برنامج قسم علم النبات

لقد بدأت الدراسة بقسم علم النبات في العام الجامعي (1975/1974) وتجري دراسة علوم النبات في القسم بالمنظور ذاته الذي تجري به دراسة علوم النبات في أقسام النبات بكليات العلوم بالجامعات العربية ، ويضم عدد (5) مجالات تخصصية دقيقة هي : وعلم الأحياء الدقيقة ، علم الوراثة ، وعلم وظائف الأعضاء ، وعلم التقسيم ، وعلم البيئة . إن خريجي قسم علم النبات يعملون فنيين بالمعامل الطبية المختلفة في مجالات الزراعة ، والبيئة ، والتدريس ... الخ .

أما بالنسبة لبرنامج الدراسات العليا بالقسم فقد بدأ عام 1980م ، أي بعد عامين من تخرج أول دفعة من طلبة القسم عام 1978م ، حيث بدأت الدراسة في التخصصات الخمسة المذكورة أعلاه . وقد تخرج في القسم إلى فصل الخريف (2012/2011) 90 طالباً وطالبة من حملة الماجستير في التخصصات المختلفة ، ويبلغ عدد طلبة الدراسات بالقسم الآن (50) طالباً وطالبة يقوم بعضهم في الوقت الراهن بكتابة رسائلهم العلمية .

تُمنح درجة الإجازة العالية (الماجستير) في "النبات" وفقاً للشروط التي تنص عليها اللائحة الداخلية للدراسات العليا بالكلية ، بعد إنجاز الطالب (30) وحدة دراسية مقسمة على النحو التالي :

(1) 18 وحدة دراسية إجبارية + 3 وحدات إحصاء حيوي (متطلبات الكلية) .

(2) مقررات دراسية اختيارية .

(3) 6 وحدات خاصة بالأطروحة .

أولاً : المقررات الإجبارية :

م	رقم المقرر	اسم المقرر	الوحدات
1	7821	علم الإحياء الدقيقة التطبيقي المتقدم	3
2	7851	علم الوراثة السيتولوجية المتقدم	3
3	7871	علم تقسيم النبات المتقدم	3
4	7841	علم البيئة المتقدم	3
5	7861	فسيولوجيا النبات المتقدم	3
6	2626	إحصاء حيوي	3

ثانياً : المقررات الاختيارية :

يختار الطالب منها (6) وحدات دراسية في مجال التخصص (مجال البحث) يحددها الأستاذ المشرف على الأطروحة ، وهذه المقررات مقسمة إلى (5) مجموعات تخصصية كالآتي :

(1) مجال الأحياء الدقيقة :

م	رقم المقرر	اسم المقرر	الوحدات
1	7800	دراسات خاصة	2
2	7810	حلقة دراسية	1
3	7820	علاقة الميكروبات والعائل	2
4	7822	تقسيم فطريات	2
5	7823	تقسيم فيروسات	2
6	7824	تقسيم بكتيريا	2
7	7825	بيئة ، تقسيم الطحالب	2
8	7826	فلور الطحالب الليبية	2
9	7827	فسيولوجيا الفطريات	2
10	7828	وراثة ميكروبية	2
11	7829	بيئة ميكروبية	2
12	7831	أمراض نبات فطرية	2
13	7832	طرق أمراض النبات	2
14	5528	كيمياء تحليلية (كروماتوقرانيا)	3

(2) مجال البيئة :

م	رقم المقرر	اسم المقرر	الوحدات
1	7800	دراسات خاصة	2
2	7810	حلقة دراسية	1
3	7811	تنوع وتطور النباتات الأرضية	2
4	7840	علم المجتمعات النباتية المتقدم	2
5	7842	علم البيئة التطبيقي	2
6	7843	تلوث وحماية البيئة	2
7	7844	تحليل الغطاء النباتي المتقدم	2
8	7845	بيئة بنوك بذور التربة	2
9	7846	علم المستحثات	2
10	7847	الوقاية من التلوث	2
11	7848	بيئة الصحراء	2
12	7849	بيئة السبخات	2
13	7861	فسيولوجيا النبات المتقدم	2
14	7866	فسيولوجيا النباتات والبيئة	2
15	5528	كيمياء تحليلة (كرماتوقرافيا)	3

(3) مجال الوراثة :

