

Academic Program Description Form

University Name: University of Karbala

Faculty/Institute: College of Agriculture

Scientific Department: Agricultural Fields Department

Academic or Professional Program Name: Bachelor of Science in Agriculture

Final Certificate Name: Bachelor of Science in Agriculture / Field Crops

Academic System: courses

Description Preparation Date: 2023\9\1

File Completion Date: 2024\3\17

Signature:



Head of Department Name:

Prof. Dr. Abbas Ali Hussein

Date:

4/6/2024

Signature:



Scientific Associate Name:

Prof. Sabah Gazi Shareef

Date:

5/6/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Asst. Prof. Ali Nadhim Farhood

Date: 04-06-2024

Signature:



Approval of the Dean

See the program

That the Field Crops Department be a pioneer in the field of field crop sciences
at the national, regional and international levels

Program message

And implementation the quality High Educational Programs presentation
Agricultural Cadres Graduating with purpose ' Sober ificScient Research
during from Agricultural sector development in Contribute Specialized
For the Outstanding Services and submit ' And sustainability Innovation
community

Program Goals

It qualifies quality educational programs-Providing high : Education .1
preparing And. students to work in various fields of agricultural production
Able to keep pace with scientific and technological qualified graduates
developing students' And. developments in the field of field crop science
. In the field of scientific research and problem solving skills
It chConducting distinguished scientific resear : Scientific research .2
developing And. contributes to solving agricultural production problems
preserve the and enhance food security To new agricultural techniques
. Through the use of sustainable agricultural practices environment
spreading by To the community cesProviding distinguished servi : Service .3
consultations to Providing. awareness of the importance of field crop science
in agricultural Participation. About best agricultural practices farmers
. development programs

Program accreditation

has been sent

:External influences

Laboratories, the field, the library, the Internet, agricultural and industrial
institutions, agricultural projects, and summer training

structure Program				
comments	percentage	Study unit	Number of courses	Section structure
	%10.76	19	11	Enterprise requirements
	%39.94	70.5	22	College requirements
	%47.59	84	26	Department requirements
			Interpolation	summer training
				Other

Program description				
Credit hours		Course Name	Course Code	Year/level
practical	theoretical			
3	2	organic chemistry	OC1401OCh	The first
3	2	General plant	OC1401GBo	
3	1	Flat space	OC1401PSu	
0	3	mathematics	OC1401Mat	
3	0	Engineering drawing	OC1401EDr	
0	2	English	UO1401ELa	
2	0	Democracy and human rights	UO1401DHR	
0	2	Computer applications	UO1401CAp	
0	2	Arabic Language	UO2402LAr	
3	2	Principles of field crops	OO2410PFC	
3	2	Principles of soil science	OC2401PPe	

3	2	Principles of animal production	OC2401PAP	
3	2	Biochemistry	OC2401Bio	
0	2	Principles of agricultural economics	OC2401PAE	
2	0	Computer applications	UO2401CAp	
	2	Principles of horticulture	OC1402PHo	the second
3	2	Principles of the food industry	OC1402PFI	
3	2	Soil fertility and fertilizers	OC1402SFF	
3	2	Plant classification	OC1402PTa	
0	2	Principles of agricultural extension	OC1402PAE	
0	2	English	OC1402ELa	
3	0	Computer applications	UO1402CAp	
3	2	Machines and machines Agricultural	OC1402AME	
3	2	Farm management	OO2420FMa	
3	2	Oil and sugar crops	OO2420OSC	
3	2	of Principles Statistics	OO2420PSt	
3	2	Plant environment	OO2420PEc	
3	2	Principles of microbiology	OC2402PMi	
3	2	Irrigation and puncture	OC2402IDr	
0	2	Arabic	UO2402ALa	
3	0	Computer applications	UO2402CAp	
0	2	Crimes of the defunct Baath Party	UO2402BPC	
3	2	Genetics	OO1430Gen	Third

3	2	Design and analysis of agricultural experiments	OO1430DAA	
3	2	Mechanization of field crops	OC1403MFC	
3	2	Field crop insects	OC1403FCI	
3	2	Land Reclamation	OC1403SRe	
3	2	Fodder crops	OO1430FCr	
0	2	English	UO1403EIa	
3	2	Fiber crops	OO2430FCr	
3	2	Cereal crops	OO2430CCr	
3	2	Legume crops	OO2430LCr	
3	2	Field crop diseases	OC2403FCD	
3	2	Seed technology	OO2430STe	
3	2	Beekeeping	OC2403Bee	
3	2	Medicinal plants	OO1440DPI	Fourth
3	2	Plant physiology	OO1440PPh	
3	2	Jungle life	OO1440WBi	
3	2	Field crop management	OO1440FCM	
0	3	Molecular genetics	OO1440MGe	
3	2	Land cultivation	OO1440FDL	
0	2	English	UO1404ELa	
3	0	Graduation research project	OO1440GRP	
3	2	Plant breeding	OO2440PBr	
3	2	Plant growth regulators	OO2440PGR	
3	2	Pasture management	OO2440PMa	
3	2	Environmental stress	OO2440ESr	
3	2	Combating	OO2440WCo	

		jungles		
0	1	Study groups	OO2440Sem	
0	1	Graduation research project	OO2440GRP	

the program For Expected learning outcomes	
education -1	
	<p>They are able to qualified graduates Preparing work in various fields of agricultural production theoretical concepts and practical and possess skills through familiarity with topics of crop production and improvement, weed control, and echnologies in developing the use of modern t production and providing the graduate with</p> <p>And preparing .social communication skills</p> <p>Able to keep pace with scientific competencies scientific and technological developments in the</p> <p>And qualifying. field of field crop science</p> <p>Able to conduct distinguished researchers</p> <p>. scientific research</p>
Research -2	
	<p>to agricultural scientific solutions Finding -2 new Innovating. production problems</p> <p>Contributes to agricultural technologies scientific Providing. enhancing food security</p> <p>Contributes to preserving the knowledge</p> <p>. environment</p>
the service -3	
	<p>The agricultural society Understanding the -3</p> <p>Preparing. importance of field crop science</p> <p>To use the best agricultural qualified farmers sustainable agricultural Achieving. practices</p> <p>It contributes to raising the development</p> <p>. standard of living of farmers</p>

Teaching and learning strategies

Providing students with the basics and additional topics related to the previous learning – outcomes of skills, to solve practical problems

.Applying topics studied theoretically at the practical level –

practical lessons to conduct some applied research under the Asking students during –

. supervision of their teachers

by academic staff laboratories Visit to practical –

Evaluation methods

. exams and monthly -

. And final exams Semester -

.Participation marks for competition questions for academic subjects -

. and report writing Grades for homework -

Delivering scientific seminars -

education institution

Preparing the teaching staff		Requirements/special skills		Specialization		Scientific rank
lecturer	angel			private	general	
	√			Soil and water	Plant nutrition	Abbas Ali . Mr. Dr Hussein
	√			Forests	Forest tree trees	Prof. Dr. Sabah Ghazi Sharif
	√			Field crops	breeding Plant and improvement	Muhammad Mr. Dr Ahmed Abrihi
	√			Field crops	Combating jungles	Hamid Abd Mr. Dr Fartusi-Khashan Al
	√			And Soil water	Plant nutrition	Ahmed Najm Mr. Dr Moussawi-Abdullah Al

	√			Field crops	Faslaja crops	Razzaq, give Mr. Dr him a gesture
	√			Field crops	Biotechnology	Ali Nazim A.M.D Farhoud
	√			And Soil water	Soil fertility and fertilizers	Mahmoud A.M.D Nasser Hussein
	√			Electricity Engineering	Capacity systems	Ahmed Jabbar M.D Abbas
	√			Life sciences	Plant classification anatomy and	Aziz M.D Basma Hamid
	√			Field crops	Propagation and improvement of plants	Maha Abbas M.D Hussein
	√			geology	Layers and fossils	Nour Ahmed M.D Nouri
	√			Field crops	Field crops	Uday millimeter Hamed Taha
	√			Life sciences	plants	Zainab Latif millimeter Hameed
	√			Field crops	Combating jungles	Badr Abbas millimeter Abd Ali
	√			Field crops	Propagation and improvement of plants	Hind Adnan millimeter Hussein
	√			Field crops	Phosphorus is a plant	Hawraa Ali millimeter Abbas
	√			Food industry	Cereal chemistry	Muhammad millimeter Hussein Alwan
	√			Field crops	Plant production	Nazim millimeter Abdul Razzaq Marza
	√			Field crops	Field crops	Mona millimeter Muhammad Ghani
	√			Field crops	Field crops	Haider millimeter Ghattar, black
	√			Field crops	Field crops	Nada millimeter Muhammad Fadel
	√			Field crops	Field crops	Ghadeer Ali millimeter Abdel Zahra
	√			Field crops	Field crops	Sarah M. Engineer Hussein Hashem
	√			Field crops	Field crops	Alaa M. Engineer Hussein Murad
	√			Field crops	Field crops	Amal M. Engineer Odeh Taher
	√			Field crops	Field crops	Ahmed M. Engineer Shawky Shaker
	√			Field	Field crops	Amira M. Engineer

				crops		Ali Hussein
	√			Field crops	Field crops	M. Engineer Haider Allawi Kazem
	√			Field crops	Field crops	Saja M. Engineer Diwan Jasib
	√			Field crops	Field crops	M. Decoration engineer Abdul Elah Mohsen
	√			Field crops	Field crops	Abbas Ali M. Engineer Hussein

Professional development

Orienting new faculty members

The Teaching body For members Guidance needs to set Done : Direction needs to set .1
 required And knowledge Skills And evaluation needs analysis on building new ones
 Includes comprehensive Guidance program design Done : Direction program Design .2
 And the Enterprise in Available and resources And procedures Policies on information
 oath
 body For members Guidance Sessions to implement Done : Program to implement . 3
 To necessary the information And submit And the visitors The new ones Teaching
 And educational academy the environment With introduce them
 body For members Continuous the support presentation Done : Follow up to support .4
 And the partial ones time ones–And the full And the visitors The new ones Teaching
 with good In a way Adapt them to guarantee And follow up Guidance a team by
 . the job environment

Professional development for faculty members

: Of which aspects several Include Teaching body For members Developmental plan .1
 courses And a job H Workshops to provide includes : And learning Teaching Strategies
 Educational And tools Techniques And use Teaching skills To promote Training
 And effective Innovative

The most important sources of information about the program
etc Scientific And articles And research methodology Books
: Books on Example

on training presentation Development plan included : Learning results Evaluation .2
the investigation measure To Ratings from Different Species And implementation design
. Constructive The return And provide nutrition Learning For goals students
Research in To participate Opportunities to provide Include : Professional Development .3
And And knowledge Skills To promote academy And conferences the job And workshops
. the job peers with communication
ideas application on Teaching body Members encouraged : And innovation creativity . 4
Educational Experience To promote And search Teaching in And innovations New
Individually And guidance Consulting Sessions saving : Singles And support Guidance . 5
And academy Their goals investigation To support Teaching body For members
professional

Acceptance standard

And academy Standards to be determined : Acceptance Standards . 1
the exams 'scholastic Grades like acceptance For required personality
Previous And experiences 'standard
specified Temporality Period to be determined : Submission Dates . 2
required And documents admissions Requests To provide
To complete ssaryNece Steps Explain : Administrative procedures . 3
to 'the demand presentation like And registration Submission practical
documents And submit 'fees push
when Paid Fees to be determined : Finance the conditions . 4
admissions after Due Scholarship And fees Submission
like To apply necessary documents Explain : Required documents .5
and any other 'Language Certificates 'scholastic Certificates
required documents

Program development plan
To Modern And the roads Field crops area in New Concepts Use
Principles of field crops Field area in The result Development keep up
Modern Devices and methods
Plant breeding and improvement .3
Design and analysis of experiments .4

the program skills a plan

Learning outcomes required from the programme												Basic Or optional	Course Name	Course Code	Year/level
Value				Skills				Knowledge							
C4	C3	C2	C1	B4	B3	B2	B1	a4	a3	a2	a1				
√	√	√	√	√	√	√	√	√	√	√	√	unessential	mathematics		The first
√	√	√	√	√	√	√	√	√	√	√	√	unessential	English language		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	human rights		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	plants		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	Flat space		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	organic chemistry		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	Engineering Drawing		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	mathematics		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	agricultural economy		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	Biochemistry		
√	√	√	√	√	√	√	√	√	√	√	√ ¹¹	Basic	field crops M		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	Computer		

√	√	√	√	√	√	√	√	√	√	√	√	unessential	animal production		
√	√	√	√	√	√	√	√	√	√	√	√	unessential	Soil science		
√	√	√	√	√	√	√	√	√	√	√	√		Agricultural guidance		the second
√	√	√	√	√	√	√	√	√	√	√	√		English language		
√	√	√	√	√	√	√	√	√	√	√	√		Gardening principles		
√	√	√	√	√	√	√	√	√	√	√	√		Machines and machines		
√	√	√	√	√	√	√	√	√	√	√	√		Plant classification		
√	√	√	√	√	√	√	√	√	√	√	√		Food industry		
√	√	√	√	√	√	√	√	√	√	√	√		Soil fertility		
√	√	√	√	√	√	√	√	√	√	√	√		Computer		
√	√	√	√	√	√	√	√	√	√	√	√		Arabic Language		
√	√	√	√	√	√	√	√	√	√	√	√		Freedom and democracy		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Counting		
√	√	√	√	√	√	√	√	√	√	√	√		Microbiology		
√	√	√	√	√	√	√	√	√	√	√	√		Farm management		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Oil and sugar crops		
√	√	√	√	√	√	√	√	√	√	√	√		Plant environment		
√	√	√	√	√	√	√	√	√	√	√	√		Computer		
√	√	√	√	√	√	√	√	√	√	√	√		Irrigation and puncture		
√	√	√	√	√	√	√	√	√	√	√	√		English language		
√	√	√	√	√	√	√	√	√	√	√	√		Crop mechanization		
√	√	√	√	√	√	√	√	√	√	√	√		Land reclamation		
															Third

√	√	√	√	√	√	√	√	√	√	√	√	Basic	Fodder crops		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	heredity		
√	√	√	√	√	√	√	√	√	√	√	√		insects Crop		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Design and analysis of experiments		
√	√	√	√	√	√	√	√	√	√	√	√		Beekeeping		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Fiber crops		
√	√	√	√	√	√	√	√	√	√	√	√		Crop diseases		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Cereal crops		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Seed technology		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Legume crops		
√	√	√	√	√	√	√	√	√	√	√	√		English		
√	√	√	√	√	√	√	√	√	√	√	√		Molecular inheritance		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Crop management		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Land cultivation		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Phosphorus is a plant		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Jungle life		
√	√	√	√	√	√	√	√	√	√	√	√		Medicinal plants		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Graduation research project		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Pasture management		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Growth regulators		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Combating jungles		
√	√	√	√	√	√	√	√	√	√	√	√		Seminars		
√	√	√	√	√	√	√	√	√	√	√	√	Basic	Environmental		

Fourth

																			stress		
√	√	√	√	√	√	√	√	√	√	√	√	√	√						Graduation research project		
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Basic				Plant breeding		

Statistics Course Name .1
Course Code .2
OO420PSt
(2024-Year First semester (2023 / Semester .3
Description 1/4/2024 this Preparation date .4
Available full time audience the shapes .5
are about (total) Units number (total) Academic hours number .6 hours, with a number of units of 3.5 units 75
name from more if) Academic The decision responsible name (Mentioned
: Email Prof. Dr. Mohamed Ahmed Abrihi : the name dr.mohammed.ibraihim@uokerbala.edu.iq
The decision Goals
Students acquire the concepts of statistics and deal with them theoretically, practically, and practically • acquire the scientific foundations for representing data through frequency distribution and graphical display • Teaching students the concepts of hypothesis testing • Providing students with information about concentration •
Scholarship Subject Goals

and dispersion					
And learning oneducati Strategies .9					
Developing the student's ability to work on performing assignments and submitting them on the scheduled date Gain experience, skill, and ability to handle and analyze . data to the Managing the lecture in an applied manner linked reality of daily life to attract the student to the topic of the lesson without straying from the core of the topic so that the material is flexible and capable of being understood .and analysed					The strategy
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week

Written and oral	Theoretical and laboratory	Introduction and definition	Theoretical and practical concepts	5	the first
Written and oral	Theoretical and laboratory	Statistical symbols	Theoretical and practical concepts	5	the second
Written and oral	Theoretical and laboratory	Display data and frequency distribution	Theoretical and practical concepts	5	the third
Written and oral	Theoretical and laboratory	Mediation measures	Theoretical and practical concepts	5	the fourth
Written and oral	Theoretical and laboratory	Measures of dispersion	Theoretical and practical concepts	5	Fifth
Written and oral	Theoretical and laboratory	Combinations and permutations	Theoretical and practical concepts	5	VI
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Seventh
Written and oral	Theoretical and laboratory	Binomial distribution	Theoretical and practical concepts	5	VIII
Written and oral	Theoretical and laboratory	Normal distribution	Theoretical and practical concepts	5	Ninth
Written and oral	Theoretical and laboratory	Hypothesis (Z) testing	Theoretical and practical concepts	5	The tenth
Written and oral	Theoretical and laboratory	distributiont	Theoretical and practical concepts	5	eleventh
Written and oral	Theoretical and laboratory	distributionF	Theoretical and practical concepts	5	twelveth
Written and oral	Theoretical and laboratory	square -Chi distribution	Theoretical and practical concepts	5	Thirteenth
Written and oral	Theoretical and laboratory	General Review	Theoretical and practical concepts	5	fourteenth
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Fifteenth

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
Rawi, Khashi Mahmoud. 1989. -Al Introduction to Statistics . College of Agriculture and .Forestry. University of Mosul	) Required decided Books (Found that methodology
<input type="checkbox"/> Muhammad, Naeem Thani-Al <input type="checkbox"/> Rawi-Khashi Mahmoud Al Younes and-Moayed Ahmed Al Marani. 1986. -Walid Khudair Al Principles of statistics. Ministry of Higher Education and Scientific Research. University of .Baghdad	(Sources) Home the reviewer
Maghrabi, Muhammad-Al Muhammad Jabr. 2021. Descriptive statistics. Modern Library for Publishing and Distribution. Arab Republic of .Egypt	that Prevailing And references Books Magazines) With it recommend (... Reports scientific
Bilal Zorić , A. (2021). Applied Statistics: Basic Principles and Application. International Journal of Innovation and Economic Development, 7(3), pp.27–33.	Electronic references, websites

Plant breeding Course Name .7
Course Code .8

OO2440PBr	
(2024-Year First semester (2023 / Semester .9	
Description 1/4/2024 this Preparation date .10	
Available full time the audience shapes .11	
are about (total) Units number (total) Academic hours number .12 hours, with a number of units of 3.5 units 75	
name from more if) Academic The decision responsible name (Mentioned	
: Email Prof. Dr. Mohamed Ahmed Abrihi : the name dr.mohammed.ibraihim@uokerbala.edu.iq	
The decision Goals	
<ul style="list-style-type: none"> • Students acquire the concepts of plant breeding and improvement and deal with them theoretically, applied and practically • Students acquire the scientific explain foundations that reproductive and pollination systems in crops and work with them • Teaching students the concepts of genetic, phenotypic and environmental variations • Providing students with methods of plant breeding in pollinated -and cross -self vegetatively propagated, crops and breeding for resistance to .diseases and insects 	Scholarship Subject Goals
And learning education Strategies .9	
<p>Developing the student's ability to work on performing assignments and submitting them on the scheduled date ity to raise and improve field cropsGain the abil Managing the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without straying from the core of the topic so that being understood the material is flexible and capable of</p>	The strategy

.and analysed					
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week

Written and oral	My theory and my field	Introduction and definition	Theoretical and practical concepts	5	the first
Written and oral	My theory and my field	Reproduction systems and types	Theoretical and practical concepts	5	the second
Written and oral	My theory and my field	Cell, nucleus, chromosome and chromosomal replication	Theoretical and practical concepts	5	the third
Written and oral	My theory and my field	Genetic action	Theoretical and practical concepts	5	the fourth
Written and oral	My theory and my field	Genetic and phenotypic variations	Theoretical and practical concepts	5	Fifth
Written and oral	My theory and my field	Infertility and incompatibility	Theoretical and practical concepts	5	VI
Written and oral	My theory and my field	Monthly exam	Theoretical and practical concepts	5	Seventh
Written and oral	My theory and my field	Genetics is quantitative	Theoretical and practical concepts	5	VIII
Written and oral	My theory and my field	Import and selection	Theoretical and practical concepts	5	Ninth
Written and oral	theory My and my field	Hybrid vigor and hybridization	Theoretical and practical concepts	5	The tenth
Written and oral	My theory and my field	Vegetative crop breeding	Theoretical and practical concepts	5	eleventh
Written and oral	My theory and my	Breeding to resist diseases and	Theoretical and practical concepts	5	twelveth

	field	insects			
Written and oral	My theory and my field	Arrange the seeds	Theoretical and practical concepts	5	Thirteenth
Written and oral	My theory and my field	Genetic mutations and molecular genetics and their relationship to breeding plant	Theoretical and practical concepts	5	fourteenth
Written and oral	My theory and my field	Monthly exam	Theoretical and practical concepts	5	Fifteenth

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
Medhat Majeed, Hamid Sahuki Jaloub Ali, and Muhammad Plant . 3 198 . Ghaffar Ahmed . breeding and improvement College of Agriculture. University . of Baghdad	) Required decided Books (Found that methodology
. Hamid Globe.198 8 . Ali Foundations of field crop College . breeding and genetics of of Agriculture. University . Baghdad	(Sources) Home the reviewer
Ahmed Abdel Hassan General . 05 Moneim.20 . principles of plant breeding Arab House for Publishing and The Egyptian . Distribution . Arabic Republic	that Prevailing references And Books Magazines) With it recommend (.... Reports scientific
Hallauer , A. R. (2011). Evolution of plant breeding. <i>Crop Breeding and</i>	websites Electronic references

<i>Applied Biotechnology</i> , 11(3), pp.197–206	
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heredity Course Name .13	
Course Code .14	
OO1430Gen	
(2024-Year First semester (2023 / Semester .15	
Description 1/4/2024 this Preparation date .16	
Available full time the audience shapes .17	
are about (total) Units number (total) Academic hours number .18 hours, with a number of units of 3.5 units 75	
name from more if) Academic The decision responsible name (Mentioned	
: Email Prof. Dr. Mohamed Ahmed Abrihi : the name dr.mohammed.ibraihim@uokerbala.edu.iq	
The decision Goals	
<ul style="list-style-type: none"> • Students acquire the concepts of genetics and deal with them theoretically, practically, and practically • Students acquire the scientific foundations of Mendelian laws and the calculation of isolation and inheritance • Teaching students the concepts of genetic material and its applications • Providing students with information about mutations, linkage, and crossing over 	Scholarship Subject Goals
And learning education Strategies .9	
Developing the student's ability to work on performing	The strategy

