Al-Ghumaiz, Prof. Dr. Abdelrahman AL-Wasel, Dr. Adil Hassan</b>

<b>Course name</b>	<b>Fungal Plant Diseases</b>
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<b>Course code</b>	<b>PAP 352</b>
<b>Brief specification</b>	History of fungal plant diseases, structure and taxonomy of fungi, dissemination and environment of fungi, methods of isolation, purification and storage of fungi, examples of common important plant diseases
<b>Faculty member teaching the course</b>	<b>Prof Dr. Ahmad Al-Roqaibah</b>

<b>Course name</b>	<b>Bacterial and Viral Plant Disease</b>
<b>Course code</b>	<b>PAP 354</b>
<b>Brief specification</b>	History of bacterial diseases and impact importance, Genera and species of plant pathogenic bacteria, symptoms, infection methods and dissemination bacterial diseases, effect of bacterial diseases on plants, examples of bacterial diseases in Saudi Arabia and their control, history of plant virology and impact importance, morphology and structure of plant viruses, symptoms, transmission and diagnosis methods of plant viruses, examples of important viral diseases on economic crops
<b>Faculty member teaching the course</b>	<b>Dr Khalid Al-Hassan &amp; Prof Dr. Ahmad Al-Roqaibah</b>

<b>Course name</b>	<b>Nematode Plant Diseases</b>
<b>Course code</b>	<b>PAP 351</b>
<b>Brief specification</b>	<p>Theoretical: Introduction- History of Nematology- The impact of Plant parasitic Nematode/ Nematodes morphology and anatomy/ Identification and classification of nematodes/ Plant diseases caused by nematodes, plant –Nematodes relationship. Symptoms induced by nematodes/Sedentary endoparasitic nematodes / / Migratory endoparasitic nematodes/Above-ground feeding nematodes/ Semi-endoparasitic nematodes /Ectoparasitic nematodes / Nematode-Virus relationship/ Nematode distribution- Method of Nematode management- Nematode integrated Management.</p> <p>Practical: Introduction to Nematodes and Nematology, recognition of plant parasites and other feeding groups / / Techniques for Extraction of Nematodes from Soil and</p>

	Plant Tissue: Symptom evaluation and bioassay/ Root staining and Gall rating/ nematode morphology and anatomy /Taxa containing Plant Parasitic Nematodes/ Sedentary endoparasitic nematodes / / Migratory endoparasitic nematodes/Above-ground feeding nematodes/ Semi-endoparasitic nematodes /Ectoparasitic nematodes / The nematode management decision process.
<b>Faculty member teaching the course</b>	<b>Prof Dr. Soluaiman Al Rehayani</b>

<b>Course name</b>	<b>Principals of Entomology</b>
<b>Course code</b>	<b>PAP 361</b>
<b>Brief specification</b>	<p>Theoretical: - Revision of the animal kingdom and the Division of arthropods and insects site in the animal kingdom / The importance and benefits of insects and insect damage, and the factors that helped insects to overcome and survival / Anatomy morphological outer (head and its appendages – Thorax &amp; its appendages - abdomen &amp; its appendages - the body wall and molting) / Anatomy external morphological (Digestive system - the circulatory system - the respiratory system - the muscular system - the nervous system - the reproductive system) /Life and development cycles</p> <p>Practical: Anatomy morphological outer (head and its appendages – Thorax &amp; its appendages - abdomen &amp; its appendages) / insect development / insect classification</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Al-Deghairi</b>

<b>Course name</b>	<b>Economical Entomology</b>
<b>Course code</b>	<b>PAP 362</b>
<b>Brief specification</b>	<p>Theoretical: Study types of insect pests and their classification / Definition of the pest and the reasons behind the changing in its status / Study insect pests life cycles, development cycles and their relationship to determine the harmful stage and its control / Study of the most important pests of field crops and control methods/ Study of the most important pests of vegetable crops and</p>

	control methods / Study of the most important pests of horticultural crops and control methods  Practical: Study of the most important field crop pests - the most important pests of vegetable crops - the most important horticultural crop pests
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nagdy Abdel-baky</b>

<b>Course name</b>	<b>Bee and Silk Worm Production</b>
<b>Course code</b>	<b>PAP 464</b>
<b>Brief specification</b>	Theoretical: - Introduction to Apiculture / Bee Colony / Apiary / Bee Keeping Processes / Queen rearing and production / Slikworms rearing / Bee and silk worm diseases and pests  Practical: Morphological characteristics of the bee colony - External and internal anatomy of the bee colony - Establishment of apiaries - beekeeping operations - morphological characteristics of the silk worms and the difference between them - Diseases and pests spelled bees and silk worm
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nagdy Abdel-baky</b>

<b>Course name</b>	<b>Pests of Grains and Stored Materials</b>
<b>Course code</b>	<b>PAP 353</b>
<b>Brief specification</b>	Theoretical: - Introduction Stored-Product Insects/ How Stored-Product Insects Multiply/ Internal Grain-Infesting Insects/ Other Stored-Product (External) Insects /Monitoring for Stored-Product Insects/ Factors responsible for deterioration of food grains in storage by pests / Insect pests of stored grains and milled products, their identification, biology and Nature of damage / Preventative Measures/ Control methods of stored grains insect pests / Fumigation Methods for Stored Grain  Practical: Samples of Stored Grains and products Pests

<b>Faculty member teaching the course</b>	<b>Prof. Dr. Nagdy Abdel-baky</b>
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<b>Course name</b>	<b>General Pesticides</b>
<b>Course code</b>	<b>PAP 371</b>
<b>Brief specification</b>	Introduction to pesticides / Pesticides Classification/ Pesticides Formulations / Oils as Pesticides / Natural pesticides / Organochlorine pesticides / Organophosphorus pesticides / Carbamate Pesticides/ Synthetic Pyrethroid Pesticides/ Neonicotinoid Pesticides/ Safety measures when dealing with pesticides
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Saleh Alhewairini</b>

<b>Course name</b>	<b>Analysis of Pesticides Residues</b>
<b>Course code</b>	<b>PAP 473</b>
<b>Brief specification</b>	Introduction and definitions in pesticide residues field/ sampling and sample transfer and storage/ sample preparation: extraction/ sample preparation: clean-up/ QuChERES method/ spectroscopic methods: UV/Vis spectrometer/ chromatographic methods: TLC/ chromatographic methods: GC/ chromatographic methods: GC-MS/ chromatographic methods: HPLC/ chromatographic methods: LC-MS/MS/ calculations and interpretation of the results.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Sherif Abdel Ghani</b>

<b>Course name</b>	<b>Pesticides Toxicity</b>
<b>Course code</b>	<b>PAP 474</b>
<b>Brief specification</b>	Introduction and definitions- insect cuticle structure- how can pesticide enter the body- structure of the nervous system in insects and mammals- toxicity of inorganic pesticides- toxicity of pesticides extracted oil from plant – toxicity of chlorine pesticides- toxicity of organophosphate pesticides – toxicity of carbamate pesticides - how the insect growth regulators as

	pesticides - how the pesticide toxicity of biological pesticides – tests toxicity of touching pesticides and blended with food
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Sherif Abdel Ghani</b>

<b>Course name</b>	<b>Animal Pests and Mites</b>
<b>Course code</b>	<b>PAP 363</b>
<b>Brief specification</b>	<p>Theoretical: - Introduction to animal pests and mites/ Phytophagous mites associated with vegetable crops, fruit crops and field crops/ Varroa infested honey bees / slugs and snails infested plants / Economic important of rodents/ the wild birds/ principles of animal pests classification. Integrated management of animal pests.</p> <p>Practical: Introduction to animal pests and mites / Identify the different forms of animal pests and mites / The work of glass slides for classification phytophagous mites/ classification of phytophagous mites/ identification of different species mollusca infested plants/ the wild birds / Identify the rodent pests</p>
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mahmoud Alazzazy</b>