م	رقم المقرر	اسم المقرر	الوحدات
1	7800	دراسات خاصة	2
2	7810	حلقة دراسية	1
3	7828	وراثة ميكروبية	2
4	7852	وراثة جزيئية	2
5	7853	وراثة نبات	2
6	7854	وراثة عشائر	2
7	7855	الإشعاع الحيوي	2
8	7856	تربية نبات	2
9	5528	كيمياء تحليلية (كروماتوفراقيا)	3

(4) مجال الفسيولوجي :

م	رقم المقرر	اسم المقرر	الوحدات
1	7800	دراسات خاصة	2
2	7810	حلقة دراسية	1
3	7841	علم البيئة المتقدم	2
4	7862	منظمات النمو نباتية	2
5	7863	تحليل وتقدير مكونات النبات الكيميائية	2
6	7864	فسيولوجيا مابعد الحصاد	2
7	7865	أيض النبات المتقدم	2
8	7866	فسيولوجيا النبات والبيئة	2
9	5228	كيمياء تحليلية (كروماتوقرافيا)	3

(5) مجال تقسيم ومورفولوجيا النبات :

م	رقم المقرر	اسم المقرر	الوحدات
10	7800	دراسات خاصة	2
11	7810	حلقة دراسية	1
12	7861	فسيولوجيا النبات المتقدم	3
13	7871	تقسيم نبات متقدم	3
14	7872	تقنيات دقيقة نباتية	3
15	7873	تشريح نبات متقدم	2
16	7874	علم الأجنة	2
17	5227	كيمياء تحليلية (كروماتوقرافيا)	3

Description of Courses

(7821) Advanced Applied Microbiology (3 cr.)

(1) Biotechnology: Principles, methods of fermentation, setting up of microbial growth.

(2) Genetic engineering: Introduction, gene cloning, applications of genetic engineering, improving crop plants by genetic engineering, breeding disease resistant plants.

(3) Microorganisms and food production: Single cell protein, wine making, beer manufacture, fermented milks manufacture current status of the lage-scale (pilot-plant) culture of food infection, food intoxications.

(4) Biological fuels: Raw materials, ethanol production, production of methane, production of hydrogen, production of organic solvents.

(5) Further industrial uses of microorganisms: Production of antibiotics, organic acids, amino acids, single-cell oil, steroids, pharmaceutical industrial enzymes, immobilized enzyme, biofertilizers and biofretilization.

(6) Some human diseases: Rabied, influenza, AIDS, STD.

(7) Role of microorganism in root region of plants.

(8) Microbial control of insects and mites.

(9) Mycotoxins; aflatoxins, ochratoxins… etc.

(7824) Taxonomy of Bacteria (2 cr.)

1- The nature of bacteria.

2- Differential characteristics of procaryotes and eucaryotes.

3- Differential characteristics of eubactria and archaeobacteria.

4- Introduction to advanced bacteriology:

a- Morphology.

b- Metabolism.

c- Genetics.

5- Classification of bacteria according to Bergey's manual.

6- The four major categories of bacteria.

7- Groups within the four major categories bacteria.

8- Symbiotic bacteria.

(7823) Taxonomy of Viruses (2rd)

- General aspectes:

- History of the taxonomy or viruses.
- The international committee on taxonomy of viruses.
- The universal system of the taxonomy of viruses.
- Virus nomenclature of viruses.
- Structural, genomic and physichemical properties used in taxonomy.
- Replicative properties used in taxonomy.
- Description of new viruses.
- Diagnostic virology.

- The RNA viruses (+ve stranded)

Unenveloped RNA viruses

(i) Unenveloped S.S. RNA viruses

- Picornaviridae
- Caliciviridae
- Nodaviridae

(ii) Uneveloped D.S. RNA viruses

- Reoviridae

- The DNA viruses:

(i) Unenveloped S.S

- Parvoviridae

(ii) Unenveloped D.S. DNA viruses

- Papovaviridae
- Adenoviridae
- Iridoviridae

- S.S. RNA (Negative strand)

- Rhabdoviridae
- Filoviridae
- Paramyoviridae

- Orthomyxoviridae
- Arenaviridae
- Bungaviridae

- Enveloped DNA viruses

- Herpesviridae
- Hepadnaviridae
- Baculoviridae
- Boxviridae

(7827) Physiology of Fungi (2 cr.)

Chapter 1: Subcelluar structure of fungi (yeasts and molds)

1- Cell well synthesis.

2- Sytoplasmic membrane and other organelles membrane structures.

3- Transport.

4- Nucleus.

5- Other membranous organelles.

Chapter 2:

1- Growth.

2- Growth cycle.