<p>assignments and submitting them on the scheduled date</p> <p>Gain experience, skill, and ability to deal with genetic information</p> <p>Managing the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without straying from the core of the topic so that the material is flexible and capable of .lysedbeing understood and ana</p>	
--	--

The decision structure .10

road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Written and oral	Theoretical and laboratory	Introduction and definition	Theoretical and practical concepts	5	the first
Written and oral	Theoretical and laboratory	Cell divisions	Theoretical and practical concepts	5	second the
Written and oral	Theoretical and laboratory	Mendelian inheritance	Theoretical and practical concepts	5	the third
Written and oral	Theoretical and laboratory	square -Chi test	Theoretical practical and concepts	5	the fourth
Written and oral	Theoretical and laboratory	Modifications in Mendelian ratios	Theoretical and practical concepts	5	Fifth
Written and oral	Theoretical and laboratory	Determine gender	Theoretical and practical concepts	5	VI
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Seventh
Written and oral	Theoretical and laboratory	Genetic linkage and crossing over	Theoretical and practical concepts	5	VIII
Written and oral	Theoretical and laboratory	Genetic mapping	Theoretical and practical concepts	5	Ninth
Written and oral	Theoretical and laboratory	Cytoplasmic genetics	Theoretical and practical concepts	5	The tenth
Written and oral	Theoretical and	Mutations	Theoretical and practical	5	eleventh

	laboratory		concepts		
Written and oral	Theoretical and laboratory	Inheritance of quantitative traits	Theoretical and practical concepts	5	twelveth
Written and oral	Theoretical and laboratory	Genetic diversity	Theoretical and practical concepts	5	Thirteenth
Written and oral	Theoretical and laboratory	Genetic material	Theoretical and practical concepts	5	fourteenth
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Fifteenth

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	teaching And Learning Sources .12
Muhammad, Adnan Hassan. Basics of Genetics . .1982 College of Agriculture and .Forestry. University of Mosul	) Required decided Books (Found that methodology
Muhammad, Adnan Hassan. II). Genetics (Parts I and .1985 College of Agriculture and .Forestry. University of Mosul	(Sources) Home the reviewer
Anbari, Muhammad Ahmad -Al Ibrihi. 2021. Genetics and analysis of quantitative plant Kutub. Karbala. -traits . Dar Al .Iraq	that Prevailing And references Books Magazines) With it recommend (.... Reports 'scientific
Stenseth , N. Chr., Andersson , L., & Hoekstra, H. E. (2022). Gregor Johann Mendel and the development of modern evolutionary biology. Proceedings of the National Academy of Sciences, 119(30).	Electronic references, websites

Design and analysis of fights Course Name .19	
Course Code .20	
OO1430DAA	
(2024-Year First semester (2023 / Semester .21	
Description 1/4/2024 this Preparation date .22	
Available full time the audience shapes .23	
are about (total) Units number (total) Academic hours number .24 hours with a number of 3.5 units 75	
name from more if) Academic The decision responsible name (Mentioned	
: Email Prof. Dr. Mohamed Ahmed Abrihi : the name dr.mohammed.ibraihim@uokerbala.edu.iq	
The decision Goals	
Students acquire the concepts of designing and analyzing experiments and dealing with them theoretically, appliedly, and practically • Students acquire the scientific foundations for designing and analyzing field and laboratory sexperiment • Teaching students how to deal with various designs • Providing students with information about correlation and regression •	Scholarship Subject Goals
And learning education Strategies .9	
Developing the student's ability to work on performing submitting them on the scheduled assignments and date Gain experience, skill, and ability to deal with	The strategy

experimental design, data collection, and analysis
 Managing the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without straying from the core of the topic so that the material is flexible and capable of being understood and analysed

The decision structure .10

road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Written and oral	Theoretical and laboratory	Introduction and concept of experimental error	Theoretical and practical concepts	5	the first
Written and oral	Theoretical and laboratory	Terminology in designing and analyzing experiments	Theoretical and practical concepts	5	the second
Written and oral	Theoretical and laboratory	Basic rules in designing and analyzing experiments	Theoretical and practical concepts	5	the third
Written and oral	Theoretical and laboratory	Hypothesis testing	Theoretical and practical concepts	5	the fourth
Written and oral	Theoretical and laboratory	Review of statistics	Theoretical and practical concepts	5	Fifth
Written oral and	Theoretical and laboratory	Correlation coefficient	Theoretical and practical concepts	5	VI
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Seventh
Written and oral	Theoretical and laboratory	Regression	Theoretical and practical concepts	5	VIII
Written and oral	Theoretical and laboratory	Completely randomized design	Theoretical and practical concepts	5	Ninth
Written and oral	Theoretical and laboratory	Randomized complete block design	Theoretical and practical concepts	5	The tenth
Written and oral	Theoretical and laboratory	square Latin design	Theoretical and practical concepts	5	eleventh

Written and oral	Theoretical and laboratory	Global experiments	Theoretical and practical concepts	5	twelveth
Written and oral	Theoretical and laboratory	Split panels design	Theoretical and practical concepts	5	Thirteenth
Written and oral	Theoretical and laboratory	General Review	Theoretical and practical concepts	5	fourteenth
Written and oral	Theoretical and laboratory	Monthly exam	and practical concepts	5	Fifteenth

decision The evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports.....etc

And teaching Learning Sources .12

Medhat and Karima □ Sahuki-AI . Muhammad Wahib. 1990 Applications in designing and analyzing experiments. Ministry of Higher Education and Scientific Research, University of .Baghdad

) Required decided Books (Found that methodology

Khashi Mahmoud and □ Narrator Abdul Aziz Muhammad Khalaf Allah. 1980. Design and analysis of agricultural experiments . Ministry of Higher Education and Scientific Research. University of .Mosul

(Sources) Home the reviewer

□ Adnan Abbas □ Humaidan Farid Jaouni □ Mtanios Makhoul .2016. and Ammar Nasser Agha Applied Statistics. Faculty of Economics. University of .Damascus

that Prevailing And references Books Magazines) With it recommend (... Reports 'scientific

Casler , M. D. (2015). Fundamentals of Experimental Design: Guidelines for

Electronic references, websites

Designing Successful Experiments. Agronomy Journal, 107(2), pp.692– 705.	
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Course Name .25					
Computer 3					
Course Code .26					
UO2402CAp					
year / Semester .27					
2024 -Second semester / 2023					
the description this Preparation date .28					
2024/4/5					
Available the audience shapes .29					
My presence					
(total) Units number (total) Academic hours number .30					
(hours (weekly) / number of units (1.5 units 3					
name from more if) Academic The decision responsible name (Mentioned					
: Email : the name					
Noor.ahmed@uokerbala.edu.iq Noor Ahmed NoorM.D.					
The decision Goals					
The course aims to introduce students • its 'Power Point program to the importance, and how to benefit from it to present their graduation . research			Scholarship Subject Goals		
And learning education Strategies .9					
With an explanation the lesson beginning maybe -1 To give students an introductory theoretical of the program and the overview of the nature components of the program's interface Practical application for the student on how to deal -2 with the features in the program and benefit from them				The strategy	
The decision structure .10					
road Evaluation	road Learning	or Unit name topic the	Outputs Learning required	hours	the week

Monthly exam + daily exam	practical application	Introduction to Power point	Ways to open Power Point the and program know the program interface	3	1
Monthly exam + daily exam	practical	Preparing the slide 1	Learn about the presentation slide, how to deal with it, and to add new how slides	3	2
Monthly exam + daily exam	practical application	Slide preparation 2	Learn how to add a dialog box to add its own effects	3	3
Monthly exam + daily exam	practical application	Slide preparation 3	Learn how to add a dialog box to add its effects own	3	4
Monthly exam + daily exam	practical application	Slide preparation 4	Learn how to make a table and know table formats	3	5
Monthly exam + daily exam	practical application	Sumner	Asking the students to introduce Sumner and interview his	3	6
Monthly exam + daily exam	practical application	Slide preparation 5	Learn how to specify margins for a slide and specify an orientation	3	7
Monthly exam + daily exam	practical application	Presentation methods 1	Learn how to add effects to slides while laying the disp movements of elements within the slide	3	8
Monthly exam + daily exam	practical application	Viewing methods 2	Recognize transition movements between slides	3	9
					10
					11
					12

					13
					14

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
	) Required decided Books (Found that methodology
Microsoft Powerpoint, LLC . Zaid Abdul Karim Yahya	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (.... Reports 'scientific
	websites 'Electronic references

Course Name .31	
Computer 4	
Course Code .32	
year / Semester .33	
2024 -Second semester / 2023	
the description this Preparation date .34	
2024/4/5	
Available the audience shapes .35	
My presence	
(total) Units number (total) Academic hours number .36	
(hours (weekly) / number of units (1.5 units 3	
name from more if) Academic The decision responsible name (Mentioned	
: Email : the name	
Noor.ahmed@uokerbala.edu.iq Noor Ahmed NouriM.D.	
decision The Goals	
The course aims to introduce students • its importance, 'Excel program to the	Scholarship Subject Goals

areas of use, and how to deal with the . program					
And learning education Strategies .9					
<p>explanation With an the lesson beginning maybe -3 To give students an introductory theoretical overview of the nature of the program and the components of the program's interface Practical application for the student on how to deal -4 with the features in the program and benefit from them</p>					The strategy
The decision tructures .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Monthly exam + daily exam	practical application	Introduction to Excel	Learn how to open the program and know the program interface	3	1
Monthly exam + daily exam	practical	Dealing with active cells 1	Learn how to work with the active cell and enter data into it	3	2
Monthly exam + daily exam	practical application	Dealing with active cells 2	Learn how to select cells, column, and row, and how to insert a column and row	3	3
Monthly exam + daily exam	practical application	Format cells	Learn how to deal with cell formatting and conditional formatting, how to adjust sheet margins and layout, and how to deal with .worksheets	3	4
Monthly exam + daily exam	practical application	Create a table	how to Learn make a table and know table formats	3	5

Monthly exam + daily exam	practical application	Sumner	Asking the students to introduce Sumner and his interview	3	6
Monthly exam + daily exam	practical application	File tab components	Learn how to save and print and the file how to open old files or create new files	3	7
Monthly exam + daily exam	practical application	Creating a series + inserting a on 1functi	Learn how a series works and how to use the addition function	3	8
Monthly exam + daily exam	practical application	Insert function 2	Learn how to use the rate function and conditional if	3	9
Monthly exam + daily exam	practical application	Chart	Learn how to make charts using the available information	3	10
					11
					12
					13
					14

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester reports.....etc editorial	
	And teaching Learning Sources .12
	) Required decided Books (Found that methodology
written by M. Microsoft Office Excel Excel Microsoft Osama Kamel, learn written by M.M. Amir Abdul Shamaa-Razzaq Al	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (.... Reports scientific

Electronic references, websites

Course Name .37	
Irrigation and puncture	
Course Code .38	
OC2402IDr	
year / Semester .39	
2024 -Second semester / 2023	
the description this Preparation date .40	
2024/9/1	
Available the audience shapes .41	
Attending the classroom / the university's electronic system / working in a group with students on Telegram	
(total) Units number (total) Academic hours number .42	
theoretical hours + 3 practical hours (weekly) / number of units (3.5 2 (units	
name from more if) Academic The decision responsible name (Mentioned	
: Email Sabbar Rahi JassimA.M.D. : Name Sabbar.aljeboory@uokerbala.edu.iq Noor.ahmed@uokerbala.edu.iq Noor Ahmed NouriM.D.	
The decision Goals	
The course aims to teach students how to make a contour map of a specific area, determine the locations of drainage channels, irrigation and calculate the drilling cubes needed to create them, learn how to extract water losses, the laws and equations for extracting water consumption, and how to find the distance between field pits .according to the texture of the soil	Scholarship Subject Goals
And learning education ategiesStr .9	
Audio methods (teaching explanation of the (topic <ul style="list-style-type: none"> • Style of writing on the blackboard • The method of direct dialogue between the teacher and the student, with the student's evaluation in class participation • Finding solutions to the problems and obstacles that students encounter in the practical and 	The strategy

theoretical parts of the subject					
The decision structure .10					
road Evaluation	road Learning	Unit name the topic or	Outputs Learning required	hours	the week
<ul style="list-style-type: none"> • Questions for discussion • Oral exams • Daily exams • Monthly exams 	<ul style="list-style-type: none"> • person -In and electronic • Using PowerPoint and educational videos with laboratory work to acquire skills and techniques • Scientific trips for irrigation and drainage projects in the region 	A historical overview of the science of irrigation and the reasons that led to the emergence of irrigation + (theoretical) the devices and tools used in land surveying (practical)	Irrigation and puncture	2 Theoretical 3 practical	1
<ul style="list-style-type: none"> • Questions for discussion • Oral exams • Daily exams • Monthly exams 		Main and secondary irrigation water sources + (theoretical) land survey and drawing a contour map (practical)	Irrigation and puncture	2 Theoretical 3 practical	2
<ul style="list-style-type: none"> • Questions for discussion • Oral exams • Daily exams • Monthly exams 		Fundamentals of planning the irrigation schedule network + (theoretical) determining the irrigation and drainage network for the agricultural area (practical)	Irrigation and puncture	2 Theoretical 3 practical	3
<ul style="list-style-type: none"> • Questions for discussion 		Calculating the ideal section of the	Irrigation and puncture	2 Theoretical	4

<p>n</p> <p>Oral • exams</p> <p>Daily • exams</p> <p>Monthly • exams</p>		<p>table</p> <p>+ (theoretical)</p> <p>moisture content (practical)</p>		<p>1</p> <p>practical 3</p>	
<p>Questions for discussion</p> <p>Oral • exams</p> <p>Daily • exams</p> <p>Monthly • exams</p>		<p>Water consumption methods and of measuring it</p> <p>+ (theoretical)</p> <p>Methods for measuring irrigation water (1) (practical)</p>	<p>Irrigation and puncture</p>	<p>2</p> <p>Theoretical</p> <p>1</p> <p>practical 3</p>	<p>5</p>
<p>Questions for discussion</p> <p>Oral • exams</p> <p>Daily • exams</p> <p>Monthly • exams</p>		<p>Lining irrigation canals</p> <p>+ (theoretical)</p> <p>Methods of measuring irrigation water (2) (practical)</p>	<p>Irrigation and puncture</p>	<p>2</p> <p>Theoretical</p> <p>1</p> <p>practical 3</p>	<p>6</p>
<p>Questions for discussion</p> <p>Oral • exams</p> <p>Daily • exams</p> <p>Monthly • exams</p>		<p>Water pumping and used machines</p> <p>+ (theoretical)</p> <p>Water rationing and water consumption (practical)</p>	<p>Irrigation and puncture</p>	<p>2</p> <p>Theoretical</p> <p>1</p> <p>practical 3</p>	<p>7</p>
<p>Questions for discussion</p> <p>Oral • exams</p> <p>Daily •</p>		<p>Calculate the pump's horsepower</p> <p>+ (theoretical)</p> <p>Laws for finding water consumption (practical)</p>	<p>Irrigation and puncture</p>	<p>2</p> <p>Theoretical</p> <p>1</p> <p>practical 3</p>	<p>8</p>

exams Monthly • exams					
Questions for discussion • Oral • exams Daily • exams Monthly • exams		Irrigation water quality and classification systems + (theoretical) Puncture of irrigated lands (practical)	Irrigation and puncture	2 Theoretical 1 practical 3	9
Questions for discussion • Oral • exams Daily • exams Monthly • exams		Drilling of irrigated lands + (theoretical) Open puncture and how to create trocars (practical)	Irrigation and puncture	2 Theoretical 1 practical 3	10
		Open puncture + (theoretical) Covered puncture and calculating the distance between the trocars (practical)	Irrigation and puncture	2 Theoretical 1 practical 3	11
		Covered puncture (theoretical)	Irrigation and puncture	2 Theoretical 1 practical 3	12

The decision evaluation .11					
Final theoretical exam	Final practical test	Attend the practical material	Duties	Practical quarterly tests	Theoretical semester tests
%30	%20	%5	%5	%10	%30
			And teaching Learning Sources .12		
			) Required decided Books		

	(Found that methodology
Irrigation basics and applications, Hadithi / Modern -Dr. Khudair Al irrigation technologies , Dr. Khudair Hadithi/ Puncture Engineering, -Al Dr. Jamal Sharif Dughramah J	(Sources) Home reviewer the
Rai, Dr. Muhammad Abdullah -Al Najm Reports, websites	Prevailing And references Books zinesMaga) With it recommend that (... Reports 'scientific
	Electronic references, websites

Course Name .43	
Computer 2	
Course Code .44	
UO1402CAp	
year / Semester .45	
2024 -Second semester / 2023	
description the this Preparation date .46	
2024/4/5	
Available the audience shapes .47	
My presence	
(total) Units number (total) Academic hours number .48	
(hours (weekly) / number of units (1 unit 2	
name from more if) Academic The decision responsible name (Mentioned	
: Email : the name Noor.ahmed@uokerbala.edu.iq Noor Ahmed NouriM.D.	
The decision Goals	
The course aims to introduce the student to computer settings in order to solve any problem he faces while using the computer And know how to adjust some settings according to user requirements, including sound, language, and user accounts	Scholarship Subject Goals

And learning education Strategies .9					
Using PowerPoint and educational videos -5 With an explanation the lesson beginning maybe -6 Control panel For benefits theoretical Practical application for the student on how to deal -7 Control panel with the categories in the					The strategy
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Monthly exam + daily exam + discussions reports (+ (Sumner	practical application	control Board	Definition of the control and ways panel to access it	2	1
=	theoretical	System and security	Knowledge of special settings to protect security and order	2	2
=	practical application	Network and +Internet Quiz1	The ability to control and review the network status	2	3
=	practical application	Hardware and Sound	Knowing how control the to most basic options on the computer, including sounds, device battery settings, power consumption method, etc	2	4
=	practical application	programs	Find out how to remove programs through this group	2	5

=	practical application	User Accounts and family Safety	How to create more than one account and set a password and monitoring	2	6
=	practical application	First the test semester theoretical +) (practical	-	2	7
=	practical application	Appearance and Personalization	Control taskbar settings, as well as background settings, screen appearance, and how to set a screen saver with formatting	2	8
=	practical application	Appearance and Personalization Quiz 2 +	Control taskbar settings, as well as background settings, screen appearance, and how to set a screen saver with formatting	2	9
=	practical application	Clock language and Region	Knowledge of the mechanism for controlling language settings, time setting and date, and changing the time zone	2	10
=	practical application	Ease of Access	Knowledge of the quick and easy access feature that serves people	2	11

			with special needs, such as improving visual display and speech recognition		
		Second semester exam theoretical +) (practical			12
		Final practical test			13
					14

The decision evaluation .11	
like requester With it Assigned mission according to on 100 from Class distribution Monthly, editorial, reports, etc And oral Daily exams And Daily Preparation	
	And Learning Sources .12 teaching
	) Required decided Books (Found that methodology
Computer fundamentals, Computer skills	(Sources) Home the reviewer
	Prevailing And references Books With it recommend that (... Reports 'scientific Magazines)
https://netaraby.com/control-panel-on-windows-10/#tshghyl_albramj_alafradyt	Electronic references, websites

Course name: Land cultivation .49
Course Code .50
OO1440FDL
2024-First semester / 2023 .51
Description 9/1/2023 this Preparation date .52
electronic+ Available: in person the audience shapes .53

3.5 : (total) Units hours, no 70 : (total) Academics hours number .54					
(Mentioned name from more if) Academic The decision responsible name					
: Email Mahmoud Nasser HusseinA.M.D. : the name					
Mahmood.n@uokerbala.edu.iq					
The decision Goals					
so that he land cultivation Providing the student with information about sustainable agricultural practices and maintain soil promote is able to by educating the community about the and productivity fertility . agricultural lands cultivating importance of					Goals Subject Scholarship
And learning education Strategies .9					
the purpose of improving soil properties, for Cultivation of crops the for amounts of water large that need crops either by planting crops purpose of completing soil washing operations, or by planting water to retain are turned in the ground to increase their ability that properties , as and biological Its texture .their fertility oveand impr the purpose of for a transitional stage after reclamation is cultivation economic productivity to the soil accessing					The strategy
The decision structure .10					
road Evaluation	Learning road	the or Unit name topic	Outputs Learning required	hours	the week
<ul style="list-style-type: none"> the• audience Oral • exams Written • tests Duties• Daily • sharing Research • papers 	<ul style="list-style-type: none"> Diction • Discussi • ons the offer • Student • groups Preparing and discussing scientific research 	Environmental and their factors on crop impact growth and production	<ul style="list-style-type: none"> Knowledge • and understand ing Skill • Value • 	5	1
		Biological, plant factors and animal and their impact on the production and distribution of field crops		5	2
		Social and economic factors and their impact on the production distribution of and field crops		5	3
		Productivity and carbon representation accounts		5	4
		Productivity factors		5	5
		Environmental and production systems		5	6
		Organic matter in		5	7

		the soil		
		Climate and plant distribution	5	8
		Agricultural regions in the world and their comparison with desert	5	9
		Horizontal agricultural expansion in Iraq	5	10
		Land reclamation programme	5	11
		Method of growing crops	5	12
		Correcting land defects	5	13
		Washing and drainage needs	5	14

The decision evaluation .11	
requester With it Assigned mission according to on 100 from Class distribution Monthly, editorial, reports, etc And oral Daily And exams Daily Preparation like	
	And teaching Learning Sources .12
Land cultivation	methodology) Required decided Books (Found that
Basics of field crop production	(Sources) Home the reviewer
Lands Dr. Hadi Applied reclamation (Yasser Abboud (2016	that Prevailing And references Books Scientific Magazines) With it recommend (.... Reports
	Electronic references, websites

Course name: Soil principles .55
Course Code .56
OC2401PPe
2024-First semester / 2023 .57
Description 9/1/2023 this Preparation date .58
electronic+ Available: in person the audience shapes .59
3.5 : (total) Units hours, no 70 : (total) Academics hours number .60