<b>Course name</b>	<b>Pests and Diseases of Date Palm</b>
<b>Course code</b>	<b>PAP 465</b>
<b>Brief specification</b>	Introduction about effecting of pests and diseases on palm date production- insect and mite pests which cause palm date and their control, fungal, bacterial, nematode and phytoplasma diseases which cause palm date and their control, interrogated control of pests and diseases which cause palm date
<b>Faculty member teaching the course</b>	<b>Prof Dr. Nagdy Abdel Baky&amp; Prof Dr. Ayman Faisal</b>

<b>Course name</b>	<b>Pest Control Machines</b>
<b>Course code</b>	<b>PAP 472</b>

<b>Brief specification</b>	The importance of mechanization in pest control - Units and terminology - Preparation of Pesticides solutions - Classification of pest control machinery – Back sprayers - Hydraulic sprayers (components – Performance – calibration) - Spraying by airplanes- dusters- Fog makers - Droplet size and governing equations- Pesticides drifting.
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Mohamed Ghonimy</b>

<b>Course name</b>	<b>Agriculture Quarantine</b>
<b>Course code</b>	<b>PAP 476</b>
<b>Brief specification</b>	Introduction on philosophy of plant quarantine, role of plant quarantine in integrated pest control, local and international laws of plant quarantine, pests and diseases controlled by plant quarantine, isolation area, methods of sampling and inspection
<b>Faculty member teaching the course</b>	<b>Prof. Dr. Ahmed Alrogaibah</b>

<b>Course name</b>	<b>Biological Control</b>
<b>Course code</b>	<b>PAP 475</b>
<b>Brief specification</b>	<p>Theoretical: - Definition of biological control with examples; The status of biological control among different methods of control; A brief history of biological control; The basics of biological control; The phenomena of predation and parasitism; Characteristics of predators; Characteristics of parasites; Interactions between natural enemies and their hosts, How parasites recognize its host and parasitization process; How to use parasites and predators in pest control, Importation and exploration projects of natural enemies from their native location and collection methods, deployment and adaptability; A brief on quantitative rearing of predators and parasites; Use of natural enemies in field and greenhouse pests; define the role and the importance of microbial control of insect pests; Bacteria, fungi, protozoa, viruses and nematodes used in microbial control; How to use microbial organisms in controlling agricultural pests.</p> <p>Practical: Introduction to Biological Control; Definitions commonly used in the field of biological</p>



	control; Predators; Classification and study the life cycles of examples of predators; Parasitoids; Classification and study the life cycles of examples of parasitoids
<b>Faculty member teaching the course</b>	<b>Prof Dr. Mohamed Al Deghairy</b>

<b>Course name</b>	<b>Graduation Project</b>
<b>Course code</b>	<b>PAP 485</b>
<b>Brief specification</b>	Field and practical training in area of plant protection including contacting a research project related to one of the specialization of plant protection track. Preparing student to perform the exit exam
<b>Faculty member teaching the course</b>	<b>Prof Dr. Ahmad Al Roqaibah</b>

<b>Course name</b>	<b>Applied Plant Pathology</b>
<b>Course code</b>	<b>PAP 451</b>
<b>Brief specification</b>	Microscopy and methods of examination- collection and maintaining diseased samples and microbial cultures- studying plant disease in the field and the laboratory, isolation and purification methods, plant clinic, search using internet, spore traps, photography
<b>Faculty member teaching the course</b>	<b>Prof Dr Ayman Faisal&amp; Dr. Khalid Al Hasan</b>

<b>Course name</b>	<b>Fungicides</b>
<b>Course code</b>	<b>PAP 477</b>
<b>Brief specification</b>	introduction to fungal diseases and their hazards/ registration of fungicides/ fungicide classes and chemistry/ synthesis of some fungicides/ mode of action of fungicides/ formulations of fungicides/ behavior of fungicides in plant/ behavior of fungicides in soil/ effect on human health/ natural fungicides
<b>Faculty member teaching the course</b>	<b>Prof Dr. Sherif Abdel Ghani</b>

<b>Course name</b>	<b>Pesticides Formulations and Bioassay</b>
<b>Course code</b>	<b>PAP 478</b>

<b>Brief specification</b>	role of formulation type in delivering pesticides to the target/ relationship between formulation and activity/ safety and health concerns of formulations/ formulation terminology and acronyms/ formulation types/ formulation preparation/ formulation characteristics/ formulation quality and testing/ formulation development/ modern formulations/ preparation for bioassay/ bioassay of different pests and different formulations/ quantitation and statistical analysis of data/ composing toxicity lines and interpretation.
<b>Faculty member teaching the course</b>	<b>Prof Dr. Sherif Abdel Ghani</b>

<b>Course name</b>	<b>Diseases of Greenhouse Plants</b>
<b>Course code</b>	<b>PAP 452</b>
<b>Brief specification</b>	Greenhouses environment (temperature, moisture, plant density)- fungal diseases, bacterial diseases, viral diseases, nematode diseases, methods of diseases control and protection, interrogated control program in greenhouses
<b>Faculty member teaching the course</b>	<b>Prof Dr Ayman Faisal&amp; Dr. Khalid Al Hasan</b>

<b>Course name</b>	<b>Pollution and Environment Protection</b>
<b>Course code</b>	<b>PAP 479</b>
<b>Brief specification</b>	Introduction to atmospheric pollutants - air pollution-behavior of pesticides in water and soil- pesticide residues in food- microbial pollution of material soil, air and water - nitrate pollution - food microbial contamination - pollution estimation of water- acidity estimation
<b>Faculty member teaching the course</b>	<b>Prof Dr. Saleh El Howirini</b>

<b>Course name</b>	<b>Physiological Plant Diseases and Parasitic Plants</b>
<b>Course code</b>	<b>PAP 453</b>
<b>Brief specification</b>	Theoretical: - An introduction on the physiological diseases, the effect of abnormal temperature on plant

	<p>growth, .Effects of high irradiances on plant growth, effect of salinity and water deficit on plant growth, reasons of fruit cracking, the effect of nutrient deficiency and excess, parasitic plants such as Broomrapes and Dodder.</p> <p>Practical: conducting experiments to study the effect of high and low temperature on seed germination and plant growth, experiments to demonstrate the effect of water and salt stresses on plant growth, demonstrate the effect of some parasitic plants such as broomrape and dodder on the economic plants.</p>
<b>Faculty member teaching the course</b>	<b>Prof Dr Ayman Faisal&amp; Dr. Khalid Al Hasan</b>

## **6.2 Master of Science Degree (M.Sc.) in Plant Production and Protection**

**Master of Science Degree (M. Sc.) in Plant Production.**

**Master of Science Degree (M. Sc.) in Plant Protection.**

### **Department study fields**

**The department teaches plant production and plant protection courses in the following areas:**

- 1- Production and breeding of horticultural crops (vegetables, fruits, ornamental plants, medicinal and aromatic plants and landscaping), field crops (food and industrial crops, fodder and pasture) and forest, storage, marketing and trading of Horticultural Crops.
- 2- Study fungal plant pathogens and bacterial and viral diseases and nematodes, the study of insect pests and weeds, and the study of pesticides and compounds used in pest control and its impact on the environment.
- 3- Classification and evaluation of soils, maintenance and soil reclamation, plant nutrition and crop water requirements.
- 4- Genetic engineering of plants and biotechnology.
- 5- Organic planting.

