Ministry of Higher Education and Scientific Research Scientific Supervision and Scientific Evaluation Apparatus Directorate of Quality Assurance and Academic Accreditation Accreditation Department



# Academic Program and Course Description Guide

7.72

# **Introduction:**

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T  $\frac{r}{3} \cdot \frac{1}{3}$  on  $\frac{r}{3} \cdot \frac{r}{3}$  regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

#### **Academic Program Description Form**

Signature: Head of Department Name: Asstand, Prof. Dr Date: Mandi Wasmey seherts

3/11/2024

Signature:

Scientific Associate Name:

· Di- Jan adays Tal: b Aber Date: 3/11/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 3/11/2024 Signature: S

Hibat Allah A. Hussein

Halceenthin Assist. Prof Dr. Hakeem.S. Abed

Approval of the Dean

### **Concepts and terminology:**

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

<u>Course Description</u>: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

**<u>Program Vision:</u>** An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

**<u>Program Mission</u>**: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

**Program Objectives:** They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

<u>Curriculum Structure:</u> All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

**Learning Outcomes:** A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

**Teaching and learning strategies:** They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extracurricular activities to achieve the learning outcomes of the program.

#### **).** Program Vision

The Department of Soil Sciences and Water Resources seeks to be one of the departments of advanced agricultural colleges in graduating competent agricultural engineers in the field of soil sciences and water resources to place them in the labor market and contribute to raising plant production by increasing soil fertility and improving its various qualities.

#### ۲. Program Mission

Leadership and excellence as a professional university that works to qualify and graduate national human resources with a high degree of competence for the labor market in the region. And to be a major source of applied scientific research that

### supports economic development and effective participation in social welfare.

#### <sup>γ</sup>. Program Objectives

The program aims to prepare cadres of agricultural engineers specialized in the five soil sciences: soil chemistry, soil physics, soil biology, soil fertility, soil surveying and classification, and employ them in work in the local market and all state departments.

### ٤. Program Accreditation

The department is working to obtain program accreditation by applying the standards launched by the Ministry

#### °. Other external influences

Field visits to stations and relevant state institutions

\* This can include notes whether the course is basic or optional.

<b>7. Program Description</b>		
Year/Level	Course Name	Credit Hours
	Mathematics <b>\</b>	۳۰ theoretical
	Computer \	۳۰ practical
	English language	<b><i>v</i></b> • theoretical
	Soil physics	۳ · theoretical + ٤ ° practical
Fall Semester	Experi Design and analysis	۳ · theoretical + ٤ ° practical
	Soil survey and classification	۳ · theoretical + ٤ ° practical
	Soil chemistry	$\forall$ , theoretical + $i \circ$ practical
	Soil fertility	$\Upsilon$ , theoretical + $\xi$ o practical
	English language/Y	T, theoretically
	Soil microbiology	$\Upsilon$ , theoretical + $\xi$ o practical
Spring Semester	Sominar	T, theoretically
Spring Semester	Research methodology	T, theoretically
	Spacialized subject	* theoretical + to practical
	Specializeu subject	<sup>+</sup> · meorencal + · • practical

v. Expected learning outcomes of the program				
Knowledge				
Cognitive goals	Student learns about the concept of soil and its geological components. The student learns about the types of soil and the external influences that contributed to the formation of soil.			
	The student learns about the nutrients found in the soil.			
Skills				
Skills objectives of the program	Thinking skill Scientific research skills Teaching skills			
Ethics				
Evaluation	Theoretical tests Practical tests Weekly reports			

### **^. Teaching and Learning Strategies**

**)**- Explanation and clarification

<sup>Y</sup>- Lecture method

 $\gamma$ - Practical lessons in the lab.

 $\boldsymbol{\xi}\mbox{-}$  Scientific trips to relevant departments and research stations and Self-learning method

### **9.** Evaluation methods

**\**-Theoretical tests

۲- Practical tests

<sup>r</sup>- Reports and studies

<b>.</b> Faculty									
Faculty Members									
Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff				
	General	Special			Staff	Lecturer			
Professor	Soil and water resources	Soil microbiology				)			
Professor	Soil and water resources	Soil fertility and fertilization			)				

٥

Professor	Soil and water resources	Soil survey and classification			)
Assistant Professor	Plant production	Plant breeding and improvement		1	
Professor	Soil and water resources	Soil fertility and fertilization		1	
Professor	Soil and water resources	Soil physics		1	
Assistant Professor	Soil and water resources	Soil chemistry		۲	
Professor	Soil and water resources	Soil chemistry		١	

#### **Professional Development**

#### Mentoring new faculty members

Guiding new, visiting, full-time and part-time faculty members by following them up by the Scientific Committee and the Department Head, attending lectures, and giving them the necessary directions.

#### Professional development of faculty members

- 1- Follow teaching and learning strategies
- <sup>Y</sup>- Evaluation of learning outcomes by the scientific committee
- <sup>v</sup>- Professional development through holding development courses

#### **11.** Acceptance Criterion

**Central admission** 

### **1**Y. The most important sources of information about the program

- 1- The website of the college and university
- ۲- University guide
- <sup>r</sup>- Central Library
- <sup>٤</sup>- The most important books and sources for the department
- °- The Internet

۱۳. Program Development Plan

1-Teamwork: Working within the group effectively and actively.

 $\gamma$ - Time management: Managing time effectively and setting priorities with the ability to work organized by appointments.