(Mentioned name from more if) Academic The decision responsible name					
: Email Mahmoud Nasser Hussein A.M.D. : the name Mahmood.n@uokerbala.edu.iq					
The decision Goals					
the Providing the student with information about so that he is able to manage subject of soil principles the soil and improve its properties to be suitable for plant growth and thus achieve the best agricultural .production				Scholarship Subject Goals	
ring And lea education Strategies .9					
Studying the components of the soil, studying the physical, of chemical, biological, fertility and morphological characteristics the student's knowledge of the extent of the influence the soil, and development of plants and how to of the soil on the growth and .manage and maintain the soil and increase its fertility					The strategy
The decision structure .10					
road Evaluation	Learning road	or Unit name the topic	Outputs Learning required	hours	the week
<ul style="list-style-type: none"> the • audience Oral • exams Written • tests Duties • Daily • sharing Research • papers 	<ul style="list-style-type: none"> Diction • Discussi • ons the offer • Student • groups Preparin • g and discussing scientific research 	General definitions and concepts	<ul style="list-style-type: none"> Knowledge • and understand ing Skill • Value • 	5	1
		Soil composition and its basic components		5	2
		Origin and development of soils		5	3
		Physical properties of soil		5	4
		Soil composition		5	5
		Soil water		5	6
		Soil water classification		5	7
		Colloids and soil chemical properties		5	8
		Mineral colloids		5	9
		Study some chemical and fertility properties of soil		5	10
		Biological properties of soil		5	11
		Organic matter		5	12

		in the soil		
		The plant obtains nutrients		5
		Nutrients and their importance to plants		13
				5
				14

The decision evaluation .11	
requester With it Assigned mission according to on 100 from Class distribution Monthly, editorial, reports, etc And oral Daily And exams Daily Preparation like	
	And teaching Learning Sources .12
Principles of soil science	) Required decided Books (Found that methodology
-Abdullah Najm Al .soil science/ A.M.D Ani	(Sources) Home the reviewer
and fertilizers , Prof. Dr. Soil fertility Din Shawqi Ali and others -Nour El (2014)	that Prevailing And references Books Magazines) With it recommend (.... Reports Scientific
	references, websites Electronic

(Course name: English language (first stage .61	
UO1401ELa	
Course Code .62	
2024-first year/2023 / Semester .63	
Description 4/6/2024 this Preparation date .64	
Availability is mandatory the audience shapes .65	
(total) Units number (total) Academic hours number .66	
name from more if) Academic The decision responsible name (Mentioned	
: Email Shatha Abdullah Muhammad RedhaA.M.D. : the name shatha.rdha@uokerbala.edu.iq	
The decision Goals	
It is introducing the student to the English language in terms of grammar, reading, sound,	Scholarship Subject Goals

<p>and conversation in a way that the student accepts as a .beginner in the language</p> <p>The curriculum includes the • skills and basics of learning the beginners English language for in an easy way so that it is not .difficult for the learner</p>	
--	--

And learning education Strategies .9

<p>It is to provide the learner with sufficient skills in the English language that are appropriate for the first can be a base or basis for learning the stage so that it .language in the second stage</p>	<p>The strategy</p>
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The decision structure .10

road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	theoretical	Introduction and good morning	BSC	2	the first
Exams	theoretical	Numbers 1-10	BSC	2	the second
Exams	theoretical	Plurals	BSC	2	the third
Exams	theoretical	Jobs	BSC	2	the fourth
Exams	theoretical	Negative and Question	BSC	2	Fifth
Exams	theoretical	Family and friends	BSC	2	VI
Exams	theoretical	Present simple tens	BSC	2	Seventh
Exams	theoretical	Sports, food, drinks	BSC	2	VIII
Exams	theoretical	Numbers and prices	BSC	2	Ninth
Exams	theoretical	Always, sometimes, never	BSC	2	The tenth
Exams	theoretical	Words that go together	BSC	2	eleventh
Exams	theoretical	My favorites	BSC	2	twelveth
Exams	theoretical	prepositions	BSC	2	Thirteenth
Exams	theoretical	Directions	BSC	2	fourteenth

The decision evaluation .11				
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc				
Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%50				%50
		And teaching Learning Sources .12		
Headway for beginner		) Required decided Books (Found that methodology (Sources) Home the reviewer that Prevailing And references Books Magazines) With it recommend (.... Reports scientific Electronic references, websites		

microbiology Course name: Principles of .67	
Course Code .68	
OC2402PMi	
2024-year/2023 / semester Second .69	
Description 4/6/2024 this Preparation date .70	
Availability is mandatory the audience shapes .71	
(total) Units number (total) Academic hours number .72	
name from more if) Academic decision The responsible name (Mentioned	
: Email Shatha Abdullah Muhammad RedhaA.M.D. : the name shatha.rdha@uokerbala.edu.iq millimeter . Ruins of Hadi's ruler	
The decision Goals	
duce the The course aims to intro student to microbiology and its	Scholarship Subject Goals

relationship with living organisms, including plants, and .its benefits and harms

Study of microbial groups: • bacteria, fungi, algae, archaea, and viruses, and their importance in the lives of .antshumans, animals, and pl

Studying its harms , benefits, • diversity, the environment in which it lives, the conditions affecting it, and the conditions .for its development

And learning education Strategies .9

<p>Make the student familiar with the basics of microbiology because it is one of the sciences that overlaps with other sciences such as plant science, .cell science, genetics, and other sciences</p>	<p>The strategy</p>
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The decision structure .10

road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	Theoretical practical +	Introduction to microbiology	BSC	5	the first
Exams	Theoretical practical +	Bacteria	BSC	5	the second
Exams	Theoretical practical +	Bacterial wall degrading enzymes	BSC	5	the third
Exams	Theoretical practical +	basic The components of prokaryotic and eukaryotic cells	BSC	5	the fourth
Exams	Theoretical practical +	Methods of transport of nutrients and substances	BSC	5	Fifth
Exams	Theoretical practical +	Nutritional requirements of microorganisms	BSC	5	VI
Exams	Theoretical practical +	Growth in bacteria	BSC	5	Seventh

Exams	Theoretical practical +	Fungi and their importance	BSC	5	VIII
Exams	Theoretical practical +	and asexual reproduction in fungi	BSC	5	Ninth
Exams	Theoretical practical +	Viruses	BSC	5	The tenth
Exams	Theoretical practical +	Viruses multiply	BSC	5	eleventh
Exams	Theoretical practical +	Pathogenic microorganisms	BSC	5	twelveth
Exams	Theoretical practical +	Microbial genetics	BSC	5	Thirteenth
Exams	Theoretical practical +	Genetic mutations	BSC	5	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%40	%20	%5	%10	%25

And teaching Learning Sources .12

Theoretical and practical microbiology) Required decided Books (Found that methodology (Sources) Home the reviewer that Prevailing And references Books Magazines) With it recommend (... Reports scientific Electronic references, websites
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(Course name: English language (second stage .73

Course Code .74

OC1402ELa

2024-first year/2023 / Semester .75

Description 4/6/2024 this Preparation date .76					
Availability is mandatory the audience shapes .77					
(total) Units number (total) Academic hours number .78					
name from more if) Academic The decision responsible name (Mentioned					
: Email Shatha Abdullah Muhammad RedhaA.M.D. : the name shatha.rdha@uokerbala.edu.iq					
The decision Goals					
<p>It is to introduce the student to the English language in terms of grammar, reading, audio, and conversation</p> <p>includes the The curriculum skills and basics of learning the English language for the upper level of the first stage in an easy way that is not difficult for the learner to understand</p>			<p>Scholarship Subject Goals</p>		
And learning education Strategies .9					
<p>with sufficient skills in the English language, appropriate for the second stage, in order to make it easier for the student to complete his learning in the English language for the higher level</p>				<p>The strategy</p>	
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs ing Learn required	hours	the week
Exams	theoretical	Verbs to be, Possessive adjectives	BSC	2	the first
Exams	theoretical	Verbs to be, negative and questions, possessive s	BSC	2	the second
Exams	theoretical	Present simple1, negative and	BSC	2	the third

		question			
Exams	theoretical	Present simple 2	BSC	2	the fourth
Exams	theoretical	There is/are, How many, some and any,	BSC	2	Fifth
Exams	theoretical	This, that, these, those	BSC	2	VI
Exams	theoretical	Can, cannot, could, was and were	BSC	2	Seventh
Exams	theoretical	Past simple1, regular and irregular verbs, time expression	BSC	2	VIII
Exams	theoretical	Past simple 2, negative	BSC	2	Ninth
Exams	theoretical	Count, uncount nouns, much and many	BSC	2	The tenth
Exams	theoretical	Comparative and superlative	BSC	2	eleventh
Exams	theoretical	Present continuous tension	BSC	2	twelveth
Exams	theoretical	Adjectives and adverbs	BSC	2	Thirteenth
Exams	theoretical	Present perfect	BSC	2	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

Final theoretical exam	Final practical test	Practical tests daily	Practical quarterly tests	Theoretical semester tests
%50				%50

	And teaching Learning Sources .12
Headway for elementary	) Required decided Books (Found that methodology
	(Sources) Home the reviewer
	that Prevailing And references Books

	Magazines) With it recommend (.... Reports ,scientific
	Electronic references, websites

Course name Principles of Biochemistry .79	
Course Code .80	
OC2401Bio	
2024-year/2023 / semester Second .81	
Description 4/6/2024 this Preparation date .82	
Availability is mandatory the audience shapes .83	
(total) Units number (total) Academic hours number .84	
name from more if) Academic The decision responsible name (Mentioned	
: Email Shatha Abdullah Muhammad RedhaA.M.D. : the name shatha.rdha@uokerbala.edu.iq ali.abid@uokerbala.edu.iq millimeter . Ali Abdul Rahim Kazem	
The decision Goals	
<p>It is to introduce the student to • the basics of biochemistry and its importance in the life of living organisms, especially plants, its relationship with other and sciences such as cell science, genetics, physiology , biotechnology and other .sciences</p> <p>Study of the most important • components of nature's vitality, starting with water, carbohydrates , proteins, fats, enzymes, hormones... and . nding with genetic materiale</p>	Scholarship Subject Goals
And learning education Strategies .9	
Make the learner capable of analytical skills in biochemistry	The strategy

.and methods of applying them					
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	Theoretical practical +	introduction	BSC	5	the first
Exams	Theoretical practical +	Cycle of elements in nature	BSC	5	the second
Exams	Theoretical practical +	The cell and its components	BSC	5	the third
Exams	Theoretical practical +	water	BSC	5	the fourth
Exams	Theoretical practical +	Carbohydrates	BSC	5	Fifth
Exams	Theoretical practical +	Dietary fiber and its importance	BSC	5	VI
Exams	Theoretical practical +		BSC	5	Seventh
Exams	Theoretical practical +	Proteins	BSC	5	VIII
Exams	Theoretical practical +	Biological functions of a number of amino acids	BSC	5	Ninth
Exams	Theoretical practical +	Enzymes	BSC	5	The tenth
Exams	Theoretical practical +	Hormones	BSC	5	eleventh
Exams	Theoretical practical +	Fats	BSC	5	twelveth
Exams	Theoretical practical +	Nucleotides and nucleic acids	BSC	5	Thirteenth
Exams	Theoretical practical +	Vitamins and coenzymes	BSC	5	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

	Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
	%40	%20	%5	%10	%25
			And teaching Learning Sources .12		
Biochemistry, Part One and Part Two			) Required decided Books (Found that methodology (Sources) Home the reviewer that Prevailing And references Books Magazines) With it recommend (.... Reports scientific Electronic references, websites		

(Course name: English language (third stage .85	
Course Code .86	
UO1403E1a	
2024-first year/2023 / Semester .87	
Description 4/6/2024 this Preparation date .88	
Availability is mandatory the audience shapes .89	
(total) Units number (total) Academic hours number .90	
name from more if) Academic The decision responsible name (Mentioned	
: Email Shatha Abdullah Muhammad RedhaA.M.D. : the name shatha.rdha@uokerbala.edu.iq	
The decision Goals	
is to introduce the student to the It • English language in terms of grammar, reading, audio, and conversation, and to prepare the student for the higher level of the .language The curriculum includes the • skills and basics of learning the	Scholarship Subject Goals

the English language for intermediate level in an easy way so that it is not difficult for .the learner to understand					
And learning education Strategies .9					
It is to provide the learner with sufficient skills in the stage, so English language, appropriate for the third that the student is proficient in the language and is . prepared for the next stage					The strategy
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	theoretical	Present, past and future	BSC	2	the first
Exams	theoretical	Present simple, present continuous	BSC	2	the second
Exams	theoretical	Past simple and past continuous	BSC	2	the third
Exams	theoretical	Much, many, some, any, a few, a lot	BSC	2	the fourth
Exams	theoretical	Verb patterns 1, Future intentions	BSC	2	Fifth
Exams	theoretical	What's it like? Comparative and superlative	BSC	2	VI
Exams	theoretical	Present Perfect and Past Simple	BSC	2	Seventh
Exams	theoretical	Should, must and have to	BSC	2	VIII
Exams	theoretical	Time and conditional clauses	BSC	2	Ninth
Exams	theoretical	Verb patterns 2, Infinitives Purpose	BSC	2	The tenth
Exams	theoretical	Passives	BSC	2	eleventh
Exams	theoretical	Present	BSC	2	twelveth

		Perfect Continuous			
Exams	theoretical	Past Perfect	BSC	2	Thirteenth
Exams	theoretical	Reported statements	BSC	2	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester reports, etc editorial

Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%50				%50

And teaching Learning Sources .12

Headway for pre-intermediate

) Required decided Books (Found that methodology (Sources) Home the reviewer that Prevailing And references Books Magazines) With it recommend (... Reports scientific Electronic references, websites

(Course name: English language (fourth stage .91
Course Code .92
UO1404ELa
2024-first year/2023 / Semester .93
Description 4/6/2024 this Preparation date .94
Availability is mandatory the audience shapes .95
(total) Units number (total) Academic hours number .96

name from more if) Academic The decision responsible name (Mentioned

: Email Shatha Abdullah Muhammad RedhaA.M.D. : the name shatha.rdha@uokerbala.edu.iq

The decision Goals

<p>It is to introduce the student to the English language in terms of grammar, reading, audio, conversation, and to prepare the student for the higher level of the language. The curriculum includes the skills and basics of learning the English language for the intermediate level in an easy way so that it is not difficult for the learner to understand.</p>	<p>Scholarship Subject Goals</p>
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And learning education Strategies .9

<p>It is to provide the learner with sufficient skills in the English language, appropriate to the fourth stage, so that the student is proficient in the language and is prepared for the next stage.</p>	<p>The strategy</p>
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The decision structure .10

road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	theoretical	Verbs to be, have and do, negative and question	BSC	2	the first
Exams	theoretical	Present tenses	BSC	2	the second
Exams	theoretical	Past tenses	BSC	2	the third
Exams	theoretical	Modal verbs 1, obligation and permission	BSC	2	the fourth
Exams	theoretical	Future forms	BSC	2	Fifth
Exams	theoretical	Verb patterns	BSC	2	VI
Exams	theoretical	Conditionals	BSC	2	Seventh
Exams	theoretical	Modal verbs 2,	BSC	2	VIII

		probability			
Exams	theoretical	Present perfect continuous	BSC	2	Ninth
Exams	theoretical	Indirect questions	BSC	2	The tenth
Exams	theoretical	Have(got) to, can, be allowed to	BSC	2	eleventh
Exams	theoretical	Should and must	BSC	2	twelveth
Exams	theoretical	Report speech	BSC	2	Thirteenth
Exams	theoretical	Report questions	BSC	2	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%50				%50

And teaching Learning Sources .12

Headway for Intermediate

) Required decided Books
(Found that methodology

(Sources) Home the reviewer

that Prevailing And references Books
Magazines) With it recommend
(... Reports scientific

Electronic references, websites

Course Name .97

Environmental stresses

Course Code .98

OO2440Est

Semester/year .99

2024 -2023 / Second

Date this description was prepared .100

6/4/2024

Available attendance forms .101					
Is mandatory					
(Number of study hours (total) Number of units (total .102					
is 3.5 hours and the number of units5 The total number of study hours is					
(Name of the course administrator (if more than one name is mentioned					
sabah.shareef@uokerbala.edu.iq : Name: Prof. Dr. Sabah Ghazi Sharif Email					
Course objectives					
<ul style="list-style-type: none"> Identify environmental factors that stress plants • Knowledge of the direct and indirect effects on physiological and metabolic processes in plants • Introducing the student to all types of environmental stresses and ways plants them can resist • 			the study subject Objectives of		
Teaching and learning strategies .9					
Showing educational videos to the student -1 Working in the laboratory and conducting experiments -2 Illustrations such as PowerPoint -3 Explanation by the teacher and video recording of the lecture -4				The strategy	
Course structure .10					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in laboratories to acquire skills and techniques	Types of stresses and methods of resistance	Environmental stresses	2 Theoretical practical 3	
=	=	Water stress, plants' response to it, and mechanisms for tolerating water stress conditions	Environmental stresses	2 Theoretical practical 3	
=	=	Salt stress: its	Environmental	2	

		causes, crops' tolerance to it, and methods of resistance	stresses	Theoretical practical 3	
=	=	high :Heat stress temperature stress	Environmental stresses	2 Theoretical practical 3	
=	=	Heat stress: low temperature stress	Environmental stresses	2 Theoretical practical 3	
=	=	First test	Environmental stresses	2 Theoretical practical 3	
=	=	Nutritional stress	Environmental stresses	2 Theoretical practical 3	
=	=	Light stresses / The effect of light stresses on plants	Environmental stresses	2 Theoretical practical 3	
=	=	Effect of pollutant stress on plants	Environmental stresses	2 Theoretical practical 3	
=	=	Biological environmental stresses	Environmental stresses	2 Theoretical practical 3	0
=	=	Nutritional stress	Environmental stresses	2 Theoretical practical 3	1
=	=	Second test	Environmental stresses	2 Theoretical practical 3	2
=	=	The effect of industrial pollutants on plants	Environmental stresses	2 Theoretical practical 3	3
=	=	Third test	Environmental stresses	2 Theoretical practical 3	4

Course evaluation .11	
according to the tasks assigned to the 100 Distribution of the grade out of student, such as daily preparation, daily, oral, monthly, written exams, and .reports	
	Learning and teaching resources .12
The effect of water stress on plant	Required textbooks (methodology, if

physiological processes The relationship of soil, water and plants Plant physiology	(any
Stress physiology book drought stress on plants Book on	(Main references (sources
nothing	Mainstream recommended books ,and references (scientific journals (...Reports
nothing	Electronic references, websites

Course Name .103	
Principles of Statistics	
Course Code .104	
OO2420Pst	
year / Semester .105	
2023-semester/2023 Second	
the description this Preparation date .106	
Available the audience shapes .107	
My presence	
(total) Units number (total) Academic hours number .108	
hours, 3.5 units 5	
name from more if) Academic The decision responsible name (Mentioned	
ali.nazem@uokerbala.edu.iq: Email Professor Ali Nazim Farhoud : Name	
The decision Goals	
Students gain experience, skills, and the ability to deal with and analyze data • Dealing with various statistical .methods • Analyze agricultural data, make •	Scholarship Subject Goals

decisions and communicate .effectively					
And learning education Strategies .9					
<p>:Focus on agricultural applications .1 life examples and case studies -life examples: Use real-Real to illustrate statistical from the field of agriculture .concepts Field visits: Organizing field visits to farms and agricultural research centers to introduce students to practical .applications of statistics :Use of technology .2 Statistical software: Teach students how to use common statistical software Simulation: Use simulation software to represent statistical .phenomena and enhance understanding of concepts Electronic learning resources: Providing electronic learning resources, such as videos and interactive exercises :learning Active .3 Group Discussions: Encourage students to discuss .statistical concepts and solve problems together :Continuous evaluation .4 Assignments and Quizzes: Assess students' understanding of statistical concepts through assignments .and quizzes ing statistics to other coursesLink .5</p>					The strategy
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Daily paper exam	Lectures	Introduction and definition	Understand the basic principles of statistics	5	1
Daily paper exam	Lectures	Statistical symbols	Learn statistical symbols	5	2
solving equations	Exercises	Data display and frequency distribution	Providing students with the ability to display data and frequency	5	3

			distribution		
solving equations	Exercises	Mediation measures	Students' understanding and assimilation of mediation scales	5	4
solving equations	Exercises	Measures of dispersion	Students' knowledge of dispersion measures and the ability to apply them	5	5
solving equations	Exercises	Compatibility and exchange	Students' understanding of the principles of compatibility and exchange	5	6
		Monthly exam	Monthly exam	5	7
solving equations	Exercises	Binomial distribution	Ability to solve applied problems of binomial distribution	5	8
solving equations	Exercises	Normal distribution	Ability to solve applied normal distribution problems	5	9
solving equations	Exercises	Hypothesis Z testing	Ability to solve applied problems and hypotheses test	5	10
solving equations	Exercises	distributiont	Ability to solve t- applied distribution problems	5	11
solving equations	Exercises	distributionF	Ability to solve F applied distribution problems	5	12
solving equations	Exercises	square -Chi distribution	Ability to solve -applied chi square distribution problems	5	13
solving equations	Exercises	General Review	General Review	5	14

		Monthly exam		5	15

The decision evaluation .11	
- (Practical semester exams (15% - (Theoretical semester exams (30% Theoretical final - (Practical final exam (20% - (Daily practical exams (5% .exam (30%	
	And teaching Learning Sources .12
Rawi, Khashi Mahmoud. 1989. -Al Introduction to statistics. College .University of Mosul - of Agriculture	) Required decided Books (Found that methodology
Hoshmand , R. (2017). <i>Statistical methods for environmental and agricultural sciences</i> . CRC press.	(Sources) Home reviewer the
Rangaswamy , R. (1995). <i>A text book of agricultural statistics</i> . new age international.	Prevailing And references Books With it recommend that (... Reports ·scientific Magazines)
https://www.realityworks.com/blog/10- online-resources-for-agriculture- classrooms/?v=560e51228bc1	Electronic references, websites

Course name: Legume Crops .1
Course Code .2
OO2430LCr
2024-First/2023 : Year / Semester .3
2023/2/9 : Description this Preparation date .4
in person : Available the audience shapes .5
hours / 3 2 : (total) Units number (total) Academic hours number .6 units
name from more if) Academic The decision responsible name