### **6.2.1 Master of Science Degree (M. Sc.), Program in Plant Production**

- **Program Aims**

- 1- Search in production problems of fruit, vegetable, ornamental and field crops and to maximize productivity.
- 2- Study the modern environmentally friendly methods of the agricultural production and the optimum use of the water and natural resources.
- 3- Genetic improvement of agricultural crops in the Kingdom.
- 4- Study the problems of storage and transportation of agricultural crops.
- 5- Training the cadres on scientific research to solve the society problems.

- **Common Rules**

- a) The student may be accepted to study master in the field is not his specialty after a recommendation from the Department and College and the approval of the council of graduate and research.
- b) The competent department can accept the student in the Masters degree after passing a number of supplementary courses from an earlier stage in a period not exceeding three semesters. The following should be taken into consideration:
  - 1- The supplementary course should be estimate at least "good".
  - 2- The cumulative rate of the supplementary courses should be estimate at least "very good"

3- The student cannot register in the graduate program only after passing these supplementary courses and the department can allow for student to register in graduate courses if it only remains one or two courses of complementary courses.

4- The duration of complementary courses do not count within the Master period.

5- The complementary courses do not count within the cumulative rate of the graduate program.

c) Student can delay a maximum of two semesters after the approval of both the department and dean of the college and dean of postgraduate and not be counted this time within the period of Masters.

- **Admission Requirements**

1- The student must be a Saudi or holds a formal grant for postgraduate studies if the student was non-Saudi.

2- The student must have a degree from one of the Saudi Universities or other recognized.

3- The student must be of good behavior and medically fit.

4- The student has two recommendation letters from professors had taught him.

5- Acceptance attributed if the student is employee.

6- A student who possesses the Bachelor of Science in Agricultural estimate at least a very good and the council of graduate and research can accept the student has estimate good but not less than very good courses in the branch of specialization.

- **Other Requirements**

1. Student must successfully pass the written test and personal interview approved by the department.

2. Student must successfully pass the English language test (TOEFL) with a minimum of 400.

- **Program courses**

The student must complete the courses required to complete the program requirements. Total credit hours that must be completed by the student is 36 credit hours from the decisions of a comprehensive headquarters graduate courses (18 credit hours) during the first two semesters then 3 voluntary decisions courses (9 credit hours). The student chooses the voluntary decisions courses with help of the supervisor or with help of the academic supervisor and must be completed before the discussion of the Thesis, which calculates as 9 credit hours as shown in the following table:

**First Semester (Compulsory)**

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
511	PPP	Biochemistry (Advanced)	2	2	3	
512	PPP	Design and analysis of agricultural experiments	2	2	3	
514	PPP	Plant Physiology (Advanced)	2	2	3	271 BOT

**Second Semester (Compulsory)**

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
524	PPP	Plant Biotechnology	2	2	3	
525	PPP	Analytical Chemistry (Advanced)	2	2	3	
526	PPP	Devices and analysis methods	2	2	3	

**Third Semester****Choose, 9 Credit hours**

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
543	PPP	Vegetable crops Production	2	2	3	PPP 514
544	PPP	Pasture and forage crops	2	2	3	PPP 514
545	PPP	Afforestation and coordinate cities	2	2	3	
546	PPP	Plant Breeding (Advanced)	2	2	3	
547	PPP	Fertilizers and soil fertility	2	2	3	PPP 525
548	PPP	Organic farming and hydroponics	2	2	3	
549	PPP	Field crops production (Advanced)	2	2	3	PPP 514
550	PPP	Soil microbes to plants Relationship	2	2	3	PPP 511
551	PPP	Techniques and post-harvest physiology	2	2	3	PPP 511
552	PPP	Flowers and ornamental plants production (Advanced)	2	2	3	PPP 514
553	PPP	Fruit crops Production (Advanced)	2	2	3	
554	PPP	Palm production (Advanced)	2	2	3	
555	PPP	Irrigation systems	2	2	3	
556	PPP	Economics of agricultural production (Advanced)	2	2	3	
557	PPP	Agricultural environment (Advanced)	2	2	3	
558	PPP	Tissue Culture Planting	2	2	3	

559	PPP	Special studies	2	2	3	
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#### Fourth Semester

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
600	PPP	Thesis			9	

### 6.2.2 Master of Science Degree (M. Sc.), Program in Plant Protection

- **Program Aims**

1. Study the problems of pests and plant diseases in the Kingdom and find the scientific and practical solutions to reduce them.
2. Study the safe methods to control pests and reduce the use of pesticides and environmental contaminants.
3. Study the biology and physiology of the agricultural pests and plant pathogens in the Kingdom.
4. Training the cadres on scientific research to solve the society problems.

- **Common Rules**

- a) The student may be accepted to study master in the field is not his specialty after a recommendation from the Department and College and the approval of the council of graduate and research.
- b) The competent department can accept the student in the Masters degree after passing a number of supplementary courses from an earlier stage in a period not exceeding three semesters. The following should be taken into consideration:
  - 1- The supplementary course should be estimate at least "good".
  - 2- 2. The cumulative rate of the supplementary courses should be estimate at least "very good"
  - 3- The student cannot register in the graduate program only after passing these supplementary courses and the department can allow for student to register in graduate courses if it only remains one or two courses of complementary courses.
  - 4- The duration of complementary courses do not count within the Master period.
  - 5- The complementary courses do not count within the cumulative rate of the graduate program.

- c) Student can delay a maximum of two semesters after the approval of both the department and dean of the college and dean of postgraduate and not be counted this time within the period of Masters.

- **Admission Requirements**

1. The student must be a Saudi or holds a formal grant for postgraduate studies if the student was non-Saudi.
2. The student must have a degree from one of the Saudi Universities or other recognized.
3. The student must be of good behavior and medically fit.
4. The student has two recommendation letters from professors had taught him.
5. Acceptance attributed if the student is employee.
6. A student who possesses the Bachelor of Science in Agricultural estimate at least a very good and the council of graduate and research can accept the student has estimate good but not less than very good courses in the branch of specialization.

- **Other Requirements**

1. Student must successfully pass the written test and personal interview approved by the department.
2. Student must successfully pass the English language test (TOEFL) with a minimum of 400.

- **Program courses**

The student must complete the courses required to complete the program requirements. Total credit hours that must be completed by the student is 36 credit hours from the decisions of a comprehensive headquarters graduate courses (18 credit hours) during the first two semesters then 3 voluntary decisions courses (9 credit hours). The student chooses the voluntary decisions courses with help of the supervisor or with help of the academic supervisor and must be completed before the discussion of the Thesis, which calculates as 9 credit hours as shown in the following table:

**First Semester (Compulsory)**

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
511	PPP	Biochemistry (Advanced)	2	2	3	
512	PPP	Design and analysis of agricultural experiments	2	2	3	



513	PPP	Plant Pathology (Advanced)	2	2	3	
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## Second Semester (Compulsory)

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
521	PPP	Economic Entomology (Advanced)	2	2	3	
522	PPP	Pesticide Chemistry and Toxicology	2	2	3	
523	PPP	Physiology snoping	2	2	3	PPP 511

## Third Semester

Choose, 9 Credit hours

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
531	PPP	Integrated management of pest control	2	2	3	PPP 521
532	PPP	Insect Physiology (Advanced)	2	2	3	PPP 521
533	PPP	Mites	2	2	3	PPP 521
534	PPP	Insect Taxonomy	2	2	3	PPP 521
535	PPP	Plant Nematology	2	2	3	PPP 521
536	PPP	Pathogenic bacteria for plant	2	2	3	PPP 523
537	PPP	Plant viruses	2	2	3	PPP 523
538	PPP	Biocontrol	2	2	3	PPP 521
539	PPP	Analysis of pesticides	2	2	3	PPP 522
540	PPP	Pathogenic fungi for plant	2	2	3	
541	PPP	Animal pests environment	2	2	3	
542	PPP	Special studies	2	2	3	