 $\mathcal{T}$ - Leadership: The ability to direct and motivate others.

*ξ*- Independence at work.

°- Negotiation and persuasion (the student is able to influence and persuade others to discuss and reach an agreement.

<sup>7</sup>- Global skills (the student is able to speak and understand other languages and appreciate other cultures.

١. (	Course	Name:				
			Mathematic			
۲. (	Course	Code:				
۳. :	Semest	er / Year:				
			Fall Semester			
٤. ]	Descrip	otion Preparation Da	te:			
	A •1 1	1 4 1	1/4/7•72			
<u> </u>	Availat	ole Attendance Forms:	A . 1 1			
	NT1	n of Cas did House (Tot	Actual attend	ance		
<b>``</b>	Number	r of Credit Hours (100	al) / Number of U	Inits (10tal)		
V	Course	administrator's par	ne (mention all	if more than one	name)	
	Name	Lecturer Prof Dr Ali	Hussein Shuaa		(indifie)	
	Email:	alishuaa@uowasit edu i				
۸. (	Course	Objectives	뇣			
Course Objectives		e Objectives au r- ty so	<ul> <li>Possessing the skill of thinking and having the ability to find solutions using the correct laws and mathematical operations.</li> <li>Learn about methods of calculating matrices and functions and their types.</li> <li>Identify applications related to matrices and types of functions.</li> <li>Learn how to draw a function</li> <li>Using new mathematical methods to perform solutions.</li> </ul>			
٩. ′	Teachir	ng and Learning Strate	gies			
Strategy	۷ ۱, 41	. Explaining and cla	rilying the mat	nematical conce	pt and stating	
	t	he laws related to it.	a valated to the t	ania		
	۲. ۳	Involve students	during the lect	upic.	evennles end	
	n	roblems using math	matical laws.	are in solving	cxampics and	
	r t	. Giving them home	vork and exercis	ses related to the	topic that was	
	d	iscussed in the lectur	е.		·· · · · · · · · · · · · · · · · · · ·	
	٥	. Conduct daily tests	<u>for studen</u> ts in a	ddition to month	ly tests.	
۱۰. Co	ourse St	tructure				
Week	Hour s	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method	
۱st	۲	Matrix	Mathematic	Explanation and presentation	Examination	

		]					Mo lect	del and ture		
۲nd		۲	Туј	pes of Matrix	Ma	thematic	Exp pre Mo lect	planation and sentation odel and fure	Exa	mination
₹rd		۲	me	Computational thods use In solving matrices	Ma	thematic	Explanation and presentation Model and lecture		Exa	mination
<b>£</b> th		۲	s aı	Applications in olving functions nd finding matrix inverses	Ma	thematic	Explanation and presentation Model and lecture		Exa	mination
<b>o</b> th		۲		Mathematical functions	Ma	thematic	Explanation and presentation Model and lecture		Exa	imination
٦ th		۲	Fu	nction components	Mathematic		Explanation and presentation Model and lecture		and <sup>1</sup> Examination	
γth		۲		Types of Mathematical function	Ma	thematic	Explanation and presentation Model and lecture		Examination	
∧th		۲	Di us	fferential relations sed In the function	Ma	thematic	Explanation and presentation Model and lecture		Exa	mination
۹ th		۲		Higher ranks of Function	Ma	thematic	Explanation and presentation Model and lecture		and Examination	
۱, tl	'n	۲	P	Partial derivatives	Ma	thematic	Explanation and presentation Model and lecture		Exa	imination
۱۱tl	h	۲	Fu	nction applications	Ma	thematic	Exp pre Mo lect	planation and esentation odel and ture	Exa	mination
	۱Ÿth		۲	Increasing, decreasing, and endings Great an small	d	Mathematic		Explanation a presentation Model and lecture	nd	Examinatior
۱۳th ۲ Concavity and convexity curves in the function Mathematic Model a		Explanation a presentation Model and	nd	Examination						

				lecture			
۱ th	۲	Drawing functions	Mathematic	Explanation and presentation Model and lecture	Examination		
۱ o th	۲	Solved problems and examples of graphing the function	Mathematic	Explanation and presentation Model and lecture	Examination		
۱۱.	Course	Evaluation					
<b>1-Theoretical tests 10</b>							
r- Daily tests 10							
د- Fin	al exam	1 .					
١٢.	Learnin	g and Teaching Resour	rces				
Require	ed textboo	oks (curricular books, if an	y) <sup>1</sup> - George Analytic G	<b>)- George B. Thomas, Y</b> Calculus and Analytic Geometry			
Main re	eferences	(sources)	y- Theori	y- Theories and problems in advanced			
			calculus	calculus 1 Murray R SPIEGEL			
			Fighth A	Fighth Arabic adition International			
			House for	House for Culturel Investments Egypt			
				rouse for Cultural Investments. Egypt.			
			Mondolse	Mondoloohn International Academy			
			Doimut I	Deimit Lehenen			
Dagom	mondad	hooles and referen	Delful, L		*•••••••••••••••••••••••••••••••••••••		
(scienti	fic journa	als, reports)	ces Iraq	es Iraqi academic scientific journals			
Electro	nic Refer	ences, Websites					