3- Factor, Attecting growth:

(a) Nutrition:

i) Carbon sources.

ii) Nitrogen sources.

iii) Elements.

(b) Oxygen.

(c) Carbon dioxide.

(d) Temperature.

(e) Osmotic pressure.

(f) Hydrogen ion concentration.

(g) Water.

Chapter 3: Carbohydrate metabolism and energy production

1- Glycolytic pathways.

2- Metabolic regulation of catabolic pathway.

3- Methods of energy production.

4- Pathways for utilization of sugar, other then glucose.

5- Pectin degredation.

6- Cellulose degredation.

7- Starch and glycogen hydrolysis.

8- Metabolism of aromatic compounds.

9- Fermentation Pathway.

10- Fermentation balance.

11- Yeast fermentation.

Chapter 4:

(1) Lipids and Sterols.

Branched chain fatty acid.

b) Unsaturated fatty acid.

c) Ring containing fatty acid.

d) Glycolipid.

(2) Biosynthesis of fatty acid

Role of cofactors in fatty acid biosynthesis.

(3) Biosythesis of phospholipids.

(4) Degredation of lipids.

(5) Sterols biosynthesis.

Chapter 5: Nitrogen metabolism

(1) Inorganic nitrogen metabolism.

(2) Assimilation of inorganic nitrogen.

(3) General reaction of amino acids.

Chapter 6:

Amino acids, purine & pyrimidine

Amino acids biosynthesis.

(1) The glutamate

- Ketoglutarate family

(2) The aspartate

- Pyruvate family

(3) The Serine-Glycine family.

(4) The aromatic amino acid

Biosynthesis of purine.

Biosynthesis of pyrmidine.

Chapter 7: Industrial uses of fungi

(1) Fermentation processes.

(2) Manafactare of ethyl-alcohol and other alcoholic beverage.

(3) Foods from water.

a) Single cell protein.

b) Single cell oil.

(4) Vitamins.

(5) Steroids.

(6) Enzymes.

(7841) Advanced Plant Ecology (3 cr.)

Part One: What is Ecology:

An introduction to science of ecology includes:

Definition, History of ecology, Basic problems and approach.

Part Two: The Problem of Distribution at Population Level

1- Method for analyzing distribution.

2- Factors limiting distribution:

(a) Dispersal.

(b) Behavior.

(c) Interrelation with other organisms.

(d) Temperature.

(e) Moisture.

(f) Other physical and chemical facter.

Part Three: The Problem of Abundance at Population level

1- Population parameters

2- Population growth.

3- Species interaction:

(a) Complition.

(b) Predation.

(c) Herbivory.

4- Natural regulation of population size.

Part Four: Distribution and Abundance at the Community Level:

1- Community parameters.

2- The nature of community.

3- Community structure.

4- Community changes.

5- Species diversity.

6- Community organization.

7- Community metabolism.

(7842) Applied Ecology (2 cr.)

1- Introduction:

Biosphere, natural environment, component of environment, environmental problems.

2- Ozone depletion and the effect on ecosystem.

3- Global warming and the effect on ecosystem.

4- Desertification and its control.

5- Soil salinity and reclamation of salt affected soils.

6- Water logging.

7- Pest control and management.

8- Natural resources:

a- Rnewable, nonrenewable resources.

b- Agriculture.

c- Forestry.

d- Wildlife.

e- Vegetation coner.

(7852) Molecular Genetics (2 cr.)

1- Molecular bases of Heredity

2- Control of gene expression in prokaryotes, Operon and Euukaryote: transcriptional, processing and transitional-level control.

3- Techniques for nncleic acid analysis

- Isolation of mRNA and DNA
- Southern and northern blots: Method and Application.
- Polymerase Chain reaction.
- DNA sequencing.
- Allele-specific oligonucleotide (SAO) probe analysis.
- Electrophoresis of single strand or denatured DNA.

4- Cloning

- Restriction endonucleases.
- Vectors: Plasmids, cosmids, M13, yeast artificial chromosomes (YAC).
- Detecting DNA on RNA sequence
- cDNA.

5- Markers and mapping

- Detecting polymorphims.

i) DNA polymorphism: RFLPs

VNTRs, Microsatelites, PCR

ii) Alterated gene products:

- Inherited enzyme variants.
- Atigentic variants.

- Polymorphism analysis and its role in genetic disease prediction.
- Locating genes and gene mapping.

6- Molecular basis of inherited diseases.

7- Gene therapy.

(7855) Radiation Biology (2 cr.)