## Fourth Semester

Course			Credit Units			Pre.
No.	Code	Title	Lec.	Lab.	Total	
600	PPP	Thesis			9	

## **7. Committees of Plant Production and Protection Department**

<b>Committee Title</b>	<b>Committee Duties</b>
<b>Graduate Studies committee</b>	<ol style="list-style-type: none"> <li>1. check the files of applicants for graduate studies and identification of eligible.</li> <li>2. review tables and tests for learners and communicated to the deanship of graduate studies.</li> <li>3. preparation of the outcome of the postgraduate students of the University.</li> <li>4. study the problems of graduate students in the Department during the study and work to resolve them.</li> <li>5. receive periodic reports to supervisors about their students to the head of Department to present to the Dean.</li> <li>6. periodic follow-up by the Coordinator of each student's program in coordination with the academic supervisor for each student.</li> </ol>
<b>Quality Assurance (QA) and development committee</b>	<ol style="list-style-type: none"> <li>1. Activate the systems, controls and standards necessary to obtain accreditation for the section, and follow the adoption of quality assurance unit headquarters in college.</li> <li>2. Coordination with the quality assurance unit at the College regarding academic credit requirements.</li> </ol>
<b>Curriculum committee</b>	<b>The work plan of the modern Department of plant production and protection</b>
<b>Scientific committee for Dept. Members</b>	<ol style="list-style-type: none"> <li>1. examine requests for faculty members who wish to attend conferences and scientific meetings and to ensure the applicability of the academic regulations.</li> <li>2. fill out all forms required by the candidate for Conference or seminar.</li> <li>3. ensure adequate research to customize Finder and the theme of the Conference or seminar.</li> </ol>

Committee Title	Committee Duties
<b>Scholarship committee</b>	<ol style="list-style-type: none"> <li>1. communicate with the year section to overcome the difficulties faced by their careers.</li> <li>2. emergency scholarship study before submission to the Board of the Department.</li> <li>3. coordination with the Scholarship Committee of the Faculty Council.</li> </ol>
<b>Academic guidance committee</b>	<ol style="list-style-type: none"> <li>1. business data for all undergraduates.</li> <li>2. urged the students to open their e-mail and provide the section with their phone numbers.</li> <li>3. follow-up of students expected to graduate with undergraduate semester at least to avoid conflicts in articles.</li> <li>4. follow the schedule and organization.</li> <li>5. study the problems of students in the Department during the study and work to resolve them.</li> </ol>

## 8. Faculty members in the program plant production and protection

No.	Faculty/ Teaching Staff Names			Nationality	Academic Rank	General Specialty	Specific Specialty	Institution Graduated From	Degree	*Study Mode	Full or Part Time	
	Name	M	F								F/T	P/T
1.	Abdelrahman AL-Wasel	√	-	Saudi	Professor	Plant Production	Biotechnology	Illinois Urbana-champaign, USA	Ph.D	On Campus Programs	√	---
2.	Abdoulla Alsohim	√	-	Saudi	Professor	Microbiology	Biotechnology	Reading Univ., UK	Ph.D	On Campus Programs	√	---
3.	Abdulla Al-Kheraiji	√	-	Saudi	Professor	Economics	Gnt. Trade and marketing	Manhattea , USA	Ph.D	On Campus Programs	√	---
4.	Abdul-Rahman Al-Humaid	√	-	Saudi	Professor	Plant physiology	Ornament plants	Iow stat, USA	Ph.D	On Campus Programs	√	---
5.	Ahmed Alrogaibah	√	-	Saudi	Professor	Plant Protection	Plant Pathology	Willes, England	Ph.D	On Campus Programs	√	---
6.	Ahmed I. Al-Turki	√	-	Saudi	Professor	Soil and water	Soil microbiology	IOW stat univ., USA	Ph.D	On Campus Programs	√	---
7.	Ahmed Mohamed Aggag	√	-	Egyptian	Professor	Soil & Water	Soil physics	Damanhour Univ., Egypt	Ph.D	On Campus Programs	√	---
8.	Ayman faisal omar	√	-	Egyptian	Professor	Plant Pathology	Virus & phytoplasma	Univ. Putra Malaysia	Ph.D	On Campus Programs	√	---
9.	Essam Abd-Elmoniem	√	-	Egyptian	Professor	Soil Sciences	Soil fertility and plant nutrition	Ain Shams Univ., Egypt	Ph.D	On Campus Programs	√	---
10.	Saleh Alhewairini	√	-	Saudi	Professor	Plant Protection	Plant Protection	Nottingham, UK	Ph.D	On Campus Programs	√	---
11.	Sherif Abdel Ghani	√	-	Egyptian	Professor	Plant Protection	Pesticides Chemistry	Ain Shams Univ. + Southampton Univ., UK	Ph.D	On Campus Programs	√	---

No.	Faculty/ Teaching Staff Names			Nationality	Academic Rank	General Specialty	Specific Specialty	Institution Graduated From	Degree	*Study Mode	Full or Part Time	
	Name	M	F								F/T	P/T
12.	Souliman Al-Rehiayani	√	-	Saudi	Professor	Plant Protection	Plant pathology nematology	Idaho, USA	Ph.D	On Campus Programs	√	---
13.	Mahmoud Alazzazy	√	-	Egyptian	Professor	Agricultural Zoology	Acarology	Alazhar university Egypt	Ph.D	On Campus Programs	√	---
14.	Medhat Rehan	√	-	Egyptian	Professor	Genetics	Genetics	Kafrelsheikh, Egypt	Ph.D	On Campus Programs	√	---
15.	Mohamed Al-Deghairi	√	-	Saudi	Professor	Entomology	Biotechnology	Colorado state, USA	Ph.D	On Campus Programs	√	---
16.	Mohamed Ghonimy	√	-	Egyptian	Professor	Ag. Engineering	Machine Design	Cairo Univ., Egypt	Ph.D	On Campus Programs	√	---
17.	Mohamed Motawei	√	-	Egyptian	Professor	Agronomy	Molecular genetics	Alex. Univ., Egypt	Ph.D	On Campus Programs	√	---
18.	Nagdy F. Abdel-Baky	√	-	Egyptian	Professor	Economic Entomology	Integrated Pest Management	Mansoura Univ., + UCR, USA	Ph.D	On Campus Programs	√	---
19.	Nasser Al-Ghumaiz	√	-	Saudi	Professor	Agronomy	Forage and Pasture management	Michigan State Univ., USA	Ph.D	On Campus Programs	√	---
20.	Yossef Al-Seleem	√	-	Saudi	Professor	Ag. Economics	Extension	USA	Ph.D	On Campus Programs	√	---
21.	Abdulaziz Bani Alharbi	√	-	Saudi	Assoc. Professor	Environmental Sc.	Environmental Physics	Reading Univ., UK	Ph.D	On Campus Programs	√	---
22.	Adil Hassan Ahmed Abdelmageed	√	-	Sudanese	Assoc. Professor	Horticulture	Vegetable crops physiology	Sandwich programme Between Humboldt	Ph.D	On Campus Programs	√	---