1. Course Name:							
Coil physics							
Y Course Code:							
۳. Semester / Year:							
Fall Semester							
٤. Description Preparation Date:							
1/9/7•75							
Available Attendance Forms:							
Actual presence							
Image: Number of Credit Hours (Total) / Number of Units (Total)							
۲ theoretical ۲ practical units ۳							
Y. Course administrator's name (mention all, if more than one name)							
Name: Prof. Dr. Jamal Nasser abdalrhman							

Em	ail: <u>ina</u> :	ser@uowasit.edu.iq			
	irse Oh	iectives			
Course Obje	ecti <sup>1</sup> - R <sup>7</sup> - S <sup>7</sup> - A agri <sup>2</sup> - U ° - K unsa	Researches the study of soil physic tudy how to measure the physica Applying measurements of phy culture and the environment Understanding the relationship be knowing the movement of water i aturated soils.	es and the physical pr l properties of soil sical properties to s etween physical soil pr n the soil and the flow	operties of soil solve scientific probl roperties v of water in saturated	ems related d and
۹. Tea	ching a	nd Learning Strategies			
Strategy		۱-Explanation and cla ۲- Lecture method ۳- Student groups ٤- Practical lessons ٥- Scientific trips ٦ - Self-learning meth	arification		
۱۰. Cours	se Struc	ture			
Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluati on method
First	٤	ntroduction and definition soil science, soil physics a some related relationships	Soil physics	Explanation, presentation of model and lecture	the exam
the secon	٤	Physical soil properties, s texture, particle s distribution, and Stock's law	Soil physics	Explanation, presentation of model and lecture	the exam
the third	٤	The specific area of soil a methods for determining physically and chemically	Soil physics	Explanation, presentation of model and lecture	the exam
the fourtl	٤	Soil Structure: its definiti importance, and how to study	Soil physics	Explanation, presentation of model and lecture	the exam
Fifth	٤	Methods of studying soil structure and evidence of soil structure	Soil physics	Explanation, presentation of model and lecture	the exam
Sixth	٤	Stability of soil aggregat methods of studying them, a factors affecting the format of aggregates	Soil physics	Explanation, presentation of model and lecture	the exam
Seventh	٤	Soil water and general wa properties, soil air, air capac and gas exchange in the soil	Soil physics	Explanation, presentation of model and lecture	the exam
Eighth	٤	Water properties related porous media (soil), soil wa energy and methods expressing and measuring it	Soil physics	Explanation, presentation of model and lecture	the exam
Ninth	٤	Soil temperature, s temperature, and heat flow	Soil physics	Explanation, presentation of	the exam

		the soil			model and lecture		
The tenth	٤	Water	flow in saturated se	Soil physics	Explanation,	the exam	
		and wa	ter flow in unsatura		presentation of		
		soils			model and lecture		
Eleventh	٤	Water	infiltration in s	Soil physics	Explanation,	the exam	
		methoa	s for measuring it a		presentation of		
Turolfth	4	equatio	lls n and drainage chai	Soil physics	Fynlanation	the exam	
Iwenun	۷	the n	hysical nronerties	son physics	nresentation of	the caun	
		surface	soil		model and lecture		
Thirteent	٤	Water	balance and ene	Soil physics	Explanation,	the exam	
		balance	in the field		presentation of		
					model and lecture	ļ	
fourteent	٤	Evaluat	ion of the water bala	Soil physics	Explanation,	the exam	
		equatio	n, water consumpti		presentation of		
	2	evapotr	anspiration		model and lecture	the even	
Fifteenth	Z	Exam		Soli physics	Explanation,	the exam	
					model and lecture		
	irse Eva	luation	1		mouer and rectar e		
۰ - Theoreti	cal tests	Indución	70				
Y- Practica	l tests		10				
٤- Final exa	am		٦.				
۱۲. Lea	rning a	nd Teac	ching Resources				
Required to	extbooks	(curricu	۱- Soil Physics, wr	itten by Dr. Hisha	am Mahmoud Ha	ssan ۲۰۰	
books, if an	y)	Ĩ	Y-Basics of soil physics, translation, Mahdi Ibrahim Odeh 196				
Main refere	nces (sou	urces)	Basics of soil physics, translation, Mahdi Ibrahim Odeh 1999				
Recommen	ded bool	ks and					
references	(sci	ientific	Iragi acadomic sci	ontific journals			
journals, re	ports)		llagi acauenne sen	elitine journais			
Electronic	J	Referenc	Soil phys	ics			
Websites			1 0				

۱۳.	. Course Title:						
	Design and analysis of agricultural experiments						
۱٤. Course Code							
10.	Semester / Year						
	Fall Semester						
١٦.	The history of preparation of this description						
	١/٩/٢ • ٢ ٤						