(Mentioned					
: Email Basma Aziz HamidA.M.D. : the name basma.azeez@uokerbala.edu.iq					
The decision Goals					
<p>Make the student able to distinguish leguminous crops from .other crops which crops are Make the student able to distinguish economically important Make the student able to recognize and distinguish important economic traits that have economic returns and nutritional value and strive to increase them</p>					Goals Subject Scholarship
And learning education Strategies .9					
<p>student acquires skills in distinguishing leguminous crops The The student acquires skills in multiplying leguminous crops Providing the student with skills in growing leguminous crops and providing all appropriate conditions increase the yield of some The student acquires the skill to leguminous crops, especially those with economic returns</p>					The strategy
The decision structure .10					
road Evaluation	road Learning	Unit name the topic or	Outputs Learning required	hours	the week
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Scientific names, family and region of -cultivation Bean sprout Botanical – -description international groups and varieties grown in Iraq	Theoretical and practical concepts	2	1
Written exam oral = questions = daily attendance at racurricular ext activities	My theory and my field	Agricultural operations, quantity of seeds, planting date, irrigation, cultivation and fertilization methods, etc., until	Theoretical and practical concepts	2	2

		maturity and harvest			
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	-Chickpeas botanical -description international groups and varieties grown in Iraq	Theoretical and practical concepts	2	3
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Agricultural operations, quantity of seeds, planting date, irrigation, planting and fertilization methods, etc., until maturity and harvest	Theoretical and practical concepts	2	4
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	-Lentils botanical -description international groups and varieties grown in Iraq	Theoretical and practical concepts	2	5
Written exam oral = questions = daily attendance at extracurricular activities	Theoretical and field	Agricultural operations, quantity of seeds, planting date, irrigation, planting and fertilization methods, etc., until maturity and harvest	etical Theor and practical concepts	2	6
Written exam oral = questions = daily attendance at extracurricular	My theory and my field	-Mung botanical -description international groups and varieties	Theoretical and practical concepts	2	7

activities		grown in Iraq			
Written exam oral = questions = daily attendance in rricular extracu activities	Theoretical and field	Agricultural operations, quantity of seeds, planting date, irrigation, planting and fertilization methods, etc., until maturity and harvest	Theoretical and practical concepts	2	8
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	-Beans botanical -description international groups and varieties grown in Iraq	Theoretical and practical concepts	2	9
Written exam oral = questions = daily attendance at urricular extrac activities	My theory and my field	Agricultural operations, quantity of seeds, planting date, irrigation, planting and fertilization methods, etc., until maturity and harvest	Theoretical and practical concepts	2	10
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	-Cowpeas botanical -description international groups and varieties grown in all - Iraq agricultural operations	Theoretical and practical concepts	2	11
Written exam oral = questions daily	My theory and my field	- Peas botanical -description international	Theoretical and practical concepts	2	12

attendance in extracurricular activities		groups and varieties grown in all -Iraq agricultural – operations Maturity and harvest			
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Field -pistachios botanical -description international groups and varieties grown in - Iraq agricultural operations	Theoretical and practical concepts	2	13
Written exam oral = questions = daily attendance in extracurricular activities	Theoretical and field	-Soybeans botanical -description international groups and varieties grown in all -Iraq agricultural operations	Theoretical and practical concepts	2	14

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
a Composition With a saying Crops The slave Hayes fair . Dr . M . Forgiving	) Required decided Books (Found that methodology
a Composition With a saying Crops The slave Hayes fair . Dr . M . Forgiving	(Sources) Home the reviewer
a Composition With a saying Crops The slave Hayes fair . Dr . M . Forgiving	that Prevailing And references Books Magazines) With it recommend (.... Reports ,scientific
Articles< http://www.webteb.com	Electronic references, websites

Course name: Plant ecology .109					
Course Code .110					
OO2420PEc					
2024-First/2023 : Year / Semester .111					
2023/2/9 : Description this Preparation date .112					
in person : Available the audience shapes .113					
2 : (total) Units number (total) Academic hours number .114					
units hours / 3					
name from more if) Academic The decision responsible name (Mentioned					
: Email Basma Aziz HamidA.M.D. : the name basma.azeez@uokerbala.edu.iq					
The decision Goals					
studying the The course aims to explain the importance of subject of plant environment, the basic purpose of the concept of environment, its importance and its connection with the rest of the other sciences, and to identify the .devices used in the environment					Goals Subject Scholarship
And learning education Strategies .9					
Teaching students how to use devices for measuring -1 environmental indicators, such as devices for measuring wind, .humidity, temperature, pH, and light Teaching students how to read results on measuring devices -2 how to choose the appropriate place to place Teaching students -3 measuring devices					The strategy
The decision structure .10					
road Evaluation	road Learning	the or Unit name topic	Outputs Learning required	hour s	the week
Written exam oral =	My theory and	The concept of ecology and the most important scientists who laid the	Theoretical and practical	2	1

questions = daily attendance at extracurricular activities	my field	foundations of ecology	concepts		
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Branches of ecology and its relationship to other sciences	Theoretical and practical concepts	2	2
Written exam oral = = questions daily attendance at extracurricular activities	My theory and my field	Ecosystem components	Theoretical and practical concepts	2	3
Written exam oral = questions = daily attendance at extracurricular activities	Theo retic al and field	Geochemical cycles	Theoretical and practical concepts	2	4
Written exam oral = questions = daily attendance in extracurricular activities	My theory and my field	cycles and Gas sedimentary cycles	Theoretical and practical concepts	2	5
Written exam oral = questions = daily attendance at a extracurricular activities	Theo retic al and field	Carbon cycle in nature	Theoretical and practical concepts	2	6
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Nitrogen cycle	Theoretical and practical concepts	2	7
Written exam oral =	Theo retic	Phosphorus cycle	Theoretical and	2	8

questions = daily attendance at extracurricula r activities	al and field		practical concepts		
Written exam oral = questions = daily attendance at extracurricula r activities	My theor y and my field	The individual environment and the group environment	Theoretical and practical concepts	2	9
Written exam oral = questions = daily attendance at extracurricula r activities	Theo retic al and field	Introduction to environmental pollution and its most important types	Theoretical and practical concepts	2	10
Written exam oral = questions = daily attendance at extracurricula r activities	My theor y and my field	air pollution	Theoretical and practical concepts	2	11
Written exam oral = questions = daily attendance Extracurricul ar activities	My theor y and my field	Water Pollution	Theoretical and practical concepts	2	12
Written exam oral = questions = daily attendance at extracurricula r activities	My theor y and my field	Secondary pollutants	Theoretical and practical concepts	2	13
Written exam oral = questions = daily attendance at extracurricula r activities	My theor y and my field	Determining factors of pollution and the most important modern methods used to reduce pollution	Theoretical and practical ceptscn	2	14

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
environment the science . Dr Composition Vegetarianism Shaltout Hussein Perfection	) Required decided Books (Found that methodology
the environment science . Dr Composition Vegetarianism Shaltout Hussein Perfection	(Sources) Home the reviewer
the environment science . Dr Composition Vegetarianism Shaltout Hussein Perfection	that Prevailing And references Books Magazines) With it recommend (... Reports 'scientific
Articles< http://www.webteb.com	Electronic references, websites

Course name: General Botany .115
Course Code .116
OC1401GBo
2024-First/2023 : Year / Semester .117
2023/2/9 : Description this Preparation date .118
in person : Available the audience shapes .119
2 : (total) Units number (total) Academic hours number .120 hours / 3 units

name from more if) Academic The decision responsible name (Mentioned					
: Email Basma Aziz HamidA.M.D. : the name basma.azeez@uokerbala.edu.iq					
The decision Goals					
The course aims to identify organisms in general, including r plants, explain the importance of plants for humans and othe living organisms, learn about the concept of botany and its connection with other sciences, study the structure of plants externally and anatomically, and identify the most important . tissues from which their organs are composed					Goals Subject Scholarship
And learning education Strategies .9					
Recognizing the importance of plants to other -1 living organisms and their economic importance Identify the apparent structure of the plant and -2 study each of its parts in detail Studying plants anatomically and identifying the -3 tissues, organs, and systems that make them up and each of its organs Identify the concept of the plant cell and study its -4 living components and the most -living and non important functions of the cell					The strategy
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	An introduction to botany and some of the scientists who contributed to the development of botany and the relationship of botany to sciences other	Theoretical and practical concepts	2	1
Written exam oral = questions = daily attendance in extracurricular activities	My theory and my field	Plant cell and its components	Theoretical and practical concepts	2	2
Written exam	My	Living	Theoretical	2	3

oral = questions = daily attendance at extracurricular activities	theory and my field	components of the cell	and practical concepts		
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	living-Non components of plants	Theoretical and practical concepts	2	4
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Primary and secondary plant tissues	Theoretical and practical concepts	2	5
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Studying some types of crops anatomically	Theoretical and practical concepts	2	6
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Seed germination and factors that help internal and external germination	and practical concepts	2	7
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	The vegetative total of the plant/stem	Theoretical and practical concepts	2	8
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	The paper, the function of the paper	Theoretical and practical concepts	2	9
Written exam oral =	My theory	The reproductive	Theoretical and	2	10

questions = daily attendance in extracurricular activities	and my field	system in plants	practical concepts		
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Male organ (stamens)	Theoretical and practical concepts	2	11
Written exam oral = questions = daily attendance in extracurricular activities	My theory and my field	Female organ (pistils)	Theoretical and practical concepts	2	12
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Pink inflorescences and tamesh	Theoretical and practical concepts	2	13
Written exam oral = questions = daily attendance in extracurricular activities	My theory and my field	The fruit and the seed	Theoretical and practical concepts	2	14

The decision evaluation .11

**With it Assigned mission according to on 100 from Class distribution
Monthly, And oral Daily exams And Daily Preparation like requester
editorial, reports, etc**

And teaching Learning Sources .12

Translated by Dr. Plant life

) Required decided Books

Qassas-Muhammad Al	(Found that methodology
.Translated by Dr Plant life Qassas-Muhammad Al	(Sources) Home the reviewer
Translated by Dr. Plant life Qassas-Muhammad Al	that Prevailing And references Books Magazines) With it recommend (.... Reports ,scientific
Articles< http://www.webteb.com	Electronic references, websites

classification Course name: Plant .121	
Course Code .122	
OC1402PTa	
2024-First/2023 : Year / Semester .123	
2023/2/9 : Description this Preparation date .124	
in person : Available the audience shapes .125	
2 : (total) Units number (total) Academic hours number .126 hours / 3 units	
name from more if) Academic The decision responsible name (Mentioned	
: Email Basma Aziz HamidA.M.D. : the name basma.azeez@uokerbala.edu.iq	
The decision Goals	
The course aims to explain the importance of studying • of plant classification, the basic purpose of the subject the concept of classification, its importance and its connection with the rest of the other sciences, and to .learn about how to classify and collect plants	Goals Subject Scholarship
And learning education Strategies .9	
Teaching students to collect plant samples Knowledge of methods for measuring phenotypic traits Identify the types of microscopes used to measure some parts .of the plant	The strategy

The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Introduction to taxonomy, history of taxonomy	Theoretical and practical concepts	2	1
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	The goals of taxonomy and its relationship to other sciences	Theoretical and practical concepts	2	2
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	A general description of the plant and ying the identif importance of the vegetative parts of the plant in plant classification	and practical concepts	2	3
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Root, its types	Theoretical and practical concepts	2	4
Written exam oral = questions = daily attendance at ular extracurric activities	My theory and my field	The leg, its types, shapes and modifications	Theoretical and practical concepts	2	5
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Leaves, their parts, shapes and modifications	Theoretical and practical concepts	2	6

Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	venation, Leaf its types	Theoretical and practical concepts	2	7
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Blade shapes , top , base and edge of the blade	Theoretical and practical concepts	2	8
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	The surface coating of the leaf	Theoretical and practical concepts	2	9
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	Colors, variations, and mutations of the leaves	Theoretical and practical concepts	2	10
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	The flower, its parts, arrangement of flower parts the	Theoretical and practical concepts	2	11
Written exam oral = questions = daily attendance at icular extracurr activities	My theory and my field	Floral symmetry	Theoretical and practical concepts	2	12
Written exam oral = questions = daily attendance at extracurricular activities	My theory and my field	The fruit, its types and shapes	Theoretical and practical concepts	2	13
Written exam	My	Seeds, their	Theoretical	2	14

oral = questions = daily attendance at extracurricular activities	theory and my field	types and shapes, pollination and its types	and practical concepts		
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The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
to the classification of Introduction Fawzy . Dr . a flowering plants safety Mahmoud	) Required decided Books (Found that methodology
to the classification of Introduction Fawzy . Dr . a flowering plants safety Mahmoud	(Sources) Home reviewer the
Classification of seed plants plants flowering-and non	that Prevailing And references Books Magazines) With it recommend (.... Reports scientific
Articles< http://www.webteb.com	Electronic references, websites

Course Name	.127
Land reclamation	
Course Code	.128
OC1403SRe	
year / Semester	.129
First semester 2023	
Date this description was prepared	.130
2023/23/6	

Available attendance forms .131	
official working hours Mandatory	
3.5 : (total) Number of units 60 : (total) Number of study hours .132	
Number of units 3.5 60	
(if more than one name is mentioned) Name of the course administrator	
: Amiri Email-Prof. Dr. Abbas Ali Hussein Al : the name abas.hussian@uokerbala.edu.iq	
Course objectives	
<p>Students acquire the concepts of • with deal land reclamation and them theoretically, practically, and practically</p> <p>Students acquire the scientific and • o laboratory foundations in how t analyze land and prepare data reclamation</p> <p>Providing students with • information about the problems that soils suffer from and how to deal with each problem of each soil type</p> <p>The student gains experience in • choosing the appropriate soil repairman for the type of problem</p>	Scholarship Subject Goals
Teaching and learning strategies .9	
<p>cognitive goal is no There</p> <p>Gaining experience, skill, and the ability to deal with ❖ . and analyze the problem that the soil suffers from appropriate by establishing various soils Dealing with ❖ . principles reclamation and applying reclamation Understanding and applying the remediation program. ❖ . steps its in</p> <p>Marathi objectives of the course Except the field Training to solve the problem through ❖ . survey</p> <p>to write a final report, individually or Training ❖ . together, to study a problem</p> <p>illustrative experiments on the Conducting ❖ . example problem, such as salinity, for for the and devices Identifying the equipment ❖ . repair process</p> <p>Teaching and learning methods</p> <p>Continuous testing of the steps for implementing the ❖ . form practical its program in remediation</p>	The strategy

<ul style="list-style-type: none"> . in the classroom activities Exercises and ❖ related to sites electronic some students to Directing ❖ . land reclamation screens in the cthe electroni A demonstration through ❖ . classroom implemented Field visits to clarify some of the ❖ . projects remediation Evaluation methods . Participation in the classroom ❖ . Oral and written tests ❖ . activities Providing scientific and applied ❖ . tests that are conducted practically are no There ❖ 	
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Course structure .10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Written and oral	Theoretical and laboratory	and Introduction land of concept reclamation	Theoretical and practical concepts	5	the first
Written and oral	Theoretical and laboratory	apply Steps to repair the program	Theoretical and practical concepts	5	the second
Written and oral	Theoretical and laboratory	Types of corrective and treatments their methods	Theoretical and practical concepts	5	the third
Written and oral	Theoretical and laboratory	of Reclamation saline soils	Theoretical and practical concepts	5	the fourth
Written and oral	Theoretical and laboratory	Mechanics of salt movement during washing of saline soils	Theoretical and practical concepts	5	Fifth
Written and oral	Theoretical and laboratory	Using salt water saline to reclaim lands	Theoretical and practical concepts	5	VI
Written and oral	Theoretical and laboratory	monthly exam A	Theoretical and practical concepts	5	Seventh
Written and oral	Theoretical and laboratory	of Reclamation sodic soils	Theoretical and practical concepts	5	VIII
Written and oral	Theoretical and laboratory	The use of salt water in reclamation of sodic soils	Theoretical and practical concepts	5	Ninth

Written and oral	Theoretical and laboratory	Reclamation of limestone soils	Theoretical and practical concepts	5	The tenth
Written and oral	Theoretical and laboratory	gypsum soils	Theoretical and practical concepts	5	eleventh
Written and oral	Theoretical and laboratory	Reclamation of waterlogged soils	Theoretical and practical concepts	5	twelveth
Written and oral	Theoretical and laboratory	Reclamation of sandy soils	Theoretical and practical concepts	5	Thirteenth
Written and oral	Theoretical and laboratory	General Review	Theoretical and practical concepts	5	fourteenth
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Fifteenth

Course evaluation .11	
according to the tasks assigned to the 100 Distribution of the grade out of student, such as daily preparation, daily, oral, monthly, and written exams, .reports, etc	
	Learning and .12 teaching resources
. Radi .H. A .Study No .Zubaidi, Ahmed Haider. 1990-AI . College of Agriculture- University of Baghdad	Required textbooks methodology, if) (any
	) Main references (sources
Janabi, Hadi Yasser, 2016. Applied land reform. - AI Higher Education and Scientific Research. of Ministry . University Qasim Green-AI	Mainstream recommended books and references scientific journals,) (... reports
https://www.mewa.gov.sa/ar/Ministry/Agencies/Agencyland/ Page	Electronic references, websites

farm management Course name: Theoretical .133

Course Code .134					
OO2420FMa					
2024 - 2023 year / Semester .135					
2023/1/12 Description this Preparation date .136					
weekly Available the audience shapes .137					
75 (total) Units number (total) Academic hours number .138 hours 3%					
(Mr. Maha Abbas Hussein) Study decision The responsible name					
: Email Eng. Damha Abbas Hussein : the name mahaa.abbas@uokerbala.edu.iq					
The decision Goals					
The student's knowledge of the <ul style="list-style-type: none"> of farm concept and definition identifying the most important problems and obstacles and their impact on increasing production, and finding the best methods and recommendations to increase productivity and its quality 			Subject Goals Scholarship		
And learning education Strategies .9					
The student gains experience, skill, and the ability to deal and classify it. The student learns farm management with how to find the best ways to increase production, classify and find a special formula to farm management problems how to get rid of them or legalize them. The student learns .and its advantages and disadvantages manage farms					The strategy
The decision structure .10					
road Evaluation	Learning road	Unit name the or topic	Outputs Learning required	hour s	the wee k
participation in the classroom is	participation in the classroom is	Farm managem ent	Gaining - experience skill, and	5 5	1 2

evidence of the student's commitment and responsibility	evidence of the student's commitment and responsibility	The concept of management science farm management management jobs The farm Production costs Decision making process Farm planning Farm planning methods Fixed replacement ratios Farm size Farm records Farm management methods Economics buying a of farm Extinction and methods of calculating it Farm budget	ability to deal with plants Gaining -2 the ability manage to farms The - 3 student will learn how to find the best factors for farm management	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	3 4 5 6 7 8 9 10 11 12 13 14 15
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The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
	) Required decided Books (Found that methodology
Farm business management Dr. Samarrai-Hashem Alwan Al Principles in farm management Qadi-Dr. Abdel Fattah Al	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (... Reports scientific
	Electronic references, websites

Course name: Theoretical grain crops .139	
Course Code .140	
OO2430CCr	
2024 - 2023 year / Semester .141	
2023/1/12 Description this Preparation date .142	
weekly Available the audience shapes .143	
75 (total) Units number (total) Academic hours number .144 hours 3%	
name from more if) Academic The decision responsible name (Mentioned	
mahaa.abbas@uokerbala.edu.iq : Email MD Maha Abbas Hussein : the name	
The decision Goals	
The student's knowledge of the • their cereal crops concept of definition and distinction, studying	Subject Goals Scholarship

the environment for cereal crops and cereal crops at the the distribution of level of terrain, continents, etc., identifying the most important problems and obstacles to the cereal distribution and spread of crops and their impact on increasing production, and finding the best methods and recommendations to .productivity and its quality easeincr

And learning education Strategies .9

<p>The student gains experience, skill, and the ability to deal and classify them. The student learns how grain crops with to find the best ways to increase production for these crops, classify the problems of fiber crops, and find a special formula to get rid of them or legalize them. The student and grain crops s oflearns the most important distribution the appropriate environment for each of them, its advantages and disadvantages, and how to identify these. Crops, their environment and needs</p>	<p>The strategy</p>
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The decision structure .10

Evaluation road	Learning road	Unit name the or topic	Outputs Learning required	hour s	the wee k
<p>participation in the classroom is evidence of the student's commitment and responsibility - Commit ment to the specified deadline for submitting assignments and research Semester - and final tests</p>	<p>participation in the classroom is evidence of the student's commitment and responsibility - Commit ment to the specified deadline for submitting assignments and research Semester - and final tests</p>	<p>Cereal crops Obstacles to the cultivation and production grain of crops , and the means to overcome them Splitting the grains the rice Varieties grown in Iraq and</p>	<p>Gaining - experience, skill, and ability to deal with plants Gaining -2 the ability to deal with grain crops The - 3 student learns how to find the best</p>	<p>5 5 5 5 5 5 5 5 5 5 5 5 5 5</p>	<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15</p>

express mmitment co and cognitive and skill achievement	express commitment and cognitive and skill achievement	some countries of the Arab :world Falling and the causes falling of Suitable environme nt barley Wheat	factors suitable for crop growth		
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The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
Saidi, Muhammad Abd Issa. -Al Grain Technology Book. .1992 Ministry of Higher Education and Scientific Research, Mosul .University Press	And teaching Learning Sources .12
	) Required decided Books (Found that methodology
	(Sources) Home the reviewer
	that Prevailing references And Books Magazines) With it recommend (... Reports 'scientific
	Electronic references, websites

Course Name .145
Management of theoretical pastures
Course Code .146
OO2440PMa
year / Semester .147
(2024-Second semester (2023
the description this Preparation date .148
2024/2/1

Available the audience shapes .149					
Daily attendance					
(total) Units number (total) Academic hours number .150					
About 30 hours					
name from more if) Academic The decision responsible name (Mentioned					
: Email : the name					
Hind Adnan Hussein hind.a@uokerbala.edu.iq					
The decision Goals					
Know the requirements for the lesson <ul style="list-style-type: none"> • the student with Providing full knowledge of the obstacles or problems and the proposed solutions • The student acquires the concept of natural pastures and how to deal with them theoretically, practically, and practically 			Scholarship Subject Goals		
And learning education Strategies .9					
Managing the lecture in an applied manner linked to the reality of daily life to attract the student to the subject of the lesson without straying from the core of the subject, so that the material is flexible and understandable, and assigning the students to some group activities and .duties					strategy The
The decision structure .10					
road Evaluation	road Learning	the or Unit name topic	Outputs Learning required	hours	the week
Daily and monthly exams	lecture	The importance of natural pastures their spread, and their relationship to other sciences	The importance of pastures	2	1
Daily and monthly exams	lecture	Types of natural pastures, characteristics of	The importance of pastures	2	2

		good pasture			
Daily and monthly exams	lecture	factors Natural affecting pastures, environmental factors, soil factors, biological factors, igneous and locational factors	Factors affecting pastures	2	3
Monthly exams	lecture	Monthly exam	Exam	2	4
Daily and monthly exams	lecture	Grazing regulation, components of plant cover in pasture lands	Grazing organization	2	5
Daily and monthly exams	lecture	The effect of grazing on pastoral plant productivity, the effect of grazing on growth, roots and soil	Grazing organization	2	6
Daily and monthly exams	lecture	Intensity of grazing, the effect of grazing on the reproduction of pastoral plants and its effect on the plant composition of the cover	Grazing intensity	2	7
Daily and monthly exams	lecture	Monthly exam	Exam	2	8
Daily and monthly exams	lecture	Grazing systems continuous protection in grazing	Grazing systems	2	9
Daily and monthly exams	lecture	Condition of natural pastures, judging the condition of pastures	Condition of natural pastures	2	10
Daily and monthly	lecture	Classification of ure conditions, past	Condition of natural	2	11

exams		trend	pastures		
Daily and monthly exams	lecture	Harmful and toxic plants in pasture lands, natural reserves	Harmful and poisonous plants	2	12
Daily and monthly exams	lecture	Monthly exam	Exam	2	13