- Atomic structure and energy relation. The nucleus nuclide and isotops.
- Radio nuclides and nuclear stability. Atomic massunit and radio actin decay.
- Types of radio actin decay. (By-emission, B-emission- Ray enission and by electron capture.
- Characteristics of radiation (-particles, -particles and – ray radiation).
- Rate of radioactive decay and the standared unit of radio activity, the curi, the bequerel, specific activity.
- Types of detectors electron scop, propotional counter, Geiger Maller counter.
- Correction for radio activity tracers and UN detected radiation.
- Measurement of radioactivity by solid (external sample,) scintillation method and by liquid (internal sample) scintillation method out radiography (nature, general principles and techniques).
- Preparation of counting samples.
- Analysis of radio activity measurements, statistical considerations, correction Factors.
- Design and excution of radio tracer experiments.
- Well documented examples will be discussed.
- Sale handling of radioistops.
- Effect of ionizing radioation on living organisms.

(7856) Plant Breeding (2 cr.)

Application of the principles of genetics and allied sciences to the improvement of crop plants through breeding.

Course Outline

1- Introduction
   a. Course objectives.
   b. History.
2- The Genetic basis for the evolution of cultivated plant.
3- Mode of Reproduction in relation to plant Breeding Methods.
4- Variability in plant.
5- Breeding objectives.
6- Program design and management.
7- Methods of Breeding self-pollinated crops.
8- Methods of Breeding Cross-pollinated crops.
9- Mutation Breeding.
10- Chromosome Breeding.
11- Breeding with Tissue Culture.
12- Breeding for Resistance to Diseases and insects.
13- Maintenance and Distribution of Varieties.

(7861) Advanced Plant Physiology (3 cr.)

Chapter 1: Plant and cell architecture

Unifying principles of plant life, an overview of plant structure, the plant cell, the cytoskeleton, the plant cell wall

Chapter 2: Energy, Enzymes and Gene expression

Energy flow through living systems, energy and direction of spontaneous processes, free energy and chemical potential, enzymes are agents for life, gene expression and protein turnover.

Chapter 3: Water and water balance of the plant

Structure and properties of water, transport processes, water potential measurements, water in the soil, water absorption, by the roots, transpiration, the soil-plant-atmosphere continuum.

Chapter 4: Mineral nutrition

Interaction of root system with the soil, soil and minerals, mycorrhizal fungi and their association with plant roots, roles of essential elements and nutrient disorder, nutritional analysis of soil and plant tissue, chemical fertilizers, organic farming and foliar nutrition, assimilation of mineral nutrients: (nitrogen, nitrate, sulfur, phosphate, cation and oxygen).

Chapter 5: Solute transport

Passive and active transport, transport of solutes across a membrane barrier, transport across biological membranes, transcellular transport

Chapter 6: Phloem translocation

Pathways and patterns of translocation, materials translocated in phloem, rates of movements, phloem loading and unloading, sink-to-source transition, the mechanism of phloem translocation, predictions of the pressure-flow model, assimilate allocation and partitioning

Chapter 7: Photosynthesis: Light reactions and carbon metabolism

General concepts and historical background, structure of photosynthetic apparatus, organization of light-absorbing antenna system, mechanisms of electron and proton transport, the C_3 photosynthetic carbon reduction cycle, photorespiratory carbon oxidation, cycle, the C_4 photosynthetic carbon assimilation cycle, Crassulacean acid metabolism (CAM), physiological and ecological considerations: (light & photosynthesis in the intact leaf, temperature responses of photosynthesis)

Chapter 8: Respiration and lipid metabolism

Glycolysis and aerobic respiration, anaerobic fermentation, mitochondrion & TCA cycle, electron transport chain, ATP synthesis in the mitochondrion, cyanide resistant respiration pathway, pentose phosphate pathway. Lipid metabolism: (fats & oils as triglycerides, triacylgycerol and phospholipids biosynthesis)

Chapter 9: Surface protection and secondary defence compounds

Cutin, suberin and waxes, secondary plant products: (terpenes, phenolic compounds and nitrogen-containing compounds), production of secondary defensive substances within plants

Chapter 10: Stress physiology

Water deficit and drought resistance, chilling and freezing injuries, heat stress and heat chock, salinity, oxygen deficiency, air pollution, gene action during water deficit

(7865) Advanced Plant Metabolism (2 cr.)