۱۷. Availab	le Attendance Fo	orms			
		Actual attendant	t		
۱۸. Number	of Credit Hours	s (Total) / Number	r of Units (Tota	al)	
۲ theoretical	۲ practica	al un	its <sup>rr</sup>		
۱۹. Course a	administrator's n	ame (if more than	n one name)		
Name: Prof. Dr. Riy	ad jabbar mans	our			
Email: : ralmaliki@u	<u>owasit.edu.iq</u>				
۲۰. Course	Objectives				
* Introducing the s	tudent that the	re are areas tha	t		
depend on condu	cting experim	ents and these	e		
experiments must be	designed on sci	entific bases			
* When analyzing	experiments it	is according to			
scientific methods an	d logical steps	is according to			
* When obtaining a	a logical steps	of the experimen		Diantin	
when obtaining a		of the experiment		Jujecuv	es.
leads us to make the	appropriate deci	sion			
* Introducing the stu	dent to many ty	pes of designs, as	5		
each experience has a	a specific design	1			
* Introduce the stud	ent to how to t	test the morale of	f		
each mathematical m	odel				
* Introducing the stu	dent that there a	re tests conducted	1		
before the experime	nt and tests n	roposed after the			
evneriment	fit and tosts p	roposed unter the			
* Introducing the stu	dont that there	ara valuas that as	n		
lost during the experi	inent and can be	are values that ca	11		
Tost during the experi					
1. Teachin	g and Learning	Strategies			
Audio methods (teac	hing explanatior	n of the subject)		Stra	tegy
Blackboard writing s	tyle				
The method of direc	t dialogue betw	een the teacher a	nd the student	w	
the evaluation of the	student in the cl	assroom participa	tions		
YY. Courses	Structure				
Evaluation method	Learning	Unit or subject	Required	Hours	The week
	method	name	Learning	110010	
	memou	name	Outcomes		
D 1 .	I			<u>v</u>	\ \
Rapid exam	Lecture	A brief history	Theoretical	١	1
		of statistics,	lecture		
		definition of			
		statistics,			

		division of			
		statistics			
Rapid exam	Lecture	Measures of	Theoretical	۲	۲
		central	lecture		
		tendency,			
		measures of			
		concentration			
Rapid exam	Lecture	Dispersion	Theoretical	۲	٣
		meters	lecture		
Rapid exam	Lecture	Hypothesis	Theoretical	۲	٤
		testing,	lecture		
		statistical			
		errors,			
		hypothesis			
		testing-t			
First month exam	Theoretical	examination	examination	۲	0
	exam				
Rapid exam	Lecture	Chi-Square	Theoretical	۲	٦
		Test	lecture		
Rapid exam	Lecture	general	Theoretical	۲	٧
		concepts and	lecture		
		definitions in			
		the design and			
		analysis of			
		experiments,			
Rapid exam	Lecture	Types of	Theoretical	۲	۸
		agricultural	lecture		
		experiments,			
		complete			
		random design			
Rapid exam	Lecture	LSD Test	Theoretical	۲	٩
			lecture		
Second month	Theoretical	examination	examination	۲	١.
exam	exam				
Rapid exam	Lecture	Design of	Theoretical	۲	))
		complete	lecture		
		random sectors			
Rapid exam	Lecture	Duncan Test	Theoretical	۲	17
			lecture		
Rapid exam	Lecture	Latin Square	Theoretical	۲	17
		Design	lecture		
Rapid exam	Lecture	Factor	Theoretical	۲	١٤
		experiments	lecture		

Rapid exam	Lecture	Factor experiment with two factors	s Theoretical lecture	۲	10				
۲۳. Course I	۲۳. Course Evaluation								
Distributing the score out of $\cdot \cdot \cdot$ according to the tasks assigned to the student such as daily preparation daily oral monthly written exams reportsetc.									
$\gamma \epsilon$ . Learning and Teaching Resources									
Y- Design and analysis of experiments - Khasha Required textbooks (methodology, any)									
		Main references (sources)							
- Foreign books agricultural experime	specialized in ents .	the design	Recommended books and references (scientific journals, reports)						
Arabic articles issued bodies	d by academic a	and profession	Electronic Refere	ences, V	Vebsites				

۱. Course N	\. Course Name:						
	English Language						
۲. Course C	۲. Course Code:						
۳. Semeste	r / Year:						
	Fall season						
٤. Descript	ion Preparation Date:						
	١\٩\٢٠٢٤						
°. Available	e Attendance Forms:						
	Actual presence						
٦. Number	of Credit Hours (Total) / Number of Units (Total)						
۱ theor	etical units <sup>\</sup>						
V. Course	administrator's name (mention all, if more than one name)						
Name:.prof	. Dr. hakim sultan abdul Emai: hsultan@uowasit.edu.iq						
^. Course C	Dbjectives						
Course 1 Objectives	* Teaching students, the basic concepts related to access to the simple basics of an introduct to the English language for students of the College of Agriculture. * The student gets to know the concept of the English language. * Enabling students to know how to deal with the English language						
۹. Teaching	g and Learning Strategies						
	Y-Explanation and clarification						
Strategy	۲- Lecture method						

		۳- Student groups					
		٤- Practical lessons					
		°- Scientific trips					
		٦ - Self-learning met	hod				
V. Course Structure							
Week	Hour	Required Learning	Unit or	Learning method	Evaluatio		
	S	Outcomes	subject		n method		
Finat	<u>\</u>		name	Explanation presentation of	the exam		
FIrst	1	International student	1	model and lecture	Quizzes,		
		READING Going abroad to study			Reports, and		
		WRITING A host family			class		
		VOCABULARY DEVELOPMENT Dictionary work					
Second	1	Where in the world?	۲	Explanation, presentation of	The exam,		
becond		READING Three countries		model and lecture	Quizzes, Reports, and		
		WRITING My country			activities in		
		VOCABULARY DEVELOPMENT Organizing vocabulary ( <sup>1</sup> )			class		
Third	١	Newspaper articles	٣	Explanation, presentation of	the exam,		
		READING An unexpected journey		model and lecture	Quizzes, Reports, and activities in class		
		WRITING Mistaken identity VOCABULARY DEVELOPMENT Word-building			C1055		
Fourth	١	Modern technology	٤	Explanation, presentation of	The exam,		
i our ch		READING Innovations WRITING		model and lecture	Quizzes, Reports, and activities in		
		Technology - good or bad?			class		
		VOCABULARY DEVELOPMENT Varying vocabulary					
Fifth	١	Conferences and visits	٥	Explanation, presentation of	the exam,		
		READING A conference in Istanbul		model and lecture	Quizzes, Reports, and		
		WRITING Invitations VOCABULARY			activities in class		
		DEVELOPMENT Word-building					