No.	Faculty/ Teaching Staff Names			Nationality	Academic Rank	General Specialty	Specific Specialty	Institution Graduated From	Degree	*Study Mode	Full or Part Time	
	Name	M	F								F/T	P/T
							and production	University of Berlin and University of Khartoum				
23.	Ahmed Alzoheiry	√	-	Egyptian	Assoc. Professor	Agric Eng	Irrigation	The Ohio state Univ., USA	Ph.D	On Campus Programs	√	---
24.	Fahad Al-Romian	√	-	Saudi	Assoc. Professor	Soil Sciences	Soil Fertility	Iowa State Univ., USA	Ph.D	On Campus Programs	√	---
25.	Mokded Rabhi	√	-	Tunisian	Assoc. Professor	Biology	Plant Ecophysiology	Univ. Tunis El Manar	PhD	On Campus Programs	√	---
26.	Souliman Al-Otayk	√	-	Saudi	Assoc. Professor	Agronomy	Plant breeding	Nebraska, USA	Ph.D	On Campus Programs	√	---
27.	Khalid Elhassan Hamed	√	-	Sudanese	Assistant Professor	Plant Pathology	Plant Virology	Univ. of Gezira Sudan & DSMZ, Germany	Ph.D	On Campus Programs	√	---
28.	Ahmed Al-Abodi	√	-	Saudi	Lec.	Plant Prod. and Prot.	---	---	M.Sc	On Campus Programs	√	---
29.	Khaled A. Aljmhan	√	-	Saudi	Lec.	Plant Prod. and Prot.	---	---	M.Sc	On Campus Programs	√	---
30.	Nader Al-Otibii	√	-	Saudi	Lec.	Plant Prod. and Prot.	---	---	M.Sc	On Campus Programs	√	---
31.	Mohamed A. Aldwaian	√	-	Saudi	Lec.	Plant Prod. and Prot.	---	---	M.Sc	On Campus Programs	√	---

### **32. Program Staff members Names, Office Tel. and their E-mail's**

Department Member	Degree	Major	Email	Office Tel.
<b>Department head (Dr. Abdulaziz Bani Alharbi)</b>			<b>Abb.alharbi@ qu.edu.sa</b>	<b>20340</b>
Prof. Abdelrahman AL-Wasel	Prof.	Biotechnology	awasel@qu.edu.sa	16133
Prof. Abdullah Alsohim	Prof.	Biotechnology	a.alsohim@qu.edu.sa	16149
Prof. Abdulla Al-Kheraiji	Prof.	Economics	khriejy@qu.edu.sa	16136
Prof. Abdul-Rahman Al-Humaid	Prof.	Pomology	ahmied@qu.edu.sa	16132
Prof. Ahmed Alrogaibah	Prof.	Plant Protection	arogaibah@qu.edu.sa	16126
Prof. Ahmed Al-Turki	Prof.	Soil and water	trky@qu.edu.sa	16125
Prof. Ahmed Mohamed Aggag	Prof.	Soil and Water	a.aggag@qu.edu.sa	16127
Prof. Ayman Faisal Abdo Omar	Prof.	Plant Pathology	a.mohmed@qu.edu.sa	16128
Prof. Essam Abd-Elmoniem	Prof.	Soil Sciences	emoniem@qu.edu.sa	16137
Prof. Saleh Alhewairini	Prof.	Pesticides	ssalhowirini@yahoo.com	16146
Prof. Sherif Abdel Ghani	Prof.	Pesticides	h.fouda@qu.edu.sa	16130
Prof. Souliman Al-Rehiyani	Prof.	Plant Protection	rhieany@qu.edu.sa	16129
Prof. Mahmoud Alazzazy	Prof.	Ag. Zoology	m.elazzazy@qu.edu.sa	16142
Prof. Medhat Ramadan Rehan	Prof.	Genetics	medhatrr@gmail.com	16150
Prof. Mohamed Al-Deghairi	Prof.	Entomology	dgiery@qu.edu.sa	16141
Prof. Mohamed Ghonimy	Prof.	Ag. Engineering	m.elsayed@qu.edu.sa	16139
Prof. Mohamed Motawei	Prof.	Agronomy	mtaoa@qu.edu.sa	16140
Prof. Nagdy F. Abdel-Baky	Prof.	Economic Entomology	nfaly@qu.edu.sa	16143
Dr. Nasser S. A. Al-Ghumaiz	Prof.	Agronomy and pastures	ngmiez@qu.edu.sa	16151
Prof. Yossef Al-Seleem	Prof.	Ag. Economics	sliem@qu.edu.sa	16144
Dr. Abdulaziz Bani Alharbi	Assoc. Prof.	Environmental Sc.	Abb.alharbi@ qu.edu.sa	16148
Dr. Adil Hassan Abdelmageed	Assoc. Prof.	Vegetable crops physiology	ad.abdelmageed@qu.edu.sa	16147
Dr. Ahmed Mahmoud Al-Zoheiry	Assoc. Prof.	Ag. Eng.	a.alzoheiy@qu.edu.sa	16152
Fahad Al-Romian	Assoc. Prof.	Soil Sciences	f.alromian@qu.edu.sa	16111
Dr. Mokded Mohamed Rabhi	Assoc. Prof.	Biology	m.rabhi@qu.edu.sa	16154
Dr. Souliman Al-Otayk	Assoc. Prof.	Agronomy	satiek@qu.edu.sa	16145
Dr. Khalid A. Hamed Mohamed	Assis. Prof.	Plant Pathology	kh.mohammed@qu.edu.sa	16153

Department Member	Degree	Major	Email	Office Tel.
أحمد بن يوسف سليمان الحصيص	M.Sc.	Plant Prod. and Prot.	ay.alhusays@qu.edu.sa	--
عمر بن عبد الرحمن عبد الله الكليه	M.Sc.	Plant Prod. and Prot.	o.alkilayh@qu.edu.sa	--
محمد بن عبد الله الفريجي	M.Sc.	Plant Prod. and Prot.	mfriejy@qu.edu.sa	--
Mr. Ahmed Al-Abodi	M.Sc.	Plant Prod. and Prot.	ahmad385@gmail.com	--
Mr. Khaled A. Aljmhan	M.Sc.	Plant Prod. and Prot.	jmhan@qu.edu.sa	16158
Mr.Mohamed A. Aldwaian	M.Sc.	Plant Prod. and Prot.		-
Mr.Nader Al-Otibii	M.Sc.	Plant Prod. and Prot.	natieby@qu.edu.sa	16159
سطام بن محمد السطامي	M.Sc.	Plant Prod. and Prot.	stamy@qu.edu.sa	--
Mr.Abdullah N. Alsaif	B.Sc.	Plant Prod. and Prot.	ansief@qu.edu.sa	16161
محمد بن عبد الله المزيني	B.Sc.	Plant Prod. and Prot.	-----	--
فهد بن مشعل السويد	B.Sc.	Plant Prod. and Prot.	f.alsweed@qu.edu.sa	16165
سليمان بن عبد الله الجطيلي	Agr. diploma	Plant Prod. and Prot	-----	16169
محمد بن سليمان الشويمان	Agr. diploma	Plant Prod. and Prot	-----	16166
صلاح بن صالح الحضيف	Agr. diploma	Plant Prod. and Prot	s.alhudhaif@qu.edu.sa	16168



### **33.The Brief biography of the Plant Production and Protection**

#### **Program members**



<b>Name</b>	Abdulaziz Bani Alharbi
<b>Job Title</b>	Associate Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"><li>• Member, plant production and protection Dept.</li><li>• Member of Sustainable Development Center.</li><li>• Representative of the Ministry of Higher Education for the seventh Initiative for Agricultural Development Fund</li><li>• Team Leader standards bottled water in Saudi Arabia.</li><li>• Many Communities in Qassim University.</li></ul>
<b>Interests</b>	<ul style="list-style-type: none"><li>• Use applies of energy balance models in arid and semi-arid area.</li><li>• Heat transfer between soil and atmosphere.</li><li>• Soil moisture conservation</li><li>• Modeling of soil evaporation</li><li>• Water requirements crops</li><li>• Environmental pollution.</li></ul>
<b>Scientific Activities</b>	<p>Teaching activities:</p> <ul style="list-style-type: none"><li>• Principles Physics course.</li><li>• Irrigation and drainage course.</li><li>• Agricultural environment and climate change</li><li>• Field Training course.</li></ul> <p>Published Research in international journals: <b>16 researches in the environmental Physics.</b></p>
<b>Contact Info</b>	<p><b>Email: abb.aharbi@qu.edu.sa</b> <b>Ex. 20340</b></p>