- Carbohydrates: introduction and general review about structure classification, nomenclature and physical properties.
  - Reaction of carbohydrates with acids and bases. Oxidation, methylation formation of acetals, ketals.
  - Separation and qualitative determination of carbohydrates.
  - Degradation of fuel carbohydrates in plants. Glycolysis and energy conversion.
  - Conversion of pyruvate to acetyl COA.
  - TCA cycle, and production of reducing power.
  - Respiration and oxidative phosphorylation.
  - Pentose phosphate bathway, glyoxylate cycle.
  - Photosynthesis (light reaction).
  - Carbondioxide fixation C3-pathway.

- Photorespiration and C4 pathway.

- Lipids introduction and general review about, fatty acid, neutral lipids, phospholipids and sphing lipids steroids.
  - Degradation of fuel lipids in plants (Fate of glycerol).
  - Oxidation of saturated fatty acids, unsatured fatty acids (B. oxidation, W. oxidation).
  - Glyoxylate cycle fatty acid biosynthesis, formation of malonate and utilization to form palmetate.
  - Elongation and desaturation of fatty acids.
- Proteins: introduction and review, (amino acids, structure Nome clatare, physical and chemical properties, peptides).
  - 1,2,3 and 4 structure of proteins.
  - Separation of proteins and determination of molecular weight and amino acids sequence in a single peptide.
  - Enzymes: Classes of enzymes.
  - Function of enzymes.
  - Co-factors required for enzyme activity.
  - Allo steric enzymes.
  - Enzyme inhibition.
- Nucleic acids: purines and pyrimidines, nucleosides
  - Nucleotides structure and function of nucleosides DNA and RNA.
  - Biosynthesis of nucleic acids.
- Nitrogen metabolism (nitrogen cycle and nitrogen fixation).
  - Utilization of ammonia in biosynthesis of amion acids.
  - Biosynthesis of purines and pyrimidines.
- Alkaloids, terpenoids and phenolic compound.

(7871) Plant taxonomy (3 cr.)

Chapter 1: Taxonomy and its significance.

Chapter 2: History of classification and systems of classification.

Chapter3: Principle of taxonomy: major and minor categories of classification; infra and supraspecific categories; morphological criteria.

Chapter 4: Phylogenetic consideration; phylogeny for higher categories.

Chapter 5: Current systems of classification:
Bentham & Hooker; Engler & Prantl; Wettistein pulle; Skottsberg Bessg; Hallier, Hutchincon, Emberger.

Chapter 6: Geography of vascular plants; genetics and evolution, static vs. dynamic, principle in geoeraphy.

Chapter 7: Biosystematics and cytogenetis biosystematic categories, methods in experimental taxonomy, apomixis.

Chapter 8: Plant nomenclature; principle of nomenclature; codes conference of nomenclature; international role of botanical nomenclature; special case of nomen calture, including different types.

Chapter 9: Plant identification; taxonomic literature; monographs and revision conspectus & synopsis; world floras & regional floras; manuals; biological abstracts, biography & bibliography; atlases & catalogue, glossaries, dictionary and index; other supporting research literature.

Chapter 10: Field and herbarium techiqes; collection and preparation of specimens; housing of bulky materials; equipment and botanical garden.

Chapter 11: Selected families of flowering plants, descriptive and their distinguish characters.

(7862) Advanced Plant Growth Regulators (2 cr.)

Chapter 1: Cellular basis of growth and morphogenesis

Anatomical and ultrastructure aspects of growth, polarity in tip- and diffuse-growing cells, control of the plane of cell division, differentiation of selected cell type, morphogenesis in shoots and roots

Chapter 2: Auxins

Chemistry & metabolism, the physiological effects of auxin, the mechanism of action of auxin, regulation of specific gene expression, transport of auxin

Chapter 3: Gibberellins

Biosynthesis, detection and assays, the physiological effects of gibberellin, the mechanism of gibberellin action, gibberellin transport

Chapter 4: Cytokinins

The discovery of Cytokinins, identification, biosynthesis, assays, cell division and plant development

Chapter 5: Ethylene and Abscisic acid (ABA)

Properties of ethylene, biosynthesis & metabolism, effects of environmental stresses and auxin, bioassays of ethylene, mechanism of action and commercial uses of ethylene. Abscisic acid: (distribution, chemical structure, and bioassays by biological, physiological & immunological methods, physiological responses, and abscisic acid and protein synthesis)

Chapter 6: Geotropism, Phototropism and Nastic responses

Tropisms are growth responses to directional stimuli, types, classification and nature of response, the reactions of perception and latent phases, the linkage of perception to hormone distribution, gravitropism in shoots involves auxin distribution. Phototropism:
(action spectra for phototropism, phototropism and lateral
redistribution of auxin, statoliths in the cap cells and inhibitor transport, tip & base responses). Nastic responses: (epinasty & hyponasty, nyctinasty & seismonasty, transmission of stimulation)