	•	[			The energy
Sixth		Science and our world READING Air pollution WRITING Trends VOCABULARY DEVELOPMENT Words that go together	1	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and activities in class
Seventh	,	READING Computers WRITING IT — benefits and drawbacks VOCABULARY DEVELOPMENT e.g. etc. RESEARCH Crediting sources	V	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class
Eighth	)	Inventions, discoveries, and processes READING How things work WRITING How things are made RESEARCH Reference books REVIEW Word building	٨	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and activities in class
Ninth	1	Travel and tourism READING International tourism VOCABULARY DEVELOPMENT Varying vocabulary (Y) WRITING Graphs and bar charts	٩	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class

fourteent	)	l - Re	Pairwork activities: - Practice - Vocabulary ading and speaking - Problems	١.		Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class
Fifteenth	1		tests	11			
۱۱.Cours	se Evalua	tion					
<b>\</b> -Theoretical tests				70			
۲- Quizzes,	Reports, a	and Class	s's Activities	10			
۳- Final exa	am			٦.			
۲.Learr	ning and T	Feachin	g Resources				
Required t	extbooks (	curricul	Intermediate S	tudent's Book:	New	, Headway Plus (	John and I
books, if any)		<i>'</i> )			So	ars) Oxford Univ	versity Pre
Main references (sources)							
Recomm	nended boo	ks and					
ref	erences(sci	entific					

	ournals, re	eports)				
Electronic	Reference	es, Websit	Internet	t network		
			Course De	scription Form		
۱. Co	urse Nai	me:				
		,	Comput	ter applications		
1. Co	urse Coo	de:				
۳. Ser	nester /	Year:				
			Fal	l Semester		
٤. De	scriptio	n Preparatio	on Date:			
			•	1/9/7•72		
°. Av	ailable A	Attendance F	forms:	A		
7 NT	mharaf	Cradit Harr	(Tetal) / N	Actual presence	tol)	
۰. INU	mber of	Credit Hour	$\frac{(10tal)}{n}$	umber of Units (10	ital)	
Y Co	urse ad	Iministrator	s name (me	ention all if more	than one name)	
Na	me: Dr.	Hoda lafta			than one name/	
Em	nail: <u>hula</u>	afta@uowas	sit.edu.iq			
A. Co	urse Obj	ectives	Ţ.			
<b>Course Obj</b>	jecti • 7	Couves The student get	s to know Micr	osoft access in details.		
Course Obj	jecti • ] • ] • ]	The student get The student sho The student sho	ts to know Micr buld know adva buld apply man	cosoft access in details. Intages of using Micros Iy commends and proce	soft access in real life. esses on Microsoft acco	ess.
Course Obj 9. Tea	jecti • 1 • 1 • 1 • 1	The student get The student sho The student sho nd Learning	s to know Micr ould know adva ould apply man Strategies	rosoft access in details. Intages of using Micros ly commends and proce	soft access in real life. esses on Microsoft acco	255.
Course Obj <u>9. Tea</u> Strategy	jecti • 1 • 1 • 1 aching an	The student get The student sho The student sho <u>nd Learning</u> <sup>\</sup> -Expla <sup>\</sup> - Pract <sup>\</sup> - Self-l	s to know Micr ould know adva ould apply man Strategies nation and o tical lessons earning met	rosoft access in details. Intages of using Micros by commends and proce clarification. thod.	oft access in real life. esses on Microsoft acco	255.
Course Obj <u>9. Tea</u> Strategy	iecti • 1	The student get The student sho The student sho nd Learning ۱-Expla ۲- Pract ۳- Self-I	s to know Micr buld know adva buld apply man <u>Strategies</u> nation and d tical lessons learning me	rosoft access in details. Intages of using Micros In commends and proce clarification. thod.	soft access in real life. esses on Microsoft acco	255.
Course Obj <u>9. Tea</u> Strategy <u>10. Cour</u> Week	iecti • 7 • 7 • 7 • 7 • 7 • 7 • 7 • 7 • 7 • 7	The student get The student sho The student sho nd Learning ۱-Expla ۲- Pract ۳- Self-I ture	s to know Micr buld know adva buld apply man <u>Strategies</u> nation and o tical lessons learning met	rosoft access in details. Intages of using Micros by commends and proce clarification. thod.	soft access in real life. esses on Microsoft acco	ess.
Course Obj <u>9. Tea</u> Strategy <u>1. Cour</u> Week	iecti • 1 • 1 • 1 • 1 • 1 • 1 • 1 • 1 • 1 • 1	The student get The student sho The student sho nd Learning ۱-Expla ۲- Pract ۳- Self-J ture Required Le Outcomes	s to know Micr buld know adva buld apply man Strategies ination and o tical lessons learning met	rosoft access in details. Intages of using Micros by commends and proce clarification. thod. Unit or subject name	coft access in real life. esses on Microsoft acco Learning method	ess. Evaluati on method
Course Obj <u> <u> </u> </u>	iecti • 7 • 7 • 7 aching an • 7 • 7	The student get The student sho The student sho The student sho nd Learning ۱-Expla ۲- Pract ۳- Self-I ture Required Le Outcomes Introduction access	s to know Micr ould know adva ould apply man Strategies nation and o tical lessons learning met earning to Microsoft	rosoft access in details. antages of using Micros antages of using Micros y commends and proce- clarification. thod. Unit or subject name Word	Explanation, presentation of model and lecture	Evaluati on method Exam
Image: Course Obj         Image: Image: Image: Course Obj         Strategy         Image:	iecti • 7 • 7 • 7 • 7 • 7 • 7 • 7	The student get The student sho The student sho The student sho nd Learning ۱-Expla ۲- Pract ۳- Self-J ture Required Lo Outcomes Introduction access Access main i	s to know Micr ould know adva ould apply man Strategies nation and o tical lessons learning met earning to Microsoft nterface	rosoft access in details. antages of using Micros antages of using Micros and procession clarification. thod. Unit or subject name Word Word	Explanation, presentation of model and lecture	Evaluati on method Exam
Image: Course Obj         Image: Image: Image: Course Obj         Strategy         Image:	iecti • 7 • 7 • 7 • 7 • 7 • 7 • 7 • 7 • 7	The student get The student sho The student sho nd Learning 1-Expla 7- Pract 7- Self-I ture Required Le Outcomes Introduction access Access main i Tabs and grou	s to know Micrould know adva build apply man Strategies anation and o tical lessons learning met earning to Microsoft nterface	rosoft access in details. antages of using Micros and processing the second processing	Explanation, presentation of model and lecture Explanation, presentation of model and lecture	ess. Evaluati on method Exam Exam