<b>Name</b>	Abdulrahman Saleh Abdulrahman Alwasel
<b>Scientific Degree</b>	Professor
<b>Responsibilities</b>	<b>Faculty member</b>
<b>Interests</b>	<p>Teaching the following undergraduate Courses (Heredity and Plant breeding, Plant tissue culture, Plant propagation, Date palm production, production of Fruits, Field training, Botany, Research and Discussion).</p> <p>Teaching graduate courses (Biotechnology)</p>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Plant micropropagation (Plant tissue culture)</li> <li>2. Mutation induction for plant improvment</li> <li>3. Genetic studies using DNA technology (DNA markers)</li> <li>4. Fruit production and propagation</li> <li>5. Plant propagation</li> <li>6. Graduate student supervision.</li> <li>7. Examiner for Master and Ph.D dissertation and thesis.</li> <li>8. Referee of scientific papers for publication.</li> <li>9. Referee for Scientific books (written or translated books)</li> <li>10. Studies and Consultation.</li> <li>11. Studies and consultation in Higher education strategy and leadership</li> </ol>
<b>Contact Info.</b>	<p>Email: awasel@qu.edu.sa or awasel@yahoo.com</p> <p>Ex.: 16133</p> <p>Mobile:+966505132066</p>



<b>Name</b>	Abdurrahman Al Humaid
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Teaching undergraduate courses.</li> <li>• Teaching graduate courses.</li> <li>• M.Sc. and Ph.D Thesis Supervision.</li> <li>• Referee member of the research projects.</li> <li>• Supervisor of Saleh Kamel date palm scientific chair.</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>• Water Relations and Associated water requirements for horticulture crops.</li> <li>• Plant physiology.</li> <li>• Ornamentals and tree physiology. .</li> </ul>
<b>Scientific Activities</b>	<ul style="list-style-type: none"> <li>• Published many scientific papers in local and international scientific journal.</li> <li>• Supervision of Ms.C. and Ph.D Thesis. Referee of many Dissertation (Ms.C and Ph.D).</li> <li>• Referee of Many specific international Journals. .</li> </ul>
<b>Contact Info</b>	<b>Emails:</b> ahmied@qu.edu.sa alhumaid1@hotmail.com <b>Ext</b> 16132



<b>Name</b>	Ahmed Mohamed Aggag
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>- Teaching undergraduate students.</li> <li>- Teaching Post-graduate students.</li> <li>- Member of Department Committee.</li> <li>- Member of faculty Student Affair Unit.</li> <li>Member of department Student Affair Unit.</li> <li>- Member of department post graduate committee.</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>❖ Soil physics</li> <li>❖ Plant Irrigation water requirements</li> <li>❖ Water stress on plants</li> <li>❖ Pollution movements in soils</li> </ul>
<b>Scientific Activities</b>	<p>1. Teaching activities:</p> <ul style="list-style-type: none"> <li>- principals of physics.</li> <li>- Introduction on physics.</li> <li>- principals of soil science.</li> <li>- Supervision of M.Sc. Thesis</li> <li>- Referee of many Dissertation (M.Sc. and Ph.D.)</li> </ul> <p>Referee of Many specific Journals</p> <p>2. Published Research:</p> <p>20 researches in soil and water sciences published in international and local magazines (Water quality and management - plant water requirements – soil and water pollution and prevention - Use of mathematical models for study the water and fertilizer movements in soil).</p>
<b>Contact Info</b>	<p>Email: a.aggag@qu.edu.sa</p> <p>Ex. 16127</p>



<b>Name</b>	Ayman Faisal Abdo Omar
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students (Agricultural Microbiology, General biology, principles of Plant protection)</li> <li>2. Teaching post graduate students (Advanced of plant pathology, Physiology of parasitism).</li> <li>3. Member of quality committee</li> <li>4. Member of study plan committee</li> <li>5. Member of post graduate studies committee</li> <li>6. Member of electronic learning committee</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1. Detection and diagnosis of Virus, Phytoplasma, Bacteria &amp; fungal diseases using advanced methods.</li> <li>2. Attendance many workshops &amp; seminars of different fields.</li> <li>3. Attendance several courses on the field of university staff development capabilities.</li> <li>4. Certified trainer in International Board of Certified Trainers (IBCT)</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Published 37 scientific papers on refereed local &amp; international journals.</li> <li>2. Authorship of scientific books (Plant diseases)</li> <li>3. Supervision of many Master &amp; PhD thesis</li> <li>4. Referee scientific Dissertation.</li> <li>5. The principle investigator of several cooperative international and local projects</li> <li>6. Member of the research team of cooperative international projects</li> <li>7. Getting several excellences of scientific publishing prizes.</li> <li>8. Member in many scientific societies</li> <li>9. Organization of several scientific practical courses of using the advanced methods for plant disease diagnosis (ELISA &amp; PCR).</li> <li>10. Establishment of Plant Pathology &amp; Biotechnology Lab. In Fac. of Agric. Kafrelsheikh Univ., according to ISO 17025 standards.</li> <li>11. Establishment of Excellence center for collecting and maintenance Egyptian plant microbes for scientific research &amp; sustainability development.</li> </ol>
<b>Contact Info</b>	Email: <a href="mailto:omar12744@gmail.com">omar12744@gmail.com</a> <a href="mailto:a.mohmed@qu.edu.sa">a.mohmed@qu.edu.sa</a> Ext. 16128 Mobil: 0561690792



<b>Name</b>	Essam M. Abd-Elmoniem
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students.</li> <li>2. Teaching Post-graduate students.</li> <li>3. A member of the Community Service Committee</li> <li>4. Supervisor of the Community Service Lab.</li> <li>5. Analysis of soil, plant, water and fertilizer samples that are returned to the laboratory</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1. Soil chemistry</li> <li>2. Soil fertility and plant nutrition</li> <li>3. Fertilizers and fertilization</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Published many scientific papers in local &amp; international scientific journals.</li> <li>2. Supervision of Ms.C. and Ph.D Thesis</li> <li>3. Referee of many Dissertation (Ms.C and Ph.D) .</li> <li>4. Referee of Many specific international Journals</li> <li>5. Author of scientific books</li> </ol>
<b>Contact Info</b>	Email: ruessam2@yahoo.com emoniem@qu.edu.sa Mobile: 0506510877 Ex: 16137



<b>Name</b>	Saleh Suliaman Alhewairini
<b>Scientific Degree</b>	Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>○ Dean of Agriculture and Veterinary Medicine College.</li> <li>○ Teaching of undergraduate students.</li> <li>○ Teaching of master's students.</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>○ Pesticide toxicity.</li> <li>○ Pesticide residues.</li> <li>○ Pest control.</li> </ul>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Scientific group membership.</li> <li>2. Designing scientific experiments.</li> <li>3. Insect biodiversity.</li> <li>4. Pollution monitoring.</li> <li>5. Toxicity assessment</li> </ol>
<b>Contact Info.</b>	<p>Email: <a href="mailto:hoierieny@qu.edu.sa">hoierieny@qu.edu.sa</a></p> <p><a href="mailto:ssalhowirini@yahoo.com">ssalhowirini@yahoo.com</a></p> <p>Ex.: 12900</p>