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
	) Required decided Books (Found that methodology
	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (... Reports scientific
	Electronic references, websites

Course Name	.151
Theoretical pharmaceutical plants	
Course Code	.152
OO1440DPI	
year / Semester	.153
(2024-First semester (2023	
the description this Preparation date	.154
2024/2/1	
Available the audience shapes	.155
Daily attendance	
(total) Units number (total) Academic hours number	.156
About 30 hours	
name from more if) Academic The decision responsible name (Mentioned	
: Email	: the name
hind.a@uokerbala.edu.iq Hind Adnan Hussein	

The decision Goals					
Know the requirements for the lesson • Providing the student with knowledge of the full obstacles or problems and the proposed solutions • The student acquires the concept of natural pastures and how to deal with them theoretically, practically, and practically •			Scholarship Subject Goals		
And learning education Strategies .9					
the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without straying from the core of the topic, so that the material is flexible and understandable, and p activities and assigning the students to some grou .duties				The strategy	
The decision structure .10					
road Evaluation	road Learning	the or Unit name topic	Outputs Learning required	hours	the week
Daily and monthly exams	lecture	Introduction to medicinal plants, caring for medicinal collecting, plants drying and storing medicinal and aromatic plants	Introduction to medicinal plants	2	1
Daily and monthly exams	lecture	The importance of growing medicinal plants, dividing medicinal plants	The importance of growing medicinal plants	2	2
Daily and monthly exams	lecture	Sources of obtaining medicinal plants, ingredients for producing medicinal and aromatic plants	of Sources medicinal plants	2	3
Monthly	lecture	Monthly exam	Exam	2	4

exams					
Daily and monthly exams	lecture	affecting the Factors production of medicinal plants, climate factors	Factors affecting the production of drug plants	2	5
Daily and monthly exams	lecture	Soil factors, industrial factors, preparing medicinal plants for marketing	Factors affecting the production of drug plants	2	6
Daily and monthly exams	lecture	Drying, its methods, and the changes that accompany drying processes	Drying	2	7
Daily and monthly exams	lecture	Monthly exam	Exam	2	8
Daily and monthly exams	lecture	Active compounds in medicinal plants	Active compounds	2	9
and monthly exams	lecture	The most important medicinal and aromatic plants, monocot plants	medicinal plants	2	10
Daily and monthly exams	lecture	Plants of the Compositae family	The most important medicinal plants	2	11
Daily and monthly exams	lecture	Apiaceae family	The most important medicinal plants	2	12
Daily and monthly exams	lecture	Monthly exam	Exam	2	13
Daily and monthly exams	lecture	Legume family, Solanaceae family	The most important medicinal plants	2	14

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12

	) Required decided Books (Found that methodology
	(Sources) Home reviewer the
	that Prevailing And references Books Magazines) With it recommend
	(... Reports 'scientific Electronic references, websites

Course name: Theoretical field crop insects	.157
Course Code	.158
OC1403FCI	
year/2024 / semester Second	.159
Description 4/5/2024 this Preparation date	.160
Available hall/lab the audience shapes	.161
2 (total) Units number (total) Academic hours number	.162
hours / 3.5 units	
name from more if) Academic The decision responsible name	
(Mentioned	
zainab.l@uokerbala.edu.iq : Email	M. Zainab Latif Hameed : Name
(millimeter . Atlal Hakim (practical course officer	
The decision Goals	
Identify the most important crops -1	Scholarship Subject Goals

<p>.susceptible to insect infestation diagnose a stinging Know how to -2 . insect .Learn how to control the insect -3</p>					
<p>And learning education Strategies .9</p>					
<p>can insects Teaching and learning strategies in field vary depending on the objective of the lesson and the are some strategies that can needs of the students. Here :be used</p> <p>Theoretical lessons: The lesson can begin with a .1 of insects theoretical explanation of the basic concepts the components of the insect's body, a general : such as idea of the type of insect, and the most important .insects to which the plant is exposed</p> <p>Interactive lessons: Using interactive activities such .2 as group discussions or analyzing case studies of can help students better insect infestations specific .understand the topic</p> <p>a: Using presentations, Presentations and multimed .3 videos, and illustrations can help better illustrate and .embody concepts</p>					<p>The strategy</p>
<p>The decision structure .10</p>					
road Evaluation	road Learning	the or Unit name topic	Outputs Learning required	hours	the week
Daily testing Requesting answers to some enriching questions like that	Use illustrative means And live .models	Taxonomic position of insects in the . animal kingdom When is an ?insect a pest Insect pest control		2 2 2	the first the second the third

		Insect control methods / natural control		2	the fourth
		Methods of insect control/biological control		2	Fifth
		Control using Pheromones		2	VI
		Integrated pest management (IPM).			Seventh
		Economic dream			VIII

decision The evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
Field crop insects	) Required decided Books (Found that methodology
Economic insects	(Sources) Home the reviewer
Book of plant pests and diseases, book of entomology, .Arab Journal of Plant Protection	that Prevailing And references Books Magazines) With it recommend (... Reports 'scientific
Arab Society for Plant Protection	Electronic references, websites

Course name: Jungle life .163

Course Code .164					
OO1440WBi					
2024-first year/2023 / Semester .165					
Description 4/6/2024 this Preparation date .166					
Availability is mandatory the audience shapes .167					
(total) Units number (total) Academic hours number .168					
name from more if) Academic The decision responsible name (Mentioned					
: Email Hamid Abdel KhashanA.M.D. : the name hamed.alfarttosi@uokerbala.edu.iq					
The decision Goals					
The course aims to introduce the student to the science of jungle life and its relationship with living organisms, including plants, and their benefits and .harms			Scholarship Subject Goals		
Study of jungle groups and methods of classifying them					
harms , benefits, Studying its diversity, the environment in which it lives, the conditions affecting it, and the conditions .for its growth					
And learning education Strategies .9					
Make the student familiar with the basics of jungle is a science that overlaps with biology because it other sciences such as plant science, cell science, .genetics, field crop production, and other sciences				The strategy	
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	Theoretical practical +	Introduction and definition	BSC	5	the first

		of jungles and their importance			
Exams	Theoretical practical +	Characteristics of jungle seeds	BSC	5	the second
Exams	Theoretical practical +	Harms and benefits of the bush	BSC	5	the third
Exams	Theoretical practical +	Botanical classification	BSC	5	the fourth
Exams	Theoretical practical +	Artificial classification of jungles	BSC	5	Fifth
Exams	Theoretical practical +	Methods of reproduction and spread of jungles	BSC	5	VI
Exams	Theoretical practical +	Monthly exam	BSC	5	Seventh
Exams	Theoretical practical +	Hibernation in jungle seeds	BSC	5	VIII
Exams	Theoretical practical +	Hibernates in bush buds	BSC	5	Ninth
Exams	Theoretical practical +	The phenomenon of antagonism	BSC	5	The tenth
Exams	Theoretical practical +	allelopathic compounds	BSC	5	eleventh
Exams	Theoretical practical +	Water jungle	BSC	5	twelveth
Exams	Theoretical practical +	Factors determining appropriate bush management dates	BSC	5	Thirteenth
Exams	Theoretical practical +	Monthly exam	BSC	5	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester etc «editorial, reports

Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
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	%40	%20	%5	%10	%25	
			And teaching Learning Sources .12			
practical jungle Theoretical and science) Required decided Books (Found that methodology (Sources) Home the reviewer that Prevailing And references Books Magazines) With it recommend (.... Reports 'scientific Electronic references, websites			

Course name: Combating jungles .169	
Course Code .170	
OO2440WCo	
2024-first year/2023 / Semester .171	
Description 4/6/2024 this Preparation date .172	
Availability is mandatory the audience shapes .173	
(total) Units number (total) Academic hours number .174	
name from more if) Academic The decision responsible name (Mentioned	
: Email Hamid Abdel KhashanA.M.D. : the name hamed.alfarttosi@uokerbala.edu.iq	
The decision Goals	
<p>The course aims to introduce the student to the science of weed control and its living relationship with organisms, including plants, and its benefits and harms</p> <ul style="list-style-type: none"> Study of groups of pesticides and methods of classification Studying its harms , benefits, diversity, the environment in 	Scholarship Subject Goals

which it lives, the conditions affecting it, and the conditions .s growthfor it					
And learning education Strategies .9					
Make the student familiar with the basics of weed control because it is a science that overlaps with other sciences such as plant science, cell science, .and other sciences ‘genetics , field crop production					The strategy
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	Theoretical practical +	Introduction and definition Scientific methods to reduce the danger of jungles	BSC	5	the first
Exams	Theoretical practical +	Mechanical control	BSC	5	the second
Exams	Theoretical practical +	Biomethods	BSC	5	the third
Exams	Theoretical practical +	Chemical control of weeds	BSC	5	the fourth
Exams	Theoretical practical +	Pesticide terminology	BSC	5	Fifth
Exams	Theoretical practical +	Classification of herbicides	BSC	5	VI
Exams	Theoretical practical +	Monthly exam	BSC	5	Seventh
Exams	Theoretical practical +	Weedicides and their additives	BSC	5	VIII
Exams	Theoretical practical +	The physiology of herbicide absorption	BSC	5	Ninth
Exams	Theoretical practical +	Transmission of herbicides	BSC	5	The tenth
Exams	Theoretical practical +	Combating weeds in crop fields	BSC	5	eleventh

Exams	Theoretical practical +	Combating weeds in vegetable crop fields	BSC	5	twelveth
Exams	Theoretical practical +	Combating weeds in water bodies	BSC	5	Thirteenth
Exams	Theoretical practical +	Monthly exam	BSC	5	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%40	%20	%5	%10	%25

And teaching Learning Sources .12	
Theoretical and practical jungle science	) Required decided Books (Found that methodology
	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (... Reports scientific
	Electronic references, websites

Fodder Crops :Course Name .175
:Course Code .176
OO1430FCr
(2024-First semester of the year (2023 : Year / Semester .177
2023-12-9 : Description this Preparation date .178
official time : Available the audience shapes .179
about 80 : (total) Units number (total) Academic hours number .180

hours	
(Mentioned name from more if) Academic The decision responsible name	
: Email Lecturer Nazim Abdel Razzaq Marza : the name nadhim.a@uokerbala.edu.iq M. M. Muhammad Hussein Alwan	
The decision Goals	
Cognitive Objectives- A on And ability And skill Experience Acquisition -1 Fodder Crops with Dealing between Excellence on Ability Acquisition -2 Fodder For crops Problems Solution Techniques And theoretically Fodder Crops with Dealing -3 ... practically The skills objectives of the course -B Training on implementing field plans related to -1 fodder crops Training on the necessary tools to implement field - 2 r fodder cropsplans fo Training on writing a field report on a fodder crop -3 . individually .. •	Subject Goals Scholarship
And learning education Strategies .9	
performance on for work requester capacity Development -1 The decision The appointment in And delivered Duties Solutions And find serious In a way the problem Analysis-2 Implementation when Expected Results Basis on she has Fieldly Technologies use on requester capacity Development-3 Fodder Crops Projects to implement in Modern And Dialogue on requester capacity Development-4 Fodder Crops on And investigation And search discussion And Fodder Crops to understand requester Acquisition -5 . And practically And practically theoretically with her deal To deal Necessary For experience requester acquisition -6 . Fodder Crops with For And service agricultural Requirements Knowledge -7 . Fodder crops or Obstacles on Perfect knowingly requester Supply -8 For crops proposed And solutions agricultural Problems . Fodder	The strategy

The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Fodder plants and their economic importance	to understand Crops basics And its Fodder importance Economic	5	1
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Fodder plants and their relationship to soil and water conservation	knowledge the relationship Fodder plants With maintenance And the soil water	5	2
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Cultivation of fodder crops	on Identify Dates And Agriculture operations the soil service And others Belonging that Crops to Fodder	5	3
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Feed mixtures	to understand mixtures Role Fodder And its advantages benefits And its	5	4
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Aldrees	acquisition skills production from Aldrees Fodder Crops	5	5
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Silage	acquisition skills production And Silage circumstances His production And its value Food	5	6
Share Hall inside tests+	Study Hall fields+ Agricultural	Cultivation of forage legume crops	knowledge Circumstances Environmental	5	7

Editorial			And her relationship With cultivation Crops Legumes And its Fodder Food value		
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	<i>Medicago sativa</i>	Its on Identify importance And Economic appointments And Cultivate it its types	5	8
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Egyptian clover <i>Trifolium alexandrinum</i>	knowledge Embroider it And its types And its And importance Cultivate knock And its it production	5	9
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	<i>medics Annul</i>	Its on Identify As importance Forage a crop And circumstances To Suitability produce it	5	10
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Cultivation of forage grasses	acquisition skills production Fodder Crops Poaceae	5	11
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	Winter grain crops	knowledge production Cereals Crops And As feed knowledge Its conditions production	5	12
Share Hall inside tests+ Editorial	Study Hall fields+ Agricultural	barley	on Identify crop production Alfi-Al barley	5	13
Share the inside Tests + hall Editorial	Study Hall fields+ Agricultural	Oats	knowledge production As a crop Oats And its Forage importance	5	14

			Economic		
--	--	--	-----------------	--	--

The decision evaluation .11					
Final theoretical exam Reports+	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests	
%40	%20	%5	%10	%25	
					Sources .12 Learning And teaching
Fodder Crops Khalida Dr .A, Kharbit behind One who praises Dr. a) (2017 Hashem Ibrahim					Books decided) Required methodology (Found that
Winter Forage Crop Harvest Time Impacts Regeneration of the AnnualWeeds Barley Grass, Annual Ryegrass and Wild Radish John W. Piltz , Stephen G. Morris 2 and Leslie A. Weston. _ Agronomy 2021, 11, 1700. https://doi.org/10.3390/agronomy11091700					the reviewer) Home (Sources
Intercropping Berseem Clover with Barley and Oat Cultivars forForage Article in Agronomy Journal · November 2004					And Books references Prevailing that recommend With it Magazines) ‘scientific (... Reports
https://www.fao.org/fileadmin/templates/agphome/documents/PGR/SoW2/thematicstudy_forage.pdf					Electronic references, websites

Course name: Mechanization of field crops .181	
Course Code .182	
OC1403MFC	
2024-year/2023 / semester First .183	
Description 2/4/2024 this Preparation date .184	
Availability is mandatory the audience shapes .185	
3.5 (total) Units number (total) Academic hours number .186	
name from more if) Academic The decision responsible name (Mentioned	
oday.h@uokerbala.edu.iq : Email M. M. Uday Hamed Taha : the name	
The decision Goals	
<p>:The article aims to</p> <ul style="list-style-type: none"> • Identify the types of field crop machines , methods of using them, and appropriate soils - Clarifying the basics and principles of engineering sciences and their applications in various agricultural fields - Discussing every type of and agricultural equipment machinery specific to the production of agricultural crops in terms of structure and function, starting from plowing the soil and preparing the seedbed, through the stages of serving the developing crop and the subsequent processes - timal use of through which the op . the machine is achieved 	Scholarship Subject Goals
And learning education Strategies .9	
<p>Make the student familiar with the basics of field crop mechanization because it is one of the sciences that is related to field crop management and field production and how to increase production at the .lowest costs</p>	The strategy

The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	Theoretical practical +	Introduction, the importance of tillage, the mechanical composition of the soil	BSC	5	the first
Exams	Theoretical practical +	Dump plows , their types and how they work	BSC	5	the second
Exams	Theoretical practical +	Calculating the force acting on the plows, choosing the appropriate tug for the .plow	BSC	5	the third
Exams	Theoretical practical +	Disc plow, use and types	BSC	5	the fourth
Exams	Theoretical practical +	First month exam	BSC	5	Fifth
Exams	Theoretical practical +	Vertical disc plow, its types and uses	BSC	5	VI
Exams	Theoretical practical +	Rotary plow, its types, and how to use it	BSC	5	Seventh
Exams	Theoretical practical +	Excavator plow, its types, parts and methods of use	BSC	5	VIII
Exams	Theoretical practical +	Subsoil plow, its importance and areas of use	BSC	5	Ninth
Exams	Theoretical practical +	Disc combs, their types, installation and features	BSC	5	The tenth
Exams	Theoretical	Toothed	BSC	5	eleventh

	practical +	combs, their importance, components, and disadvantages			
Exams	Theoretical practical +	Indexes, types, advantages and disadvantages	BSC	5	twelveth
Exams	Theoretical practical +	Maintenance, repair and maintenance of agricultural machinery	BSC	5	Thirteenth
Exams	Theoretical practical +	Second month exam	BSC	5	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%30	%20	%5	%15	%30

And teaching Learning Sources .12

Field crop mechanization equipment, written by Mr. Lotfi Hussein	) Required decided Books (Found that methodology
	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (... Reports scientific
	Electronic references, websites

Course name: Principles of field crops .187	
OO2410PFC :Course code .188	
2024-year/2023 / semester Second .189	
2024/6/4 Description this Preparation date .190	
Availability is mandatory the audience shapes .191	
= (total) Units number (total) Academic hours number .192 (3.5)(5)	
name from more if) Academic The decision responsible name (Mentioned	
: Email M. M. Haider, black guitar : the name haider.khatar@uokerbala.edu.iq	
The decision Goals	
<p>The student acquires the concept of field crop principles and how to deal with them theoretically, practically, and practically</p> <p>student acquires the The necessary experience to deal with field crops</p> <p>Knowledge of agricultural and service requirements for field crops</p> <p>Providing the student with a complete knowledge of agricultural obstacles or problems and the proposed solutions</p>	Scholarship Subject Goals
And learning education Strategies .9	
The course includes studying a group of field crop plants and identifying them, their most important plant families, their divisions, their environmental and nutritional needs,	The strategy

esses necessary for the success and the most important proc .of their cultivation					
The decision structure .10					
road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	Theoretical practical +	The origin and origin of field crops	BSC	11	the first
Exams	Theoretical practical +	The importance of field crops	BSC	11	the second
Exams	Theoretical practical +	The most important plant families for field crops	BSC	11	the third
Exams	Theoretical practical +	Field crop divisions	BSC	11	the fourth
Exams	Theoretical practical +	The relationship of environmental factors to the growth of field crops	BSC	11	Fifth
Exams	Theoretical practical +	Abiotic factors and their impact on field crop production	BSC	11	VI
Exams	Theoretical practical +	Soil service operations	BSC	11	Seventh
Exams	Theoretical practical +	Crop service operations	BSC	11	VIII
Exams	Theoretical practical +	The most important jungles that grow with field crops and methods of combating them	BSC	5	Ninth
Exams	Theoretical practical +	Agricultural courses	BSC	5	The tenth
Exams	Theoretical practical +	Types of fertilizers used in Iraq	BSC	5	eleventh
Exams	Theoretical practical +	The importance of field crops in	BSC	5	twelveth

		the national income of countries			
Exams	Theoretical practical +	Modern methods used to increase the area of field crops	BSC	5	Thirteenth
Exams	Theoretical practical +	Grain grading	BSC	5	fourteenth

The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%40	%20	%5	%10	%25

And teaching Learning Sources .12

Principles of field crop production, written by Dr. -Muhammad Hazal Kazem Al Baldawi and others. 2020	) Required decided Books (Found that methodology
	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (.... Reports scientific
	Electronic references, websites

Course description form

Course Name .1
Principles of animal production
Course code .2
00131 PAN
Semester/year .3
in 2024 The first is

structure Course - .10

Evaluation method	Teaching method	Name of the unit/topic	Required learning outcomes	hours	the week
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in laboratories to acquire skills and techniques	Economic importance of animal products	Principles of animal production	2 Theoretical 3 practical	First + second
=	=	Cows and buffalo	Principles of animal production	2 Theoretical 3 practical	Third + fourth
=	=	Reproduction in cows	Principles of animal production	2 Theoretical 3 practical	Fifth + sixth
=	=	Caring for calves	Principles of animal production	2 Theoretical 3 practical	Seventh + eighth
=	=	nutrition	Principles of animal production	2 Theoretical mm3 2	Tenth + eleventh
=	=	Milk production	Principles of animal production	2 Theoretical 3 practical	+ Twelfth thirteen
=	=	Sheep and goats	Principles of animal production	2 Theoretical 3 practical	The fourteenth + the fifth are difficult
		Poultry and exams			The weeks are interspersed with monthly

					exams
Course evaluation - - .11					
The grade is distributed out of 100 according to the tasks assigned to the student, such as .preparation, mandatory exams, oral and monthly exams, etc					
Education and teaching resources .12					
Book of principles of animal production			textbooks Required -- (methodology, if any)		
Book of principles of animal production			(Main references (sources ---		
books for free International and local magazines and			Recommended books and --- scientific journals,) references (...reports		
The Scientific Researcher website, Scopus websites , and the electronic reference			Electronic references, - -- ...Internet sites		

Course name: Oil and sugar crops .193
OO24200SC :Course code .194
2024-year/2023 / semester Second .195
Description 4/6/2024 this Preparation date .196
Availability is mandatory the audience shapes .197
= (total) Units number (total) Academic hours number .198 (3.5)(5)
name from more if) Academic The decision responsible name (Mentioned
: Email M. M. Haider, black guitar : the name haider.khatar@uokerbala.edu.iq
The decision Goals

<p>The student acquires the concept of oil and sugar crops and deals with them theoretically, practically, and practically</p> <p>The student acquires the experience necessary for the extraction processes of the most important existing oils</p> <p>Knowledge of agricultural and service requirements for oil and sugar crops</p> <p>Providing the student with a complete knowledge of tural obstacles or agricul problems and the proposed solutions</p> <p>Identify the properties of chemical compounds of oils and how to extract them</p>	Scholarship Subject Goals
--	---------------------------

And learning education Strategies .9

The course includes studying a group of oil and sugar crop identifying them, their most important plant families, plants their divisions, their environmental and nutritional needs, the most important methods used to extract oils, their most important chemical compositions, essential oils and their .uses	The strategy
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e decisionTh structure .10

road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
Exams	Theoretical practical +	Introduction to oil and sugar crops	BSC	11	the first
Exams	Theoretical practical +	The importance of oil and sugar crops	BSC	11	the second
Exams	Theoretical practical +	The most important plant families for oil and sugar crops	BSC	11	the third
Exams	Theoretical practical +	Vegetable oil industry	BSC	11	the fourth
Exams	Theoretical practical +	Tests and chemical reactions of	BSC	11	Fifth

		oils and fats			
Exams	Theoretical practical +	The sunflower plant, its importance, needs, soil and crop service processes	BSC	11	VI
Exams	Theoretical practical +	Castor and flax plants, their importance, needs, their soil service processes, and crop the	BSC	11	Seventh
Exams	Theoretical practical +	Crop service operations	BSC	11	VIII
Exams	Theoretical practical +	Soybean plant, its importance, needs, soil and crop service processes	BSC	5	Ninth
Exams	Theoretical practical +	Agricultural courses	BSC	5	The tenth
Exams	Theoretical practical +	safflower plant, its importance, needs, soil and crop service processes	BSC	5	eleventh
Exams	Theoretical practical +	Field pistachio plant, its importance, and needs, soil crop service processes	BSC	5	twelveth
Exams	Theoretical practical +	plant, Sesame its importance, needs, soil and crop service processes	BSC	5	Thirteenth
Exams	Theoretical practical +	Beet and sugarcane plants, their importance, needs, soil and crop service processes	BSC	5	fourteenth