Fifth	۲	Tabs an	d groups	Excol	Explanation, presentation of model and lecture	Exam	
Sixth	٢	Practica	l Example	Power point	Practical session	Exam	
Seventh	۲	Practica	ll Example	Power point	Practical session	Exam	
Eighth	۲	Tables		Genestat	Explanation, presentation of model and lecture	Exam	
Ninth	۲	Practica	ll Example	Genestat	Practical Example	Exam	
Tenth	٢	Queries		Genestat	Explanation, presentation of model and lecture	Exam	
Eleventh	۲	Practica	l Example	Matlab	Practical session	Exam	
Twelfth	٢	Reports		Matlab	Explanation, presentation of model and lecture	Exam	
Thirteent	٢	Control panel		Onenote	Explanation, presentation of model and lecture	Exam	
fourteent	۲	Practica	l Example	Onenote	Practical session	Exam	
Fifteenth	۲	Practica	ll Example	Exam	Practical session	Exam	
11. Cou	ırse Eva	aluation					
۱-Theoreti	cal tests		70				
۲- Practica	l tests		10				
۳- Final exa	am	1 -	1.				
T. Lea	rning a	nd Teac	ching Resources				
books, if an	extbooks ly)	(currici					
Main references (sources)			<ul> <li>Microsoft Access (.). book(UNIVERSITY OF VIRGINIA HEALTH SYSTEM).</li> <li>Lectures of Microsoft Access (.). prepared by Eng.M.Abou Elale.</li> </ul>				
Recomment references journals, rej	ded bool (sc ports)	ks and ientific					
Electronic Websites	J	Referenc	https://support.micr           sa/office/%D^/A^//           %D^//A^//D^//A+1//           %D^//A^//D^//A-a           c <sup>w</sup> · e <sup>o</sup> · · · · · · · · · · · · · · · · · · ·	<u>`osoft.com/ar-</u> D٩%^£%D٩%^0%D٩ D^% <u>A</u> ₩%D^% <u>B</u> ₩%D^ ccess- <sup>¶</sup> • \•- <sup>¶¶</sup> ^acfe	<u>Ανχ</u> <b>D</b> λζ <b>Α</b> νζ <b>D</b> ۹ζΛε d-۲έλέ-έλΥΥ-acbΨ-	<u>}-</u> ▲%D^%A٩	