<b>Name</b>	Suloiman AL-Rehiyani
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students (Plant Nematology + Zoology+ Date Palm Diseases).</li> <li>2. A member, College of Agriculture and Veterinary Medicine Council.</li> <li>3. A member, the scientific Committee of Promising Research Center in Biological Control and Agricultural Information, Qassim University.</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1- Control of Plant Parasitic Nematodes and other Pests in Organic Farming.</li> <li>2- Biological studies on Plant Parasitic Nematodes.</li> <li>3- Morphological and molecular identification of plant-parasitic nematodes</li> <li>4-Date Palm Diseases and Pests.</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Plant Parasitic Nematodes Management.</li> <li>2. Molecular Approaches for Identification of Root-knot nematode and other genera from AL-Qassim area.</li> <li>3. <i>Pasteuria penetrans</i> (AL-Qassim population) for Meloidogyne incognita control.</li> <li>4. Entomopathogenic nematodes (EPN) identification and biological studies.</li> <li>5. Referee of many specific international Journals</li> </ol>
<b>Contact Info</b>	E-mail: rhieany@qu.edu.sa 380 0050 Ext. 16129





<b>Name</b>	Sherif B. Abdel Ghani
<b>Job Title</b>	Professor
<b>Responsibilities</b>	1- Teaching undergraduate students (Pesticides Residues Analysis, General Chemistry, Principles of Plant Protection, Weeds and Their Control. Fungicides). 2- Teaching graduate students (Advanced analytical Chemistry, Instrumentation and Analytical Methods, Chemistry and Toxicity of Pesticides). 3- Scientific research. 4- Community service. 5- Member of many committees in the department and college.
<b>Interests</b>	1- Pesticide residues analysis in food and environmental components. 2- Analytical methods development and validation. 3- Synthesis of biologically active natural products. 4- Synthesis of nano-metals for pest control purposes
<b>Scientific Activities</b>	1- Published many research papers in international and national scientific journals 2- supervising MSc students.  3- PI and Co-PI in a few research projects funded from the University  4- reviewer in several scientific journals
<b>Contact Info</b>	Email: sherifbiomy@yahoo.com  h.fouda@qu.edu.sa Ex. 16130



<b>Name</b>	Mahmoud Mostafa Ahmed Al-Azzazy
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>4. Teaching undergraduate students (General Zoology + Animal Pests and Mites + Economic Mites)</li> <li>5. A member of scientific participations committee in PPP department.</li> <li>6. University/Community service</li> <li>7. Scholarly activity</li> <li>8. Departmental meetings</li> <li>9. Office hours</li> <li>10. Academic advising</li> <li>11. Research projects</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>1. Agricultural zoology</li> <li>2. Mites injurious to economic plants</li> <li>3. Integrated management of mites</li> <li>4. Rearing and mass production of the predatory mites</li> <li>5. Mites classification</li> <li>6. Ticks</li> </ul>
<b>Scientific Activities</b>	<ul style="list-style-type: none"> <li>12. Several published scientific papers in international and national journals</li> <li>13. Supervision of M.Sc. and Ph.D. Thesis</li> <li>14. Supervision of many dissertations (M.Sc. and Ph.D.)</li> <li>15. Referee of many specific international journals.</li> </ul>
<b>Contact Info</b>	Email: m.elazzazy@qu.edu.sa Ex. 16142



<b>Name</b>	Medhat Ramadan Amin Rehan
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students (Biochemistry – Biology).</li> <li>2. Teaching Post-graduate students (Biochemistry – Biotechnology).</li> <li>3. A member of quality committee in PPP department.</li> <li>4. A member of studding plan in PPP department.</li> <li>5. A member of the Academic Advising committee.</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1- Microbial Genetics</li> <li>2- Biotechnology</li> <li>3- Applying microorganisms in degradation the environmental pollutants.</li> <li>4- Using the benefit microorganisms as a biological control agents a against plant pathogens.</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>6. Identify the gene function related to environmental bioremediation.</li> <li>7. Microorganism's resistance to heavy metals.</li> <li>8. Supervision of Ms.C. and Ph.D thesis</li> <li>9. Supervision of many Dissertations (Ms.C and Ph.D).</li> <li>10. Referee of many specific international Journals</li> </ol>
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<b>Name</b>	Mohammad Abdulaziz Aldeghairi
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students (Fundamentals of Entomology, References and Periodicals, Field Training, Research and Discussions).</li> <li>2. Teaching Master students (Biological Control &amp; Integrated Pest Management).</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1. Insects and arthropods.</li> <li>2. Biological control of agricultural and urban pests.</li> <li>3. Safe control and clean agriculture.</li> <li>4. Integrated Pest Management.</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Identify insect pests and other related pests and find practical solutions to reduce and control them.</li> <li>2. Biological and integrated pest control and published many papers and articles in this field.</li> <li>3. Supervising graduate research.</li> <li>4. Evaluation of theses and dissertations.</li> <li>5. Evaluation of research projects.</li> <li>6. Peer review of research papers.</li> </ol>
<b>Contact Info</b>	<p>Mobile: 00966500060664</p> <p>EX: 16141</p> <p>Email: dgiery@qu.edu.sa, maldeghairi@gmail.com</p>



<b>Name</b>	Mohamed Ibrahim Ghonimy
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Member, plant production and protection Dept.</li> <li>• Member, Quality Assurance Unit.</li> <li>• Member, Academic accreditation committee, Plant production and protection Dept.</li> <li>• Member of the Education affairs committee.</li> <li>• Member, judging committee of the Journal of Environmental Design, Faculty of Environmental Designs, King Abdel Aziz University - Jeddah, Saudi Arabia.</li> <li>• Member, judging committee of the Misr Journal of Agricultural Engineering, Egypt.</li> <li>• Member, judging committee, the Standing Scientific Committee of Agricultural Engineering, Egypt.</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>- Design, development and evaluation of agricultural machinery.</li> <li>- Mathematical analysis to predict the performance of agricultural machinery.</li> <li>- Development of food processing equipment.</li> </ul>
<b>Scientific Activities</b>	<p>Teaching activities:</p> <ul style="list-style-type: none"> <li>- Agricultural operations mechanization.</li> <li>- Introduction to computer.</li> <li>- Applications of Computer in Agric.</li> <li>- Food Process Engineering.</li> </ul> <p>Published Research:</p> <p>34 researches in Agricultural Engineering published in international and local magazines (development, design and evaluation of agricultural machinery- Use of mathematical analysis to predict the performance of the agricultural machinery- Development and design of food processing equipment - Development of irrigation systems - Use of mathematical models on agricultural machinery).</p>
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<b>Name</b>	Mohamed Ibrahim Motawei
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students.</li> <li>2. Teaching Post-graduate students.</li> <li>3. M.Sc. Thesis Supervision.</li> <li>4. Member of Post-graduate committee at Department of Plant Production and Protection.</li> <li>5. A member of the Curriculum Development Committee at PPD.</li> </ol>
<b>Interests</b>	<ul style="list-style-type: none"> <li>❖ Biotechnology</li> <li>❖ Genetic maps in plants</li> <li>❖ Molecular markers and plant breeding</li> </ul>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Published More than 35 papers in scientific journal</li> <li>2. Supervision of M.Sc. Thesis</li> <li>3. Referee of many Dissertation (M.Sc. and Ph.D)</li> <li>4. Referee of Many specific international Journals</li> </ol>
<b>Contact Info</b>	Email: rumotawei@hotmail.com, mtaoa@qu.edu.sa  Ex. 16140



<b>Name</b>	Nagdy F. Abdel-Baky
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students (Economic Entomology &amp; beekeeping – Date palm production &amp; pests; Practice 2; research &amp; Discussion, Basics of plant protection).</li> <li>2. Teaching Post-graduate students (Economic Entomology – Biological Control).</li> <li>3. Director of Quality assurance Unit PPP</li> <li>4. A member of quality committee in PPP Collage.</li> <li>5. A member of quality committee in PPP department.</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1. Red palm weevils and palm pests.</li> <li>2. Integrated pest management.</li> <li>3. Biological control element.</li> <li>4. Whiteflies.</li> <li>5. Pests of greenhouses Insect Pests.</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Insect-Plant relationship.</li> <li>2. Red palm weevils and palm pests.</li> <li>3. Integrated pest management.</li> <li>4. Biological control element.</li> <li>5. Whiteflies.</li> <li>6. Pests of greenhouses Insect Pests.</li> <li>7. Supervision of Ms.C. and Ph.D thesis</li> <li>8. Supervision of many Dissertations (Ms.C and Ph.D).</li> <li>9. Referee of many specific international Journals</li> </ol>
<b>Contact Info</b>	<p>E-mail: nafly@qu.edu.sa</p> <p>Ext. 16143</p> <p>Mobile: 0557857877</p>