The decision evaluation .11				
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc				
Final theoretical exam	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical semester tests
%40	%20	%5	%10	%25
		And teaching Learning Sources .12		
		) Required decided Books (Found that methodology		
		(Sources) Home the reviewer		
		that Prevailing And references Books Magazines) With it recommend (... Reports scientific		
		Electronic references, websites		

Course Name .199	
Soil fertility	
Course Code .200	
OC1402SFF	
Semester/year .201	
2024 -2023 / Second	
description was prepared Date this .202	
6/4/2024	
Available attendance forms .203	
Is mandatory	
(Number of study hours (total) Number of units (total .204	
is 3.5 hours and the number of units5 The total number of study hours is	
(than one name is mentioned Name of the course administrator (if more	
: Email Moussawi-Ahmed Najm Abdullah Al .Name: Prof. Dr	
dr.ahmed.abdallah@uokerbala.edu.iq	
Course objectives	
influencing factors Identify the •	Objectives of the study subject
In soil fertility and fertilizers •	
e direct and Knowing th •	

<p>of the indirect effects the in readiness of nutrients . soil Introducing the student to all • of fertilizers and types . methods of adding them</p>					
Teaching and learning strategies .9					
<p>Showing educational videos to the student -4 in the laboratory and conducting Working -5 experiments Illustrations such as PowerPoint -6 Explanation by the teacher and video recording of the -4 lecture</p>					The strategy
Course structure .10					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in laboratories to acquire skills and techniques	The concept of soil fertility and fertilizer science	Soil fertility	2 Theoretical practical 3	
=	=	The emergence and formation of soil science	Soil fertility	2 Theoretical practical 3	
=	=	Soil fertility and fertilizer properties	Soil fertility	2 Theoretical practical 3	
=	=	Nitrogen	Soil fertility	2 Theoretical practical 3	
=	=	Phosphorus	Soil fertility	2 Theoretical practical 3	
=	=	First test	Soil fertility	2 Theoretical practical 3	
=	=	Potassium	Soil fertility	2 Theoretical practical 3	
=	=	Calcium and magnesium	Soil fertility	2 Theoretical	

				practical 3	
=	=	Sulfur	Soil fertility	2 Theoretical practical 3	
=	=	Minor elements	Soil fertility	2 Theoretical practical 3	0
=	=	Fertility calendar	Soil fertility	2 Theoretical practical 3	1
=	=	Water use management	Soil fertility	2 Theoretical practical 3	2
=	=	Efficiency of fertilizer and water use	Soil fertility	2 Theoretical practical 3	3
=	=	Third test	Soil fertility	2 Theoretical practical 3	4

Course evaluation .11	
according to the tasks assigned to the 100 Distribution of the grade out of such as daily preparation, daily, oral, monthly, written exams, and student reports	
	Learning and teaching resources .12
Soil fertility and fertilizers The relationship of soil, water and plants	Required textbooks (methodology, if (any
Fertilizer pollutants Soil fertility basics	(sources) Main references
nothing	Mainstream recommended books 'and references (scientific journals (....Reports
nothing	Electronic references, websites

Course name: Theoretical fiber crops .205
OO2430FCr Course code .206
2024 - 2023 year / Semester .207

2023/1/12 Description this Preparation date .208					
weekly Available the audience shapes .209					
75 (total) Units number (total) Academic hours number .210 hours 3%					
name from more if) Academic The decision responsible name (Mentioned					
hawraa.abbas@uokerbala.edu.iq : Email Hawraa Ali Abbas : Name					
The decision Goals					
<p>The student's knowledge of the concept of fiber crops, their definition and distinction, studying the and the environment for fiber crops distribution of fiber crops at the level of terrain, continents, etc., identifying the most important problems and obstacles to the distribution and spread of fiber crops and their impact on increasing production, and finding the best methods and recommendations to increase r .productivity and its quality</p>			<p>Subject Goals Scholarship</p>		
And learning education Strategies .9					
<p>The student gains experience, skill, and the ability to deal with fiber crops and classify them. The student learns how to increase production for these to find the best ways crops, classify the problems of fiber crops, and find a special formula to get rid of them or legalize them. The student learns the most important distributions of fiber em, its crops and the appropriate environment for each of th advantages and disadvantages, and how to identify these. Crops, their environment and needs</p>					<p>The strategy</p>
The decision structure .10					
Evaluation road	road Learning	Unit name the topic or	Outputs Learning required	hour s	the week
Participation -	Using	Fiber	Gaining -	5	1

in the classroom - Oral and written tests - Providing scientific and applied activities	PowerPoint and educational videos while working in laboratories to acquire skills and techniques	Fiber :crops crops Obstacles to the cultivation and production of fiber crops, and the means to overcome them Fiber Classification Cotton Varieties grown in Iraq and some countries of the Arab world Falling and the causes of falling Suitable environment Flax Linen Hump Hemp	experience, skill, and ability to deal with plants Gaining the ability to deal fiber with crops The student learns how to find the best factors suitable for crop growth	5 5 5 5 5 5 5 5 5 5 5 5 5 5	2 3 4 5 6 7 8 9 10 11 12 13 14 15
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The decision evaluation .11

With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc

exam Final theoretical	Final practical test	Practical daily tests	Practical quarterly tests	Theoretical quarterly selections
%40	%20	%5	%10	%25

And teaching Learning Sources .12

Shaker lyad Talaat 1999 Fiber Crops

) Required decided Books
(Found that methodology

Ali Hikmat Abdel and Majeed Mohsen 1980 Fiber Crops

(Sources) Home the reviewer

	that Prevailing And references Books Magazines) With it recommend (... Reports 'scientific
	Electronic references, websites

: Course Name .211	
Field crop management	
Course Code .212	
OO1440FCM	
year / Semester .213	
First semester 2023/2024	
the description this Preparation date .214	
2024/22/4	
Available the audience shapes .215	
My presence	
(total) Units number (total) Academic hours number .216	
hours, 3.5 units 5	
name from more if) Academic The decision responsible name (Mentioned	
ali.nazem@uokerbala.edu.iq: Email Prof. Dr. Ali Nazim Farhoud : the name	
The decision Goals	
Teaching field crops students knowledge -1 . of field crop management	Subject Goals Scholarship
Educating field crops students to work in -2 institutions and ministries related to agricultural sciences	
scientific and academic Preparing -3 researchers in the field of field crop management of all types	
Increasing students' ability to work in the -4 private and governmental agricultural .sectors	
And learning education Strategies .9	
students with concepts in the Working to graduate -1 .field of field management in a good manner	The strategy
Working to graduate students familiar with sciences -2 related to field crop management, such as plant .physiology , irrigation, and puncturing	
ure of their Introducing students to the types and nat -3 growth, methods of propagation and reproduction, .and the characteristics of their growth and harvest	
Introducing students to the devices used in -4	

<p>.laboratory and field crop management Introducing students to the nature of dealing with -5 ed in agriculture in the field of crop seeds us .management Introducing the student to dealing with soil types -6 .that suffer from salinity or drought</p>					
<p>The decision structure .10</p>					
road Evaluation	road Learning	the or Unit name topic	Outputs Learning required	hou rs	the wee k
Daily paper exam	Lectures	Humans and food. Food production and population increase, productivity .factors	Understand the basic principles of food production	5	1
Daily paper exam	Lectures	Land service/tillage, its importance and depth, its relationship to the growth of different crops, its role in eliminating jungles, neutralizing the elements, increasing water conservation in the soil, smoothing, and the machines used	Learn to serve the land	5	2
Daily paper exam	Lectures	Field division: land leveling and its relationship to field division and the area of agricultural panels	Providing students with the ability to rk in the wo field	5	3
Daily paper exam	Lectures	Irrigation channels: irrigation systems, the nature of irrigation waterways, and irrigation water losses according to the method used and the method appropriate to the	Students' understanding of the work and arrangement of water	5	4

		nature of the land .and the crop			
Daily paper exam	Lecture s	Crop service: planting dates and their impact on calculating the thermal units needed for crop growth and light energy and their relationship to planting dates and temperature. The difference in the effect of planting dates for winter r crops and summe on changing the harvest date and .harvest quantity	Students' knowledge of rop servicec	5	5
Daily paper exam	Lecture s	Plant density and seed quantities according to the crop, the role of plant density in ht intercepting lig and increasing yields, the optimal densities for the main crops, the optimal planting distances for crops planted in lines, how to calculate plant densities and their relationship to the paper area .index	Students' understanding of plant yield and density calculations	5	6
Daily paper exam	Lecture s	the - Fertilization role of major, secondary and rare fertilizers in growth and increasing yield and the symptoms of element deficiency on the plant, the relationship of elements to metabolic	Monthly exam	5	7

		processes in the plant			
Daily paper exam	Lectures	seed - Seeds quality, seed quantities, plant densities and their .calculations	y of The abilit the student to know the seeds	5	8
Daily paper exam	Lectures	- Soil amendments using animal manure and green manure, adding gypsum and agricultural sulfur to repair saline and alkaline -saline soils, and their relationship to electrical conductivity, pH, and everything related to soil analysis .specifications	The ability for the student to know how to improve the soil	5	9
Daily paper exam	Lectures	the - Weed control most important weed killers common in major fine and - crops broad weed killers and meads Recommended in Iraq to combat jungles of major .crop plants	Ability to escombat jungl	5	10
Daily paper exam	Lectures	he t - Crop irrigation role of water in dissolving elements, absorption, and plant growth. The number of irrigations for the crop, determining the irrigation depth, and how to calculate it. Hydroponic injectors for major crops	The ability to irrigate the crop	5	11
Daily	eLectur	Methods and depth	Method of	5	12

paper exam	s	- of cultivation planting spread out in rows and terraces, planting in lines and its importance to the the - type of crop relationship to the nature of root growth in each .method	cultivation and facilitation of work by the student		
Daily paper exam	Lectures	Disease and insect the main - control insect diseases that affect field crops, how to prevent them before they appear, control them when they appear, and the recommended pesticides in Iraq	The ability to fight diseases	5	13
Daily paper exam	Lectures	Plant organs and their functions the plant cell and - – its organelles Root, stem , inheritance , and leaf area. Physiological maturity, harvest, how to harvest and the appropriate time for each crop. Storage of crops, types of stores, storage conditions, stores of seeds and grains, their specifications, storage conditions them such as in heat, humidity, and protective pesticides, methods of drying crops in the field and in the store, and expression of moisture in seeds	General Review	5	14

		before and during .storage			
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The decision evaluation .11	
- (Practical semester exams (15% - (Theoretical semester exams (30% Theoretical final - (Practical final exam (20% - (Daily practical exams (5% .(exam (30%	
	And teaching Learning Sources .12
undations for Scientific fo managing , producing and improving field crops. Written by -Prof. Dr. lyad Hussein Ali Al Muaini / Prof. Dr. Muhammad Awi Ghadeer	) Required decided Books (Found that methodology
Principles of field crops	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (.... Reports scientific
	Electronic references, websites

Course Name .217	
Managing my pastures	
Course Code .218	
OO2440PMa	
year / Semester .219	
(2024-Second semester (2023	
the description this Preparation date .220	
2024/2/1	
Available the audience shapes .221	
Daily attendance	
(total) Units number (total) Academic hours number .222	
About 45 hours	
name from more if) Academic The decision responsible name (Mentioned	
: Email : the name hind.a@uokerbala.edu.iq Hind Adnan Hussein	
The decision Goals	
Know the requirements for • the lesson	Scholarship Subject Goals

Providing the student with full knowledge of the obstacles or problems and the proposed solutions The student acquires the concept of natural pastures and deals with them practically and practically					
And learning education Strategies .9					
Managing the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of lesson without straying from the core of the topic, so that the material is flexible and understandable, and assigning the students to some group activities and duties					The strategy
The decision structure .10					
road Evaluation	road Learning	e th or Unit name topic	Outputs Learning required	hours	the week
Daily and monthly exams	lecture	Pasture management and types, pasture measurements and methods of collecting samples in vegetation	Pasture management	3	1
Daily and monthly exams	lecture	Sample size, shapes of experimental units, area, and evaluation of vegetation cover	Vegetation assessment	3	2
Daily and monthly exams	lecture	Methods for estimating plant density, frequency and abundance	Plant density	3	3
Monthly exams	lecture	Methods of measuring production and methods of estimating production	Production measurement	3	4
Daily and monthly	lecture	Monthly exam	Exam	3	5

exams					
Daily and monthly exams	lecture	Qualitative For evaluation vegetation cover from a pastoral point of view	Qualitative evaluation	3	6
Daily exams	lecture	Scientific trip	Scientific trip	3	7
Daily and monthly exams	lecture	Pastoral load and its estimation, exploitation of natural pastures, some concepts and related to pasture exploitation	Pastoral load	3	8
Daily and monthly exams	lecture	of Standard exploitation and estimation of the degree of exploitation of pastures	Exploitation standard	3	9
Daily and monthly exams	lecture	Livestock management in natural pasture animal ' conditions poisoning	Animal poisoning	3	10
Monthly exams	lecture	Monthly exam	Exam	3	11

The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
	) Required decided Books (Found that methodology
	(Sources) Home the reviewer
	that Prevailing And references Books Magazines) With it recommend (... Reports 'scientific
	Electronic references, websites

30	(total) Number of study hours .1
	Date this description was .2 prepared
Course objectives .3	
bachelor's degree in the theoretical and practical aspects in Granting the student a order to prepare a graduate of a distinguished level and a position in the practical arena	

outcomes and teaching, learning and evaluation methods Course .4
Cognitive objectives -A A/1: Enabling students to obtain knowledge and understanding of the intellectual . and applied framework in agricultural economics according to A/2: Enabling students to obtain knowledge and understanding standards scientific and economic students to modern techniques in agriculture through showing films and A/3 Introducing modern scientific and economic research A/4 Enabling students to gain knowledge of modern and advanced methods using modern technologies in conserving natural resources
decision skills of the The goals and - B Using the display screen in classrooms - B1 Enabling students to visit the library and the Internet - B2 Show illustrative pictures of various natural resources - B3 area Visit horticultural stations in the geographical -B4
Teaching and learning methods
Providing students with additional basics related to the outcomes of thinking and analysis - Forming a community group to discuss various agricultural topics - (how, when, and why 'Asking thinking questions during lectures, including (what - causal methods modern

Evaluation methods

Daily exams with discussion questions within the lecture
The degree of participation in questions related to the academic subject
Specific grades for economic assignments and reports

based goals-Emotional and value -C
Asking general questions during lessons -C1
Assigning students to reports on various economic topics -C2
Discussing and guiding students -C3
Enabling students to carry out all agricultural operations correctly -4 C

Teaching and learning methods

Providing students with additional basics related to the outcomes of thinking and analysis -
Forming a national group to discuss various agricultural and economic topics -
(what, how, when, and why) Asking thinking questions during lectures, including -
explanation in causal ways-Preparing students for homework that requires self

Evaluation methods

Daily exams with discussion questions within the lecture
subject The degree of participation in questions related to the academic
Specific grades for field assignments and reports

General and transferable skills (other skills related to employability and personal -D
.(development
Enabling students to use the curricula -D1
Enable students to pass work tests -D2
by international bodies organized Enable students to pass professional tests -D3
development after graduation-Enabling students to continue self -D4

Course structure .5

Evaluation method	Teaching method	Name of the unit/course or subject	Required learning	hours	the week
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			outcome s		
Exams	theoretical	the –aspects of economic life – General concepts economic problem	Bachelo r's	5 hours	the first
Exams	theoretical	–micro –Introduction to economic theory macro	Bachelo r's	5 hours	the second
Exams	theoretical	Theory of –Theory of Consumer Behavior Utility and Consumer Equilibrium	Bachelo r's	5 hours	the third
Exams	theoretical	Modern Theory of Consumer Equilibrium (Indifference Curves)	Bachelo r's	5 hours	the fourth
Exams	theoretical	economics/agricultural economics and General its importance	Bachelo r's	5 hours	Fifth
Exams	theoretical	agricultural systems –Types of agriculture	Bachelo r's	5 hours	VI
Exams	theoretical	The importance and role of the agricultural development sector in economic	Bachelo r's	5 hours	Seven h
Exams	theoretical	agricultural costs – Economic resources	Bachelo r's	5 hours	VIII
Exams	theoretical	stages of –production functions –Production – natural production Shawty output curves	Bachelo r's	5 hours	Ninth
Exams	theoretical	The law of diminishing returns and production elasticities	Bachelo r's	5 hours	The tenth
Exams	theoretical	Demand theory, factors affecting demand, and types of elasticities	Bachelo r's	5 hours	eleven h
Exams	theoretical	and factors affecting supply Supply theory	Bachelo r's	5 hours	twelve th
Exams	theoretical	Agricultural prices, agricultural marketing, agricultural financing and credit	Bachelo r's	5 hours	Thirte enth
Exams	theoretical	Farm business management and agricultural cooperation	Bachelo r's	5 hours	fourte enth
Exams	theoretical	General Review	Bachelo r's	5 hours	Fiftee th

Infrastructure .6

For each course Prescribed methodological books	books Required course ▪
Supporting sources for each course	(Main references (sources
Scientific journals in basic and veterinary specialties	Recommended books and references (scientific journals, reports)
Specialized websites	Electronic -1 references

Course development plan .7
new courses Adding -1
Developing courses that keep pace with local market demand -2

College of Agriculture - University of Karbala	Educational institution	1-
Field crops	center / University department	2-
(theoretical) Principles of gardening	code / name	3-
	Programs in which it is included	4-
My attendance is mandatory	Available attendance forms	5-
first semester / The second stage	year / Semester	6-
hours 5	(total) Number of study hours	7-
9/20/2023	Date of preparation of this description	8-

Course objectives	9-
Familiarity with horticultural sciences, their divisions, and methods of dividing plants according to conditions or the nature of the work -1 The propagation methods used and determining the best ones, as well as the plant propagation and the extent of their successparts used in pro -2 How to care for plants , especially indoor ones, including irrigation , fertilization, and other service operations -3 Identifying horticultural facilities and their departments -4 and its types within the plant canopy How to perform vaccination operations -5	
Learning outcomes, teaching, learning and assessment methods	10
Cognitive objectives .1 The student acquires knowledge and experience about plants, their sections and . classification -A1 . gain experience in plant classification and basic sciences will The student -A2 including watering, , The student knows how to deal with plants and care for them -A3 . fertilizing, and lighting solutions to it The student gains experience in identifying the problem and finding -A4 student gains experience in the process of plant propagation and carrying out it The -A5	
skill objectives of the course .2 Classify plants and determine which part is best for carrying out the propagation - B1 process optimal amount of water, light, and fertilizer through practice Determine the - B2 and experiments . The skill of selecting plants in garden design and coordination - B3 in the vaccination process and determining the best part to do it Skill -B4	
methods Teaching and learning Providing students with the basics and topics related to the knowledge and systems : described in . Garden landscaping methods and how to choose suitable plants -1 Dividing vegetables, fruits and ornamental plants -2 ng plant tissueMethods of pruning and shapi -3 Methods of planting seeds and determining the best time using appointment methods -4	

Evaluation methods

choice questions for academic subjects-Daily tests with multiple

Daily and oral testing -

the field and the plant canopy Scientific and practical activities inside-

Oral questions and answers -

Written reports and articles -

based goals-Emotional and value - C

Developing students' knowledge about horticultural plants - C1

**rom fruits and ornamental Developing the student's ability to distinguish vegetables f - C2
plants**

. Developing the student's ability to devise new methods in the agricultural field - C3

. Giving the student an opportunity to start his own project by preparing it - A4

Teaching and learning methods

ps to nurseries near the collegeConducting field tri .

**Giving the practical aspect to bring the student into contact with the learning environment -
and answer is a motivational method for students to learn Question**

Evaluation methods

questions that require scientific skills choice-Direct daily exams with multiple -

Daily exams with scientific and practical questions -

Receiving ideas from students and participating in the lesson-

Participation grades for competition questions for academic subjects -

homework Assigning grades for -

students to make scientific seminars and discuss them Assigning

course structure .11

evaluation method	an offer	introduction	Required learning outcomes	hours Theoretical + practical	the week
daily tests by asking questions about the subject of the study material to determine the extent of their understanding of the subject	an offer	Learn about the concept of horticulture, its branches , and the division of plants according to families and their function	-Al Muara qah	5	1
questions and answers	an offer	Identify the factors affecting the growth of horticultural crops: temperature, light, humidity, rain, wind, soil and .their conditions	Knowle dge	5	2
field experiments	an offer	Vegetable crops dividing, factors Environmental growing crops methods of and processes of preparing the land for agriculture	Knowle dge	5	3
daily questions and answers	field + Width	Transplanting and its benefits and the reasons for transplanting and dividing plants according to their tolerance to transplanting	Knowle dge	5	4

			operations after and service planting			
ily questions and answers	field + Width	Fruit, its division and types, establishing fruit orchards, choosing types and varieties of fruit , fruit tree cultivation systems, the distances over planted , the which trees are causes of fruit fall, and what are the solutions to address .it	Knowle dge	5	5	
estions and swer	an offer	Ornamental plants, their division and types, the most important problems that ornamental plants face, and prominent solutions the most to address them	Knowle dge	5	6	
ily questions and answers	an offer	Medicinal and aromatic plants , their types , methods of cultivation and classification according to the 'active substance	Knowle dge	5	7	
ily questions and answers	an offer	Nursery types, organic agriculture, picking , preserving and storing horticultural crops , preparing, packing and chemical components of the .fruits	Knowle dge	5	8	
ily questions and answers	an offer	Protected cultivation of vegetable crops, its	Knowle dge	5	9	

		advantages and disadvantages and some important factors inside greenhouses			
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Infrastructure -12

Principles of Horticulture, Faisal Rashid Nasser, and Principles of Horticulture, Karim Najjar, -Saleh Abdul and Saad Zaghloul Al methodological books

Required prescribed books -1

- international research - Methodical books electronic references, ornamental plants, Dr. Sami Karim, fallen fruits, Dulaa Abdel Razzaq

(sources) Main references -2

websites of - foreign sources - Methodical books websites of libraries - international universities and publishing houses

Recommended books and -1 scientific journals,) references (... reports

scientific sites such as - The Internet in general Google Schooler Research Kit , Scopus and Publishing Houses

Electronic references, Internet sites -2 ...