Soil survey and classification         Y. Course Code:         Fall Semester         *. Description Preparation Date:         1\9\Y.Y ±         •. Available Attendance Forms:         Actual presence         *. Number of Credit Hours (Total) / Number of Units (Total)         Y theoretical       Y practical         Y. Course administrator's name (mention all, if more than one name)         Name: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         ^. Course Objectives         Course Objecti         * For the student to become familiar with the science of surveying and classificat         * The student should classify all types of soil         * That the student can distinguish soil         * The student gets to know the types of classifications in the world	tion
Y. Course Code:         Y. Semester / Year:         Fall Semester         2. Description Preparation Date:         1\9\Y.Y \$         •. Available Attendance Forms:         Actual presence         1. Number of Credit Hours (Total) / Number of Units (Total)         Y theoretical         Y practical         Units "         Y. Course administrator's name (mention all, if more than one name)         Name: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         A. Course Objectives         Course Objecti         • For the student to become familiar with the science of surveying and classificat         • The student should classify all types of soil         • The student can distinguish soil         • The student gets to know the types of classifications in the world	tion
*. Semester / Year:         Fall Semester         *. Description Preparation Date:         1\9\7.7£         •. Available Attendance Forms:         Actual presence         *. Number of Credit Hours (Total) / Number of Units (Total)         * theoretical * practical units *         Y. Course administrator's name (mention all, if more than one name)         Name: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         ^. Course Objectives         Course Objecti         • For the student to become familiar with the science of surveying and classificat         • The student should classify all types of soil         • That the student can distinguish soil         • The student gets to know the types of classifications in the world	tion
<ul> <li><sup>r</sup>. Semester / Year:</li> <li>Fall Semester</li> <li><sup>f</sup>. Description Preparation Date:</li> <li><sup>1\9\7.7£</sup></li> <li><sup>o</sup>. Available Attendance Forms:</li> <li>Actual presence</li> <li><sup>1</sup>. Number of Credit Hours (Total) / Number of Units (Total)</li> <li><sup>r</sup> theoretical <sup>r</sup> practical units <sup>r</sup></li> <li><sup>v</sup>. Course administrator's name (mention all, if more than one name)</li> <li>Name: Prof. Hashim hanin karim</li> <li>Email: hashim.hanin@uomisan.edu.iq</li> <li><sup>A</sup>. Course Objectives</li> <li>Course Objecti</li> <li><sup>e</sup> For the student to become familiar with the science of surveying and classificat</li> <li><sup>e</sup> That the student can distinguish soil</li> <li><sup>e</sup> The student gets to know the types of classifications in the world</li> </ul>	tion
Fall Semester         ٤. Description Preparation Date:         1\9\7.7٤         •. Available Attendance Forms:         Actual presence         ٦. Number of Credit Hours (Total) / Number of Units (Total)         Y theoretical       Y practical         Y. Course administrator's name (mention all, if more than one name)         Name: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         ^. Course Objectives         Course Objecti         • For the student to become familiar with the science of surveying and classificat         • The student should classify all types of soil         • That the student can distinguish soil         • The student gets to know the types of classifications in the world	tion
<ul> <li>٤. Description Preparation Date:         <ul> <li>1\9\7.7£</li> <li>Available Attendance Forms:</li></ul></li></ul>	tion
Image: Source Energy and Construct Energy         Image: Number of Credit Hours (Forms:         Actual presence         Image: Number of Credit Hours (Total) / Number of Units (Total)         Image: Vertical         Image: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         Actual presence         Image: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         Actual presence         Image: Prof. Hashim hanin@uomisan.edu.iq         Image: Prof. Hashim hanin@uomisan.edu.iq         Image: Prof. Hashim hanin@uomisan.edu.iq         Image: Prof. Hashim hanin@uomisan.edu.iq <td< td=""><td>tion</td></td<>	tion
<ul> <li>Available Attendance Forms:         <ul> <li>Actual presence</li> <li>Number of Credit Hours (Total) / Number of Units (Total)</li> <li><sup>↑</sup> theoretical <sup>↑</sup> practical units <sup>¬</sup></li> </ul> </li> <li><sup>∨</sup> Course administrator's name (mention all, if more than one name)         <ul> <li>Name: Prof. Hashim hanin karim</li> <li>Email: hashim.hanin@uomisan.edu.iq</li> <li><sup>∧</sup> Course Objectives</li> </ul> </li> <li>Course Objecti <ul> <li><sup>●</sup> For the student to become familiar with the science of surveying and classificat</li> <li><sup>●</sup> The student should classify all types of soil</li> <li><sup>●</sup> That the student can distinguish soil</li> <li><sup>●</sup> The student gets to know the types of classifications in the world</li> </ul> </li> </ul>	tion
Actual presence <sup>1</sup> . Number of Credit Hours (Total) / Number of Units (Total) <sup>Y</sup> theoretical <sup>Y</sup> practical         units <sup>m</sup> <sup>Y</sup> . Course administrator's name (mention all, if more than one name)         Name: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq             A. Course Objectives             Course Objectives             • For the student to become familiar with the science of surveying and classificat             • The student should classify all types of soil             • That the student can distinguish soil             • The student gets to know the types of classifications in the world	tion
<ul> <li>Number of Credit Hours (Total) / Number of Units (Total)         <ul> <li>Y theoretical</li> <li>Y practical</li> <li>Y practical</li> <li>Y course administrator's name (mention all, if more than one name)</li> <li>Name: Prof. Hashim hanin karim</li> <li>Email: hashim.hanin@uomisan.edu.iq</li> <li>A Course Objectives</li> </ul> </li> <li>Course Objecti</li> <li>For the student to become familiar with the science of surveying and classificat</li> <li>The student should classify all types of soil</li> <li>That the student can distinguish soil</li> <li>The student gets to know the types of classifications in the world</li> </ul>	tion
Y theoretical       Y practical       units Y         Y. Course administrator's name (mention all, if more than one name)         Name:       Prof. Hashim hanin karim         Email:       hashim.hanin@uomisan.edu.iq         ^. Course Objectives         Course Objecti       • For the student to become familiar with the science of surveying and classificat         • The student should classify all types of soil         • That the student can distinguish soil         • The student gets to know the types of classifications in the world	tion
Y. Course administrator's name (mention all, if more than one name)         Name: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         ^. Course Objectives         Course Objecti         • For the student to become familiar with the science of surveying and classificat         • The student should classify all types of soil         • That the student can distinguish soil         • The student gets to know the types of classifications in the world	tion
<ul> <li>V. Course administrator's name (mention all, if more than one name) Name: Prof. Hashim hanin karim Email: hashim.hanin@uomisan.edu.iq</li> <li>A. Course Objectives</li> <li>Course Objecti</li> <li>For the student to become familiar with the science of surveying and classificat</li> <li>The student should classify all types of soil</li> <li>That the student can distinguish soil</li> <li>The student gets to know the types of classifications in the world</li> </ul>	tion
Name: Prof. Hashim hanin karim         Email: hashim.hanin@uomisan.edu.iq         ^. Course Objectives         Course Objecti         • For the student to become familiar with the science of surveying and classificat         • The student should classify all types of soil         • That the student can distinguish soil         • The student gets to know the types of classifications in the world	tion
Email: hashim.hanin@uomisan.edu.iq ^. Course Objectives Course Objecti • For the student to become familiar with the science of surveying and classificat • The student should classify all types of soil • That the student can distinguish soil • The student gets to know the types of classifications in the world	tion
^. Course Objectives         Course Objecti         • For the student to become familiar with the science of surveying and classificat         • The student should classify all types of soil         • That the student can distinguish soil         • The student gets to know the types of classifications in the world	tion
<ul> <li>Course Objecti</li> <li>For the student to become familiar with the science of surveying and classificat</li> <li>The student should classify all types of soil</li> <li>That the student can distinguish soil</li> <li>The student gets to know the types of classifications in the world</li> </ul>	tion
<ul> <li>The student should classify an types of soil</li> <li>That the student can distinguish soil</li> <li>The student gets to know the types of classifications in the world</li> </ul>	
<ul> <li>The student gets to know the types of classifications in the world</li> </ul>	
• The student will be able to manage soil according to its characteristics	
Strategy	
Y- Lecture method	
ν- Student groups	
٤- Practical lessons	
°- Scientific trips	
<sup>7</sup> - Self-learning method	
V. Course Structure	
Week         Hours         Required Learning         Unit or subject         Learning	Evaluati
Outcomes     name     method	on
Einst f. The student gets to know the cont Soil granteer and Exploration	method the exam
First 2 file student gets to know the cont Soll survey and Explanation, presentation of	the exam
classification model and lecture	
the second i The student gets to know the ty Soil survey and Explanation	the exam
of international categories classification presentation of	vaulli
model and lecture	41
the third z for the student to become family Soil survey and Explanation, with classification methods.	the exam
classification model and lecture	
the fourth $\xi$ The student will be familiar with Soil survey and Explanation,	the exam
classification presentation of model and lecture	