<b>Name</b>	Nasser S. Al-Ghumaiz
<b>Job Title</b>	Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>- Member of the Deanship Council of Graduate studies, Qassim University</li> <li>- Head of the External Cooperative Training Committee at Collage of Agriculture and Vet Med.</li> <li>- Head of Academic Advising Committee at Collage of Agriculture and Vet Med</li> <li>- Head of study plan committee, Plant Production and Protection Department.</li> <li>- Member at a many Committees at Qassim University</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>- Field crops management</li> <li>- Productivity and nutritive value of new forage crops under the Saudi Arabia environmental condition</li> <li>- Establish Organic Agriculture in forage and field crops</li> <li>- Study of the competitive relationship between grass and legumes species and their impact of Botanical Composition in forage mixtures</li> </ul>
<b>Scientific Activities</b>	<p>Teaching activities</p> <ul style="list-style-type: none"> <li>• Production of Forage Crops.</li> <li>• Production of Filed Crops.</li> <li>• Practical Training</li> <li>• Principles of Plant Production.</li> </ul> <p>Research activities</p> <ul style="list-style-type: none"> <li>- Examiner member committee of M.Sc. and Ph.D. thesis.</li> <li>- Referee of many specific paper and research projects.</li> <li>- Publishing in several international journals.</li> <li>- Attending and participating in several international conferences.</li> </ul>
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<b>Name</b>	Adil Hassan Ahmed Abdelmageed
<b>Job Title</b>	Associate Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students.</li> <li>2. Teaching Post-graduate students.</li> <li>3. Member of Department Committee</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1. Domestication of some indigenous medicinal and aromatic plants by using good agricultural practices (GAP).</li> <li>2. Investigation of the physiological basis of heat tolerance in some vegetable crops like, tomatoes; pepper; potatoes; snap beans.....</li> <li>3. Protected cultivation of vegetable crops</li> <li>4. Micropropagation and investigation of antioxidant and antimicrobial activities of some medicinal and aromatic plants.</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. Published More than 19 papers in regional and international scientific journals (most of them with impact factor)</li> <li>2. Supervision of M.Sc. and Ph. D. Thesis</li> <li>3. Referee of many Dissertations (M.Sc. and Ph.D.)</li> <li>4. Referee of Many local, regional and international Journals</li> </ol>
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<b>Name</b>	Ahmed Mahmoud Alzoheiry
<b>Job Title</b>	Associate Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>• Teaching undergraduate students</li> <li>• Member of the plant protection and production Quality assurance committee</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>• Irrigation</li> <li>• Water conservation</li> <li>• Ground water sustainability</li> <li>• Renewable energy ( solar and wind)</li> </ul>
<b>Scientific Activities</b>	<ul style="list-style-type: none"> <li>• Published several scientific papers in the field of irrigation</li> <li>• Member of the ASABE</li> </ul>
<b>Contact Info.</b>	Email: alzoheiry@gmail.com, a.alzoheiy@qu.edu.sa  Ex. 16152



<b>Name</b>	Mokded M. Rabhi
<b>Job Title</b>	Associate Professor
<b>Responsibilities</b>	<ul style="list-style-type: none"> <li>- Member of Plant Production and Protection Department.</li> <li>- Member of the Committee of Graduate Studies.</li> <li>- Member of Exit Exam Committee.</li> </ul>
<b>Interests</b>	<ul style="list-style-type: none"> <li>- Plant ecophysiology</li> <li>- Photosynthesis</li> <li>- Halophytes</li> <li>- Abiotic stresses</li> <li>- Phytodesalination</li> </ul>
<b>Scientific Activities</b>	<p>Teaching activities:</p> <ul style="list-style-type: none"> <li>- General Botany</li> <li>- Plant Physiology</li> </ul> <p>Published Research:</p> <p>63 research articles published in international journals with impact factor (ISI), 1 book, 4 book chapters, and 3 conference papers</p>
<b>Contact Info.</b>	Email: m.rabhi@qu.edu.sa ; mokded.rabhi@gmail.com Ex. 16154



<b>Name</b>	Soleman Mohamed Al-Otayk
<b>Job Title</b>	Associate professor
<b>Responsibilities</b>	1- Teaching BS student plant breeding and genetics course and experimental design course 2- Teaching MS student advance plant breeding course and advance experimental deign course 3- Member in college student abroad committee
<b>Interests</b>	1. Genetics and cytogenetic 2. Plant breeding for better plants 3. Molecular genetics
<b>Scientific Activities</b>	1. Search for genes for selenium in plants 2. Search for genes for beta glucan in seeds 3. Arbitration thesis
<b>Contact Info</b>	Email: saloe_2000@yahoo.com  Ex.:00966613800050 ex 16145



<b>Name</b>	Khalid Elhassan Hamed Mohammed
<b>Job Title</b>	Assistant Professor
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching undergraduate students. (Bacterial and viral plant diseases + Agricultural microbiology + Botany)</li> <li>2. Teaching graduate students (Advance plant pathology + Physiology of parasitism)</li> <li>3. Member of the Quality Assurance and Accreditation Committee</li> <li>4. Member, plant production and protection Dept.</li> <li>5. Member, College Library and scientific research committee.</li> <li>6. Member, College student affairs committee (B.Sc),</li> <li>7. Representative the Dept. of Plant prod. and prot. in the College Student Club.</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1. Molecular and serological characterization of plant viruses</li> <li>2. Detection and characterization of fungal plant diseases</li> <li>3. Testing the efficiency of fungicides</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>16. Publication of more than 15 scientific researches in Arab and foreign scientific journals.</li> <li>17. Referee of a scientific journals</li> <li>18. Contribution on supervising MSc. student</li> </ol>
<b>Contact Info.</b>	<p>Email: kh.mohammed@qu.edu.sa</p> <p>Ex.: 16153</p> <p>Cell. 0506947045</p>



<b>Name</b>	Khalid Abdul-karim Aljamhan
<b>Scientific Degree</b>	Masters in Plant Pathology
<b>Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Teaching some of practical courses in plant products and protection department.</li> <li>2. Supervision of plant diseases laboratories.</li> <li>3. Supervision plant clinic of the community service department.</li> <li>4. The head of undergraduate student committee.</li> <li>5. Member of the cooperative training committee at the College of Agriculture and. Veterinary Medicine</li> <li>6. Member of the study plan committee in the plant products and protection</li> <li>7. Secretary of the Faculty of Social Affairs.</li> </ol>
<b>Interests</b>	<ol style="list-style-type: none"> <li>1. Diagnosis and identification of pathogens in laboratories and fields</li> <li>2. Training students and colleagues in how to use diagnose pathogens devices</li> <li>3. Attend several training courses; in how identifying plant pathogens by using modern devices</li> <li>4. Attend several courses in capacity development and development</li> </ol>
<b>Scientific Activities</b>	<ol style="list-style-type: none"> <li>1. published 8 papers in scientific journals.</li> <li>2. Member of the research team in plant products and protection department</li> <li>3. Helping the farmer to well understanding the damage that the plant pathogens capable of.</li> <li>4. Training in how to detect pathogens in the laboratory</li> </ol>
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