Course development plan -13

Giving specialists an opportunity to introduce modern technologies into the agricultural field -1

students and specialized staff with international courses in order to Supporting -2 develop the horticultural reality

Providing motivation to students by holding courses and scientific trips -3

Course name: Practical field crop diseases .1	
Course Code .2	
OC2403FCD	
year /2024 / Second semester .3	
is 5/4/2024 The date this description was prepared .4	
Lab / Attendance forms available Hall .5	
3.5 / hours 3 (total) Number of units (total) Number of study hours .6 units	
(if more than one name is mentioned) Name of the course administrator	
zainab.l@uokerbala.edu.iq : Zainab Latif Hameed Email .M : Name	
Course objectives	
Identify the most important plant -1 . diseases	Objectives of the study subject
Know how to diagnose plant disease -2 .	
. Learn how to combat plant disease -3	
Teaching and learning strategies . 9	
	The strategy

Teaching and learning strategies in the field crop diseases lesson can vary depending on the objective of the lesson and the needs of : Here are some strategies that can be used . the students

The lesson can begin with a theoretical : Theoretical lessons .1 explanation of the basic concepts of field crop diseases, such as the . types of diseases, their symptoms, and causes

Using interactive activities such as group : Interactive lessons .2 discussions or analyzing case studies of specific disease cases can . help students better understand the topic

Using presentations, videos, and : Presentations and multimedia .3 . d better embody concepts illustrations can help clarify an

Course structure . 10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Daily testing	Use illustrative means And live . models	General terms and concepts of . plant pathology	Understand the meaning of illness	3	the first
Requesting answers to some enriching questions		. Wheat diseases	The most important diseases that affect wheat . plants	3	the second

like that	. Barley diseases	The most important diseases that affect barley plants	3	the third
	. Corn diseases		3	
	. Rice diseases	The most important diseases that affect white and yellow corn	3	the fourth
	Sunflower diseases	The most important diseases that affect rice plants	3	Fifth
		The most important diseases that affect sunflower plants		VI

Course evaluation .11

Distribution of the grade out of 100 according to the tasks assigned to the

student, such as daily preparation, daily, oral, monthly, and written exams, .etc , reports	
	Learning and teaching resources .12
Field crop diseases	methodology, if any) Required textbooks (
The book on plant pathology by the scientist Akrios	(sources) Main references
plant disease , magazineCrop disease . magazine	Mainstream recommended books and Reports , scientific journals) references (....
. American Plant Pathology Society	websites , Electronic references

Beekeeping : Course name .1	
Course Code .2	
OC2403Bee	
year / Semester .3	
2023-2023 / Second semester	
Date this description was prepared .4	
Available attendance forms .5	
My presence	
(total) Number of units (total) Number of study hours .6	
units 3.5 , hours 5	
(if more than one name is mentioned) The name of the course administrator and email	
lina.q@uokerbala.edu.iq Lina Qassem Eidan . Dr . M	
Course objectives	
<ul style="list-style-type: none"> • Providing the student with the basic skills for raising bees using modern . methods • Learn about the most 	study subject Objectives of the

<p>important honey bee products and how to benefit from them</p> <p>Learn about the life of bees • and the most important mutations Morphological And physiological For members of the honey bee</p> <p>. sect</p> <p>Requirements for •</p> <p>. establishing apiaries</p> <p>Identify the most • important pastures and how to preserve and</p> <p>. develop them</p> <p>the most Identify • important honey bee diseases, diagnose them,</p> <p>. and how to combat them</p>					
<p>Teaching and learning strategies . 9</p>					
<p>. Gaining experience, skill, and ability to deal with bees -</p> <p>Gaining the ability to distinguish between methods of solving -</p> <p>. beekeeping problems</p> <p>. Dealing with beekeeping theoretically and practically -</p> <p>. Training on the basics of beekeeping using modern methods -</p> <p>. Training on the necessary tools for beekeeping –</p> <p>. Training in diagnosing bee diseases and pests -</p>					<p>The strategy</p>
<p>Course structure . 10</p>					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Daily exam	Lectures	The economic of importance beekeeping	Statement of the economic importance of beekeeping	5	1
Daily exam	Lectures	Types of honey bees and their breeds	Distinguish between honey bee types and breeds	5	2
Daily exam	Lectures	The external appearance of bees	Identify the external appearance of bees	5	3

Daily exam	Lectures	Internal appearance of bees	Knowledge of the functions of the internal organs of bees	5	4
Monthly exam					
Daily exam	Lectures	Work of beekeepers	Learn about the work of beekeepers	5	5
Daily exam	Lectures	The life of bee individuals	Understanding the life cycle of bees	5	6
Daily exam	Lectures	Establishing and managing apiaries	How to establish and manage apiaries	5	7
Daily exam	Lectures	Bee products	Learn about bee products	5	8
Monthly exam					
Daily exam	Lectures	Bee pests	Identify bee pests and how to combat them	5	9
Daily exam	Lectures	False mothers, expulsion, and theft	Identifying false mothers, expulsion and theft and how to get rid of them	5	11
Daily exam	Lectures	Honey production and preservation	How is honey produced and preserved	5	12

Course evaluation .11	
Daily - (%15) Practical semester exams - (%30) Theoretical semester exams Theoretical final exam - (%20) Practical final exam - (%5) practical exams .(%30)	
	Learning and teaching resources .12
Omari-Abdul Baqi Al / Beekeeping	methodology, if) Required textbooks (any
Encyclopedia of bees	(sources) Main references
Beekeeping is a science and a hobby	Mainstream recommended books and Reports (scientific journals) references (....
-----	references, websites Electronic

:Course Name	.223
mathematics	
Course Code	.224
OC1401Mat	
Year First Semester/2024 / Semester	.225
the description this Preparation date	.226
2024/1/9	
Available the audience shapes	.227
My presence	
(total) Units number (total) Academic hours number	.228
2 2	
name from more if) Academic The decision responsible name (Mentioned	
: Email Ahmed Jabbar AbbasM.D.	: the name
ahmed.jabbar@uokerbala.edu.iq	
The decision Goals	
Learn about matrices and •	Subject Goals

<p>mathematical operations on them</p> <p>Practice arranging data in matrices and processing it using the above operations</p> <p>multivariable linear equations using matrices</p> <p>Functions, their properties, diagrams and types</p> <p>eir propertiesComplex functions and th</p> <p>Continuity and goals</p> <p>Differentiation and its types</p>	Scholarship
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And learning education Strategies .9

<p>Presenting mathematical concepts to students and explaining them in detail on the blackboard by solving are also encouraged to derive applied examples. Students .some concepts through comparison and deduction</p>	The strategy
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The decision structure .10

road Evaluation	road Learning	or Unit name the topic	Outputs Learning required	hours	the week
and Weekly monthly assignments and exams	My presence	Matrices	Learn about the concept of matrices and their applications	2	1
and Weekly monthly assignments and exams	My presence	Types of arrays	Classify arrays according to their content	2	2
and Weekly monthly assignments and exams	My presence	arrays Types of	Classifying matrices according to their dimensions	2	3
and Weekly monthly assignments and exams	My presence	Operations on arrays	Add and subtract matrices	2	4
and Weekly monthly assignments and exams	My presence	Operations on arrays	Matrix multiplication	2	5
and Weekly monthly	My presence	Operations on arrays	How to divide two matrices	2	6

assignments and exams					
and Weekly monthly assignments and exams	My presence	Matrix applications	Solve a system of first order using equations matrices	2	7
and Weekly monthly assignments and exams	My presence	-Functions Introduction	Define a function and determine its domain and its corresponding domain	2	8
and Weekly monthly assignments exams and	My presence	Function properties	Osmosis, increase and decrease	2	9
and Weekly monthly assignments and exams	My presence	Drawing functions	How to graph a function using the table method	2	10
and Weekly monthly assignments exams and	My presence	Complex functions	Complex functions and how to determine their domain	2	11
and Weekly monthly assignments and exams	My presence	differentiation	Learn about the concept of purpose and continuity	2	12
and Weekly monthly assignments exams and	My presence	differentiation	The derivative of the function and its applications	2	13
and Weekly monthly assignments and exams	My presence	differentiation	Derivation rules	2	14
Assignments and exams	My presence	differentiation	Objectives	2	15
The decision evaluation .11					
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc					
			And teaching Learning Sources .12		
Calculus by Thomas			) Required decided Books (Found that methodology		
Calculus by Thomas			(Sources) Home the reviewer		
Online sources			Prevailing And references Books		

	Magazines) With it recommend that (... Reports scientific
Khan Academy	Electronic references, websites

Course Name .1	
Principles of theoretical gardening	
Course Code .2	
Semester/year .3	
2024-second phase / 2023 / First semester	
Date this description was prepared .4	
2023/20/9	
Available attendance forms .5	
My presence	
(Number of study hours (total) Number of units (total .6	
hours per week. Number of units: 3.5 5	
one name is Name of the course administrator (if more than mentioned) and email	
Mr. Dr . Suzan Muhammad Khudair suzan.mohammed@uokerbala.edu.iq	
Course objectives	
Familiarity with horticultural sciences, their divisions, and -1 nature methods of dividing plants according to conditions or the of the work	
The propagation methods used and determining the best ones, -2 as well as the plant parts used in propagation and the extent of their success	
How to care for plants , especially indoor ones, including irrigation , -3 service operations fertilization, and other	
Identifying horticultural facilities and their departments -4	
How to perform vaccination operations and its types within the -5 plant canopy	
Providing students with experience in them, and propagating plants, dividing caring for them, including irrigation and fertilization	Objectives of the study subject
Teaching and learning strategies .9	
Focus on agricultural aspects by linking the -1 practical and theoretical aspects Field visits: to some nurseries for the purpose of -2 distinguishing between medicinal , aromatic and ornamental plants and classifying plants .according to their shapes Using plant samples and drying them, as well as -3 enabling the student to distinguish between the	The strategy

<p>samples</p> <p>ideo clips and learning resources: providing v-E -3 various activities</p> <p>Active Learning: Group Discussions Urging -4 students into group discussions</p> <p>Continuous assessment: assignments, reports, -5 and tests to determine the extent of students' understanding and comprehension</p> <p>h all other sciences Linking horticulture wit -6</p>	
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Course structure .10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Daily and monthly exams	Lectures , discussions, reports and scientific films	Learn about the concept of horticulture, its branches, and the division of plants according to families and their function	-Al Muaraqah	5	1
Daily and monthly exams	Lectures , discussions, reports and scientific films	Identify the factors affecting plant growth: temperature, light, humidity, and wind	Knowledge	5	2
Daily and monthly exams	Lectures , discussions, reports and scientific films	Vegetable crops, their division and methods of cultivation	Knowledge	5	3
Daily and monthly exams	Lectures , discussions, reports and scientific films	Land preparation operations for agriculture	Knowledge	5	4
Daily and monthly exams	Lectures , discussions, reports and scientific films	Soil types and characteristics of soil suitable for agriculture	Knowledge	5	5

Daily and monthly exams	Lectures , discussions, reports and scientific films	Transplanting, the benefits of transplanting, and dividing plants according to their tolerance to transplanting	Knowledge	5	6
Daily and monthly exams	‘ Lectures discussions, reports and scientific films	Service operations after planting	Knowledge	5	7
Daily and monthly exams	Lectures , discussions, reports and scientific films	Fruit types, division, and creation of orchids	Knowledge	5	8
Daily and monthly exams	Lectures , discussions, reports and scientific films	Fruit tree cultivation systems and the distances over which fruit trees are planted	Knowledge	5	9
Daily and monthly exams	Lectures , discussions scientific ‘ reports and films	The causes of fruit falling and what are the solutions to treat it	Knowledge	5	10
Daily and monthly exams	Lectures , discussions, reports and scientific films	Ornamental plants and their division And its types, nurseries and its types	Knowledge	5	11
Daily and monthly exams	Lectures , discussions, reports and scientific films	Problems facing ornamental the plants and most prominent solutions to address them	Knowledge	5	12
Daily and monthly exams	Lectures , discussions scientific ‘ reports and films	Medicinal and aromatic plants, their types, methods of	Knowledge	5	13

		cultivation and classification			
Daily and monthly exams	Lectures , discussions scientific reports and films	agriculture: picking, preserving and storing horticultural crops, processing, packaging and chemical components	Knowledge	5	14
Daily and monthly exams	Lectures , discussions, reports and scientific films	Protected cultivation of vegetable crops has its advantages and disadvantages and some important factors inside greenhouses	Knowledge	5	15
			a		

Course evaluation .11

The theoretical semester exams are 30%, the practical semester exams are 15%, the daily exams are 5%, the practical final exam is 20%, and the .theoretical final exam is 30%

Learning and teaching resources .12	
Principles of gardening, Faisal Rashid, and principles of horticulture, Karim Saleh Abdul Najjar-and Saad Zaghloul Al	Required textbooks (methodology, if (any
Ornamental plants, Dr. Sami Najjar-Karim and Nisreen Al Deciduous fruits, Dr. Alaa Abdul others Jumaili and-Razzaq Al	(Main references (sources
Iraqi academic scientific journals	Mainstream recommended books and references (scientific journals, (....Reports
Websites concerned with plant sciences	Electronic references, websites

Course name: Theoretical organic chemistry .7	
ORFA2 :Course code .8	
2024 -year: 2023 / Semester .9	
2023-12-Description: 9 this Preparation date .10	
In attendance -Available: the audience shapes .11	
(3.5) Units number (5) Study hours number .12	
name from more if) Academic The decision responsible name -: (Mentioned	
ali.abid@uokerbala.edu.iq : Email M.M Ali Abdul Rahim Kazem : the name	
The decision Goals	
<p>The student learns about the • most important branches of chemistry, which is the branch of organic chemistry, as well knowing the main as classification of its organic compounds and studying .them</p> <p>The student will know how to • name different organic compounds</p> <p>The student gets to know the • most important physical and chemical properties and methods for preparing organic dscompoun</p> <p>The student gets to know the • saturated organic compounds , their physical and chemical properties, and methods of preparing them</p> <p>The student will be familiar • with the unsaturated organic compounds, their physical and chemical properties, and . preparing them methods of</p> <p>The student will be familiar • with aromatic organic compounds , their physical and chemical properties, and</p>	<p>Scholarship Subject Goals</p>

methods of preparing them The student will be familiar • with the most important paths of chemical reactions for ch as organic compounds, su substitution and deletion					
And learning education Strategies .9					
					The strategy
The decision structure .10					
road Evaluation	road Learning	name or Unit the topic	Learning Outputs required	hours	the week
Oral evaluation and editing during the lecture through questions and answers	My presence Using the B method of discussion and cooperative learning	organic chemistry	Identify and classify chemistry organic and the most important bonds between molecules		1
Oral evaluation and editing during the lecture through questions and answers	My presence Using the method of discussion and cooperative learning	organic chemistry	Classification and organic naming of compounds		2
Oral evaluation and editing during the lecture through questions and answers	My presence	organic rychemist	Linear and cyclic alkanes and their substituted groups		3
Oral evaluation and editing during the	Using the method of discussion and	organic chemistry	Unsaturated organic compounds: linear and cyclic alkenes		4

lecture through questions and answers	cooperative learning				
Oral evaluation and editing during the lecture through questions and answers	-	organic chemistry	First month exam		5
Oral evaluation and editing during the lecture through questions and answers	Using the method of discussion and cooperative learning	organic chemistry	Unsaturated organic compounds alkynes		6
Oral evaluation and editing during the lecture through questions and answers	My presence Using the B discussion method	organic chemistry	Aromatic hydrocarbons		7
Oral evaluation and editing during the lecture through questions and answers	Using the method of discussion and cooperative learning	organic chemistry	Reaction pathways/substitution reactions and deletion reactions		8
Oral evaluation and editing during the lecture through questions and answers	My presence Using the B discussion method		Halides		9

Oral evaluation and editing during the lecture through questions and answers	Using the method of discussion and cooperative learning		Alcohols		10
Oral evaluation and editing during the lecture through questions and answers	My presence Using the B discussion method		Ethers		11
Oral evaluation and editing during the lecture through questions and answers	Using the method of discussion and cooperative learning		Aldehydes and ketones		12
Oral evaluation and editing during the lecture through questions and answers	My presence		Carboxylic acids		13
Oral evaluation and editing during the lecture through questions and answers	Using the method of discussion and cooperative learning		esters And amides A		14
Oral evaluation and editing during the lecture	-		Monthly exam		15

through questions and answers					
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The decision evaluation .11	
With it Assigned mission according to on 100 from Class distribution Monthly, And oral Daily And exams Daily Preparation like requester editorial, reports, etc	
	And teaching Learning Sources .12
Foundations of organic chemistry Fattahi-Youssef Ali Al .Dr	) Required decided Books (Found that methodology
Solomons ' Organic Chemistry Global Edition 2017	(Sources) Home the reviewer
Journal ACS Organic and -1 Inorganic Au Organic Chemistry In Its -2 Applications To Agriculture And Physiology, Ed. By L. Playfair	that Prevailing And references Books Magazines) With it recommend (... Reports 'scientific
Google scholar, Research get, ACS	Electronic references, websites

Course Name .1
Flat space
Course Code .2
SURV1
year / Semester .3
2023-2023 / First semester
prepared Date this description was .4

Available attendance forms .5					
My presence					
(total) Number of units (total) Number of study hours .6					
units 3.5					
(if more than one name is mentioned) Name of the course administrator					
RABAB.H@uokerbala.edu.iq Rabab Hadi Abboud Email .M : Name					
Course objectives					
Training the student on the use of • various devices used in field survey work The student's ability to evaluate the • most important processes associated . with making measurements Teaching the student how to obtain the • basic information and data necessary . to prepare and draw maps			Objectives of the study subject		
Teaching and learning strategies . 9					
Theoretical lectures1 - Practical lectures -2 Field training -3				The strategy	
Course structure . 10					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week

Daily exam	+ Practical theoretical	Definition of space and its divisions	Bachelor's	hours 4	the first
Daily exam	+ Practical theoretical	Measurement units	Bachelor's	hours 4	the second
Daily exam	+ Practical theoretical	Drawing scale	Bachelor's	hours 4	the third
Daily exam	+ Practical theoretical	Measuring horizontal distances	Bachelor's	hours 4	the fourth
Daily exam	+ Practical theoretical	Measurement errors	Bachelor's	hours 4	Fifth
Daily exam	+ Practical theoretical	Erecting and knocking down columns	Bachelor's	hours 4	VI
Daily exam	+ Practical theoretical	Obstacles to measurement	Bachelor's	hours 4	Seventh
Daily exam	+ Practical theoretical	Calculating the areas of regular shapes	Bachelor's	hours 4	VIII
Daily exam	+ Practical theoretical	Division of land areas	Bachelor's	hours 4	Ninth
Daily exam	+ Practical theoretical	Leveling and types of devices used	Bachelor's	hours 4	The tenth
Daily exam	+ Practical theoretical	Methods of calculating levels	Bachelor's	hours 4	eleventh
Daily exam	+ Practical theoretical	Sequential settlement	Bachelor's	hours 4	twelfth
Daily exam	+ Practical theoretical	Longitudinal and cross sections	Bachelor's	hours 4	Thirteenth
Daily exam	+ Practical theoretical	Grid budget and contour lines	Bachelor's	hours 4	fourteenth

		Monthly exam		5	15

Course evaluation .11	
Daily - (%15) Practical semester exams - (%30) Theoretical semester exams Theoretical final exam - (%20) Practical final exam - (%5) practical exams .(%30)	
	Learning and teaching resources .12
Methodological books prescribed for each course	methodology, if) Required textbooks (any
Abbas .Dr / Surveying Engineering Zidan Khalaf	(sources) Main references
Khalisi-Dr. Fawzi Al / Survey book	Mainstream recommended books and Reports , scientific journals) references (...
All websites related to surveying	websites , Electronic references

Course Name .13
manufacturing Theoretical food
Course Code .14
OC1402PFI
Semester/year .15
2024 -2023 / Second
Date this description was prepared .16
2024/23/4
Available attendance forms .17
Is mandatory

(Number of study hours (total) Number of units (total .18					
is 3.5 hours and the number of units5 The total number of study hours is					
(Name of the course administrator (if more than one name is mentioned					
hayfaa.a@uokerbala.edu.iq : Email Dr. Haifa Ali Awad .Name: A					
Course objectives					
all food components Identify • Know the nutritional • importance of food ingredients Knowledge of food • preservation methods Know the causes of food • contamination			subject Objectives of the study		
Teaching and learning strategies .9					
student Showing educational videos to the -7 Working in the laboratory and conducting -8 experiments Illustrations such as PowerPoint -9 Explanation by the teacher and video recording of the -4 lecture				The strategy	
Course structure .10					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Questions for discussion Oral exams Reports	Using PowerPoint and educational videos while working in laboratories to acquire skills and techniques	A historical overview of the emergence of food industry science	Food processing science	2 Theoretical practical 3	
=	=	Carbohydrates , their types, types, and nutritional importance	Food ingredients	2 Theoretical practical 3	
=	=	Proteins, their types, sections, and nutritional importance	Food ingredients	2 Theoretical practical 3	
=	=	Fats, their composition, types, presence in food, and	Food ingredients	2 Theoretical practical 3	

		nutritional importance			
=	=	Water, its presence, and its physiological importance And biological	Food ingredients	2 Theoretical practical 3	
=	=	First test	Food ingredients	2 Theoretical practical 3	
=	=	Organic acids, vitamins, colourants	Food ingredients	2 Theoretical practical 3	
=	=	Enzymes, hormones	Food ingredients	2 Theoretical practical 3	
=	=	Meat, its types, nutritional importance, and chemical composition	of food Types	2 Theoretical practical 3	
=	=	Its chemical composition, nutritional importance, and uses	eggs	2 Theoretical practical 3	0
=	=	Second month test	Second test	2 Theoretical practical 3	1
=	=	Extraction , refining and purification	Oils and fats	2 Theoretical practical 3	2
=	=	Food preservation methods	Food preservation	2 Theoretical practical 3	3
=	=	Types of bacteria that infect food	Food spoilage and contamination	2 Theoretical practical 3	4

Course evaluation .11

according to the tasks assigned to the 100 Distribution of the grade out of student, such as daily preparation, daily, oral, monthly, written exams, and .reports

	Learning and teaching resources .12
Food industry principles book	methodology, if) Required textbooks (any

Food safety book	(Main references (sources
nothing	Mainstream recommended books ,and references (scientific journals (....Reports
nothing	Electronic references, websites

Course Name .1	
Arabic	
Course Code .2	
UOP213	
year / Semester .3	
First 2023	
the description this Preparation date .4	
Available the audience shapes .5	
My presence	
(total) Units number (total) Academic hours number .6	
34	
And email (Mentioned name from more if) Academic The decision responsible name	
shama.a@s.uokerbala.edu.iq	millimeter . Shaima Abdel Kazez
The decision Goals	
Course objectives .the Arabic language Developing a spirit of pride in -1 .Developing the student's linguistic skills -2	Subject Goals Scholarship