Chapter 7: Apical dominance

The physiological basis of correlative inhibition, nutritive theory, diffusable substances in lateral shoots & buds, endogenous growth inhibitors & correlative inhibition, correlative bud inhibition in woody species, orientation of rhizome, stolons & leaves in relation of apical dominance, environmental effects in apical dominance phenomena

Chapter 8: Phytochrome and Photomorphogenesis

The photochemical & biochemical properties of phytochrome, localization of phytochrome in tissues & cells, phytochrome-induced whole plant responses, cellular & molecular mode of action

Chapter 9: The Control of Flowering

Effects of plant age. Photoperiodism: (daily rhythms, day length & flowering time, endogenous oscillator, phytochrome & photoperiodism, far-red light & flowering). Vernalization: (interaction with photoperiodism, protein synthesis, the transition to flowering, gene expression during flower development

Chapter 10: Germination and Dormancy

Bud dormancy: (induction & removal of bud dormancy, dormancy of various organs. Seed dormancy: (forms & causes of seed dormancy, secondary dormancy of seeds & buds, mechanism of dormancy, hormonal regulation &

metabolic aspects of dormancy. Germination: (conditions for seed germination, metabolic aspects of seed germination.

(7866) Advanced Environmental Physiology (2 credit)

Part I. General introduction

Chapter 1: Introduction

Plant growth, the influence of the environment, population responses, adaptability & adaptedness

Part II. The acquisition of resources

Chapter 2: Energy and Carbon

The radiation environment, effect of spectral distribution of radiation on plants, effect of irradiance on plants

Chapter 3: Mineral nutrients

Nutrients in the soil system, physiology of ion uptake, morphological responses, soil microorganisms, general patterns of response to soil nutrients

Chapter 4: Water

Adaptations favouring germination and seedling establishment in dry environment, adaptations favouring survival & reproduction under conditions of water shortage, some special problems in tree / water relations

Part II. Responses to environmental stress

Chapter 5: Temperature

The temperature relations of plants, plant adaptations & resistance to low and high temperature ranges

Chapter 6: Ionic toxicity

The nature of toxicity, effects of toxins on plants, resistance to toxicity, the origins of resistance

Chapter 7: Gaseous toxicity

Anaerobiosis in soils, aerial pollution

Chapter 8: Interactions between organisms

Competition, predation and parasitism, allelopathy

Chapter 9: An ecological perspective

Allocation, strategies, communities, dynamics

قائمة بأعضاء هيئة التدريس الذين يقومون بتدريس
الدراسات العليا بقسم علم النبات

م	الاسم	الجنسية	الدرجة العلمية	التخصص
1	أ. د. صالح حمد بعيو	ليبي	أستاذ	بكتيريا
2	أ.د. مسعود محمد قديح	ليبي	أستاذ	طحالب
3	أ.د. صلاح سعيد العماري	ليبي	أستاذ	فطريات
4	أ.د. صالحة فرج بن جويرف	ليبية	أستاذ	بكتيريا نباتية
5	أ.د. محمد الدراوي العائب	ليبي	أستاذ	بيئة نباتية
6	أ.د. احمد طاهر الفقيه	ليبي	أستاذ	تهجين نبات
7	د. محمد فرج الحاسي	ليبي	أستاذ مشارك	وراثة ميكروبية
8	أ.د. فوزية رجب القربولي	ليبية	أستاذ	علم وراثة خلية
9	د. محمد سالم حمودة	ليبي	أستاذ مشارك	علم التلوث البيئي
10	أ.د. صالح حسين المجبري	ليبي	أستاذ	فطريات
11	د. إبراهيم عبدالله الدرسي	ليبي	أستاذ مشارك	وراثة عشائر
12	د. مصباح فرج المقصبي	ليبي	أستاذ مشارك	مجتمعات نباتية
13	أ.د. يعقوب محمد البرعصي	ليبي	أستاذ	إنتاج محاصيل
14	د. نادية عبدالسيد المالكي	ليبية	أستاذ مشارك	إنتاج محاصيل
15	د. نزيهة عبدالقادر الحشاني	ليبية	أستاذ مشارك	علم البيئة النباتية
16	أ.د. مريم فضيل البرغثي	ليبية	أستاذ	فسيولوجيا نبات