.Raising the professional and research level of students -3 Developing the grammatical and literary abilities of university -4 .students	
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And learning education Strategies .9	
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.Lecture, use of the blackboard, and presentation - .Demonstrations using diagrams and pictures - .Interactive discussion - .self education - .Organizing lectures prepared by students -	The strategy
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Evaluation method	Teaching method	the unit/topic Name of	Required learning outcomes	hours	the week
Exams	theoretical	<p>The importance of the Arabic language</p> <p>Why do we study the Arabic language and what is its importance? Why is the Arabic language called the language of the Qur'an? What are the Arabic language other names for the</p>	BSC	2	1
Exams	theoretical	<p>Interpretation and memorization of twenty verses from Surat Yusuf, while examining the words, their connotations, and meanings, and highlighting the rhetorical and educational aspects they contain</p>	BSC	2	2
Exams	theoretical	<p>Grammar rules (speech and what it consists of</p> <p>What's the talk? What is the difference between speech, speech and word? What are the parts of the word? What are the signs of nouns, verbs, letters and their divisions</p>	BSC	2	3
Exams	theoretical	<p>The verbal sentence and types of verbs in terms of immanence, transgression, correctness, and impairment</p>	BSC	2	4
Exams	theoretical	<p>Nominal sentence What is the nominal sentence? What is the definition of subject and predicate? beginner? What What are the types of are the types of news</p>	BSC	2	5

Exams	theoretical	Abrogators of the nominal sentence (abrogating verbs)	BSC	2	6
Exams	theoretical	Letters similar to the verb, their meanings, and parsing examples of them	BSC	2	7
Exams	theoretical	month exam First	BSC	2	8
Exams	theoretical	Objects in the Arabic language (object, absolute object, direct object)	BSC	2	9
Exams	theoretical	Numbers, their writing rules, and their parsing	BSC	2	10
Exams	theoretical	The beginnings of :Arabic Literature prose and its types, and memorizing selections from it Arabic poetry: The eras of Arabic poetry and its artistic and thematic features The art of the article) while) memorizing selected models	BSC	2	11
Exams	theoretical	topics, ,Maarri (his life–Ala Al–Abu Al and literary works) with memorizing verses from the poem (All of Life is (Tired	BSC	2	12
Exams	theoretical	What is the life of the poet Abu Firas Hamdani? Reading the poem: (The –Al Screaming Dove) with precise Analyze and clarify the .movements Literary text: Poet: . poem's verses Hamdani–Abu Firas Al	BSC	2	13
Exams	theoretical	Rules for writing ta' and hamza in the	BSC	2	14

.Arabic language					
Exams	theoretical	The difference between dha and dha What do we mean by the phenomenon of difference between dha and dha? Why is the Arabic language called the language of Dhad? What are the differences ڤ`dād and dābetween	BSC	2	15
Exams	theoretical	Punctuation marks in the Arabic roll	BSC	2	16
Exams	theoretical	exam Second month	BSC	2	17

The decision evaluation .11

- (assignments (5% -activities (5%) -attendance (5%) - (Theoretical semester exams (35%
.(final theoretical exam (50%

And teaching Learning Sources .12

methodology) Required decided Books
(Found that

(Sources) Home the reviewer

The Holy Quran-
Explanation of Ibn Aqeel-
. Wajeez in the Arabic language–Al-
.Collection of Arabic lessons –
Arabic language rules, grammar and easy -
.morphology
. Spelling rules-

Scientific journals in the Arabic language
.specializations

that Prevailing And references Books
Magazines) With it recommend
(... Reports ‘scientific

The many websites concerned with the Arabic –
.archlanguage, including YouTube and scientific rese

Electronic references, websites

1. Course name	
Democracy and human rights	
2. Course code	
U211	
3. semester/year	
2023-2023 first semester	
4. Study title/ description/ core proposal	
20/4/2024	
5. attendance forms available	
in person	
6. Number of study hours (total) Number of units (total)	
2 hours per week, one unit	
Name of the course administrator (if more than one name is mentioned)	
Email: kudir.yassen@uokerbala.edu.iq	Name: Prof. Dr. Khudair Yassin Al-Gharani
Course objectives	
<ul style="list-style-type: none"> Creating a generation of students capable of understanding and properly applying this vocabulary. Students gain experience, skills, and the ability to Data handling and analysis Create a base of information capable of dealing According to the data and principles of rights and the foundations of the democratic system Provide a huge amount of information and a student base. A carrier of knowledge capable of making decisions And effective communication with the community. 	Objectives of the study subject
Teaching and learning strategies	
<ul style="list-style-type: none"> Active learning strategies By providing examples for each word of the approved curriculum and leaving the space to the students For critical thinking, creative thinking, research and exploration in the academic setting society and comparing them to the current reality. Using real-life examples and case studies of democratic systems and their foundations And the existing system of rights, freedoms and international law and compare them to clarify Historical development of subject vocabulary. Brainstorming strategies and focus on putting the mind of the student learner in A state of readiness and anticipation to generate the largest number of spontaneous ideas about The word is the subject of the lesson and identifies the problem and the violence that occurred with the aim of solving it, after Sit through these ideas and choose the best among them. Electronic learning resources: Providing electronic learning resources, such as video clips And reports issued by United Nations human rights organizations and the organization Democracy International Group discussions by giving and encouraging students to discuss concepts introducing each term in the article and putting them back together. Continuous evaluation 	The strategy

Assignments and tests evaluate students' understanding of concepts and content of the material through Assignments and tests: Focusing on the relationship between human rights and a stable democratic system as an exciting, interconnected dialectic that exists together.					
10. Course structure:					
Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Daily paper exam	Lectures	Introduction and definition	Understanding the basic principles, using the way for defining concepts	2	1
Directed questions for each student	Lectures	Principles of human rights and democracy	Identify the most important basic principles in human rights vocabulary and why human rights and democracy	2	2
		Human rights goals	Identifying values, with the ability to understand the relationship between elements and values and understanding the subject	2	3
		The relationship between rights and the importance of studying human rights and some human rights elements Modern phenomenon of progress Informatics - 1 phenomenon Globalization and rights Human	Introducing the nature of rights elements	2	4
		Learning interests and... Relevance and the idea of rights Human/4 Theoretical analysis and... On human rights	Students' knowledge of these vocabulary	2	5
Daily paper exam		Students' understanding of the principles in the international Bill of Rights and the international laws governing human rights Human 1 - Universal Declaration Humanity and democracy for human rights		2	6
		city exam	Assessing...	2	7
		on students' understanding of principles in declarations, other international laws governing human rights, democracy, and economic rights, the social and cultural rights elements According to the charters and Global Ads -1- Civil Rights -2-3	charters, international laws governing	2	8
Self-questionnaire and answers from students		The second part Democracy definition And its types	General historical overview Introduction and definition	2	9

Specify the name		Democracy in the ancient era Direct democracy Types of democracies Semi-direct democracy, representative, consensual and social democracy			
Oral questions to be answered by students by specifying their name	=====	Means of democratic transfer of power: General election and nominal election. Democratic government. The difference between the government and the state. Means of transfer of power	Providing students with the scientific ability to understand the subject individually, step by step	2	10
=====	=====	Election and voting systems: direct election, indirect election/individual voting, and list voting system	=====	2	11
=====	=====	One of the manifestations of democratic systems is political parties, their definition, types, and the relationship between political parties. Human rights and democratic principles	=====	2	12
=====	=====	Advantages and disadvantages of Democratic systems Means of influence Order and decision -1 Democrat pressure group 2 Corruption		2	13
=====	=====	General Review	General Review	2	14
	=====	city exam		2	15

11. Course evaluation	
Semester theoretical tests (40%) - daily oral and paper tests and questions (10%) Theoretical final (50%)	
12. Learning and teaching resources	
Introduction book to the study of democracy and public freedoms Prof. Dr. Khudair Yassin, Baghdad, Al-Masaka Printing, 2022	Required textbooks (methodology, if any)

<p>French Constitution Declaration of Human Rights Almond Publisher French Department of Communication and Information, Ministry of Foreign Affairs</p> <p>sciences. CRC press.6 French p</p>	<p>Main references (sources)</p>
<p>United Nations Charter 1945 2 Universal Declaration of Human Rights 1945 3- The International Covenant on Human Rights 1966 4- The European Charter of Human Rights 1953 5 Charter of the International Criminal Court - Rome 1998 7 Human Rights and Elections Booklet issued by the Centre Human Rights - United Nations 1994 New York 1155-199494 Vizhnev</p> <p>Human Rights, article -9 -8 published in-Http://www.iep.utm/h harbor.htm</p> <p>Alfred Sauvy, L'opinion Publique -9 Universities from FRANCE, France, 1958 p99</p> <p>Aristotle-Politics-Editions -10 Gonthier, Paris, 1964, p178</p> <p>talebawad@muwatin.org-</p>	<p>Mainstream recommended reference books and journals Scientific, reports....)</p>
<p>talebawad@muwatin.org-</p>	<p>Electronic references, websites</p>

Course Name .19	
Seeds technology	
Course Code .20	
OO2430STe	
year / Semester .21	
Second semester 2023	
Date this description was prepared .22	
2023/23/6	
Available attendance forms .23	
Mandatory official working hours	
3.5 : (total) Number of units 60 : (total) Number of study hours .24	
Number of units 3.5 60	
(if more than one name is mentioned) Name of the course administrator	
razzaq.ateha@uokerbala.edu.iq : Prof. Dr. Razzaq Lafta, give him the email : the name	
Course objectives	
<p>Students acquire the concepts of • to deal with it seed technology theoretically, applied and practically</p> <p>Students acquire scientific and • laboratory foundations in how to seed prepare and analyze data on technology</p> <p>Providing students with • information about the problems and how to seeds suffer from that deal with each problem of each of seed type</p> <p>The student gains experience in • laboratory tests choosing</p>	Scholarship Subject Goals
Education strategies .9	
<p>goal cognitive is no There</p> <p>Gaining experience, skill, and the ability to deal with ❖ . the seeds suffer from and analyze the problem that types of seeds Dealing with various ❖ laboratory tests Understanding and applying. ❖ Marathi objectives of the course Except the through field Training to solve the problem ❖ tests</p> <p>to write a final report, individually or Training ❖ . together, to study a problem for demonstration experiments Conducting ❖ . example for seed grading the for and devices Identifying the equipment ❖</p>	The strategy

<p>process inspection</p> <p>Teaching and learning methods</p> <p>Continuous testing of the steps for implementing the ❖</p> <ul style="list-style-type: none"> . its practical form certification program in seed . in the classroom activities Exercises and ❖ <p>to related Directing students to some electronic sites ❖</p> <ul style="list-style-type: none"> . ogytechnol seed <p>screens in the the electronic A demonstration through ❖</p> <ul style="list-style-type: none"> . classroom <p>the inspection steps Field visits to clarify some of ❖</p> <ul style="list-style-type: none"> . carried out <p>Evaluation methods</p> <ul style="list-style-type: none"> . Participation in the classroom ❖ . Oral and written tests ❖ . activities Providing scientific and applied ❖ . tests that are conducted practically are no There ❖ 	
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Course structure .10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Written and oral	Theoretical and laboratory	and Introduction of seed concept technology	Theoretical and practical concepts	5	the first
Written and oral	Theoretical and laboratory	Screening tests	Theoretical and practical concepts	5	the second
Written and oral	Theoretical and laboratory	of flowers Types	Theoretical and practical concepts	5	the third
Written and oral	Theoretical and laboratory	Seeds and study their anatomy	Theoretical and practical concepts	5	the fourth
Written and oral	Theoretical and laboratory	Plant examination, cold examination, vigor seed examination	Theoretical and practical concepts	5	Fifth
Written and oral	Theoretical and laboratory	Growth regulators and their role in seed activation	Theoretical and practical concepts	5	VI
Written and oral	Theoretical and laboratory	exam monthly A	Theoretical and practical concepts	5	Seventh

Written and oral	Theoretical and laboratory	Seed sorting programme	Theoretical and practical concepts	5	VIII
Written and oral	Theoretical and laboratory	Seed grading	Theoretical and practical concepts	5	Ninth
Written and oral	Theoretical and laboratory	Drying and certifying the seeds	Theoretical and practical concepts	5	The tenth
Written and oral	Theoretical and laboratory	Field inspection	Theoretical and practical concepts	5	eleventh
Written and oral	Theoretical and laboratory	Production of certified seeds	Theoretical and practical concepts	5	twelveth
Written and oral	Theoretical and laboratory	Seed treatments after harvest	Theoretical and practical concepts	5	Thirteenth
Written and oral	Theoretical and laboratory	General Review	Theoretical and practical concepts	5	fourteenth
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Fifteenth

Course evaluation .11	
according to the tasks assigned to the 100 Distribution of the grade out of student, such as daily preparation, daily, oral, monthly, and written exams, .reports, etc	
	Learning and .12 teaching resources
. Radi .H. A .Study No .Zubaidi, Ahmed Haider. 1990-AI . College of Agriculture- University of Baghdad	Required textbooks methodology, if) (any
	) Main references (sources
Janabi, Hadi Yasser, 2016. Applied land reform. - AI Higher Education and Scientific Research. of Ministry . University Qasim Green-AI	Mainstream recommended books and references scientific journals,) (... reports
https://www.mewa.gov.sa/ar/Ministry/Agencies/Agencyland/ Page	Electronic references, websites

Course Name .25	
regulators Growth	
Course Code .26	
OO2440PGR	
year / Semester .27	
First semester 2023	
Date this description was prepared .28	
2023/23/6	
Available attendance forms .29	
Mandatory official working hours	
3.5 : (total) Number of units 60 : (total) Number of study hours .30	
Number of units 3.5 60	
(if more than one name is mentioned) Name of the course administrator	
razzaq.ateha@uokerbala.edu.iq : Prof. Dr. Razzaq Lafta, give him an email : the name	
Course objectives	
<p>Students acquire the concepts of • and deal with it seed technology theoretically, applied and practically</p> <p>Students acquire scientific and • laboratory foundations in how to use growth regulators</p> <p>Providing students with information • ts plan about the problems that suffer from and the role of systems in treating them</p> <p>The student gains experience in • and using organizations selecting</p>	Scholarship Subject Goals
Teaching and learning strategies .9	
<p>cognitive goal is no There in using Gain experience, skill, and ability ❖ . organizations types of organizations . Inhibitors Dealing with various ❖ application program Understanding and applying an. ❖ .for the role of organizations in the field Marathi objectives of the course Except the field Training to solve the problem of ❖ . inationsexam to write a final report, individually or Training ❖ . together, to study a problem</p>	The strategy

<p>illustrative experiments on the Conducting ❖ . example for ' seed vitality problem, such as for the and devices Identifying the equipment ❖ .organizations inspecting process of Teaching and learning methods of the steps for implementing the growth testing ❖ . program and its practical form organizations . in the classroom activities Exercises and ❖ to related sites Directing students to some electronic ❖ hormones plant screens in the the electronic A demonstration through ❖ . classroom application projects for Field visits to clarify some ❖ .growth organizations Evaluation methods . Participation in the classroom ❖ . Oral and written tests ❖ . activities Providing scientific and applied ❖ . tests that are conducted practically are no There ❖</p>	
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Course structure .10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Written and oral	Theoretical and laboratory	and Introduction plant concept of growth regulators	Theoretical practical and concepts	5	the first
Written and oral	Theoretical and torylabora	Steps to implement a to program prepare solutions for each regulator	Theoretical and practical concepts	5	the second
Written and oral	Theoretical and laboratory	growth Types of regulators	Theoretical and practical concepts	5	the third
Written and oral	Theoretical and laboratory	The role of growth regulators in seed germination	Theoretical and practical concepts	5	the fourth
Written and oral	Theoretical and laboratory	Mechanism of action of growth regulators	Theoretical and practical concepts	5	Fifth
Written and oral	Theoretical and laboratory	The use of hormones to stimulate seed	Theoretical and practical concepts	5	VI

		germination			
Written and oral	Theoretical and laboratory	monthly exam A	Theoretical and practical concepts	5	Seventh
Written and oral	Theoretical and laboratory	Study of nootropic inhibitors	Theoretical and practical concepts	5	VIII
Written and oral	Theoretical and laboratory	Using nitrogen regulators to treat flower drop	Theoretical and practical concepts	5	Ninth
Written and oral	Theoretical and laboratory	The role of growth regulators in stress resistance	Theoretical and practical concepts	5	The tenth
Written and oral	Theoretical and laboratory	Studying the most important subjects that cover the work of nuclear organizations	Theoretical and practical concepts	5	eleventh
Written and oral	Theoretical and laboratory	The use of regulators in the ripening of fruits and seeds	Theoretical and practical concepts	5	twelveth
Written and oral	Theoretical and laboratory	Screening and estimation of hormones in plants	Theoretical and practical concepts	5	Thirteenth
Written and oral	Theoretical and laboratory	General Review	Theoretical and practical concepts	5	fourteenth
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Fifteenth

Course evaluation .11	
according to the tasks assigned to the 100 Distribution of the grade out of student, such as daily preparation, daily, oral, monthly, and written exams, .reports, etc	
	Learning and .12 teaching resources
. Radi .H. A .Study No .Zubaidi, Ahmed Haider. 1990-AI . College of Agriculture- University of Baghdad	Required textbooks methodology, if) (any
	) Main references

	(sources
Janabi, Hadi Yasser, 2016. Applied land reform. - Al Higher Education and Scientific Research. of Ministry . University Qasim Green-AI	Mainstream recommended books and references scientific journals,) (... reports
https://www.mewa.gov.sa/ar/Ministry/Agencies/Agencyland/ Page	Electronic references, websites

Course Name .31	
Plant physiology	
Course Code .32	
OO1440pph	
year / Semester .33	
First semester 2023	
Date this description was prepared .34	
2023/23/6	
Available attendance forms .35	
Mandatory official working hours	
3.5 : (total) Number of units 60 : (total) Number of study hours .36	
units 3.5 Number of 60	
(if more than one name is mentioned) Name of the course administrator	
razzaq.ateha@uokerbala.edu.iq : Dr. Razzaq, please give him the email : the name	
Course objectives	
<ul style="list-style-type: none"> • Students acquire the concepts of and deal with them plant physiology theoretically, practically, and practically • Students acquire scientific and studying laboratory foundations in plant functions • Providing students with information cell types about • The student gains experience in g solutionspreparin 	Scholarship Subject Goals
Teaching and learning strategies .9	
<ul style="list-style-type: none"> • cognitive goal is no There in studying the parts of the Gain experience and skill ❖ . cell • Overcoming the most important problems in plant ❖ cells 	The strategy

<p>study applied program to Understand and apply an. ❖ .plant cells Marathi objectives of the course Except the field Training to solve the problem of ❖ . examinations to write a final report, individually or Training ❖ . together, to study a problem demonstration experiments to Conducting ❖ . example for ' cell parts prepare slides For plant for and devices Identify equipment ❖ .analysis Teaching and learning methods of the steps for implementing the growth testing ❖ . program and its practical form organizations . in the classroom activities Exercises and ❖ to related sites students to some electronic tingDirec ❖ physiology plant screens in the the electronic A demonstration through ❖ . classroom . Evaluation methods . Participation in the classroom ❖ . Oral and written tests ❖ . activities Providing scientific and applied ❖ . tests that are conducted practically are no There ❖</p>	
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Course structure .10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	the week
Written and oral	Theoretical and laboratory	and Introduction plant concept of physiology	Theoretical and practical concepts	5	the first
Written and oral	Theoretical and laboratory	Study of cell and their types parts	Theoretical and practical concepts	5	the second
Written and oral	Theoretical and laboratory	Identify the muscles and their vital activities	Theoretical and practical concepts	5	the third
Written and oral	Theoretical and laboratory	Solutions and methods of preparing them	Theoretical and practical concepts	5	the fourth
Written and oral	Theoretical and laboratory	Water potential and energy	Theoretical practical and concepts	5	Fifth
Written and oral	Theoretical and	Optical systems	Theoretical and practical	5	VI

	laboratory		concepts		
Written and oral	Theoretical and laboratory	monthly exam A	Theoretical and practical concepts	5	Seventh
Written and oral	Theoretical and laboratory	Dark interactions	Theoretical and practical concepts	5	VIII
Written and oral	Theoretical and laboratory	Representation, transportation and storage	Theoretical and practical concepts	5	Ninth
Written and oral	Theoretical and laboratory	Diffusion and absorption	Theoretical and practical concepts	5	The tenth
Written and oral	Theoretical and laboratory	plasma phenomenon And cell contraction	Theoretical and practical concepts	5	eleventh
Written and oral	Theoretical and laboratory	Mechanisms of water and nutrient absorption	Theoretical and practical concepts	5	twelveth
Written and oral	Theoretical and laboratory	Elements of photosynthesis	Theoretical and practical concepts	5	Thirteenth
Written and oral	Theoretical and laboratory	Study of redox enzymes	Theoretical and practical concepts	5	fourteenth
Written and oral	Theoretical and laboratory	Monthly exam	Theoretical and practical concepts	5	Fifteenth

Course evaluation .11	
according to the tasks assigned to the 100 Distribution of the grade out of student, such as daily preparation, daily, oral, monthly, and written exams, .reports, etc	
	Learning and .12 teaching resources
. Radi .H. A .Study No .Zubaidi, Ahmed Haider. 1990-AI . College of Agriculture- University of Baghdad	Required textbooks methodology, if) (any
	) Main references (sources
Janabi, Hadi Yasser, 2016. Applied land reform. - AI Higher Education and Scientific Research. of Ministry . University Qasim Green-AI	Mainstream recommended books and

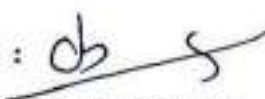
	references scientific journals,) (... reports
https://www.mewa.gov.sa/ar/Ministry/Agencies/Agencyland/ Page	Electronic references, websites

The main link for the field crops section:

<https://agriculture.uokerbala.edu.iq/wp/%D9%82%D8%B3%D9%85-%D8%A7%D9%84%D9%85%D8%AD%D8%A7%D8%B5%D9%8A%D9%84-%D8%A7%D9%84%D8%AD%D9%82%D9%84%D9%8A%D8%A9-2>

Link to the academic program description form for the Field Crops
Department - College of Agriculture - University of Karbala 2023-2024:

<https://agriculture.uokerbala.edu.iq/wp/%D8%A7%D9%84%D8%A8%D8%B1%D9%86%D8%A7%D9%85%D8%AC-%D8%A7%D9%84%D8%A7%D9%83%D8%A7%D8%AF%D9%8A%D9%85%D9%8A-%D9%84%D9%82%D8%B3%D9%85-%D8%A7%D9%84%D9%85%D8%AD%D8%A7%D8%B5%D9%8A%D9%84-%D8%A7%D9%84%D8%AD>

Signature : 

Department Head: Prof. Dr. Abbas Ali Hussein.



Signature:

Dean: Prof. Sabah Gazi Shareef