Fifth	٤	The stu	dent will learn how to	Soil survey and	Explanation,	the exam
		conduc	t soil mineral surveys	classification	presentation of	
				•••••••••••••	model and lecture	
Sixth	٤	The stud	lent will know how to prep	Soil survey and	Explanation,	the exam
		son map	8.	classification	presentation of	
					model and lecture	
Seventh	٤	For the	student to become fami	Soil survey and	Explanation,	the exam
		with the	classification of land uses.	classification	presentation of	
				Classification	model and lecture	
Eighth	٤	The st	udent will be familiar y	Soil survey and	Explanation,	the exam
6		drawin	g and preparing soil maps.	classification	presentation of	
				clussification	model and lecture	
Ninth	٤	For the	student to become fami	Soil survey and	Explanation,	the exam
		with the	modern American system	classification	presentation of	
	,			~ ~ ~	model and lecture	
The tenth	2	The stuc	lent gets to know the clim	Soil survey and	Explanation,	the exam
		anu nun	nulty factors	classification	presentation of	
<b>E1</b>	4	The s	tudent gets to know		Explanation	the even
Eleventh	2	diagnost	ic soil horizons	Son survey and	nresentation of	the exam
				classification	model and lecture	
Twelfth	÷	The stu	ident will know how	Soil survey and	Explanation.	the exam
I wentin	-	diagnose	unidentified soils		presentation of	
		-		classification	model and lecture	
Thirteenth	٤	The st	udent gets to know the	Soil survey and	Explanation,	the exam
		types		classification	presentation of	
				classification	model and lecture	
fourteenth	٤			Soil survey and	Explanation,	the exam
				classification	presentation of	
	,			~ ~ ~	model and lecture	
Fifteenth	2			Soil survey and	Explanation,	the exam
				classification	presentation of	
	Ireo Eur	Justice	•		model and lecture	
$\frac{1}{1}$ COU		iluatioi	1 Xo			
Y Dreatical	tosts		10			
"- Practical	lesis		70 7.			
- Final exa		ad Taa	ahing Descurres			
Paguirad to	rning al		ching Resources			
hooks if an	w)	(currici	<b>\-Soil survey and cla</b>	assification, Dr. Ahn	ned Al-Mashdani	
Main refere	nces (sor	irces)				
Decommon	ded bool	ze and				
references		s allu	 - · · · ·			
ioumala	(SC)	entific	Iraqi academic scie	entific journals		
Journals, re	ports)	Deferre				
Electronic	l	xeieren	Soil classification			
w edsites						

۲٥.	Cou	rse Name:					
		Soil fertil	ity				
۲٦.	Cou	urse Code:					
۲۷.	Sem	nester / Year:					
		Spring Sem	nester				
۲۸.	Des	cription Preparation Date:					
		1/9/7•7	΄ ξ				
۲۹.	Ava	ilable Attendance Forms:					
		Actual	presence				
۳۰.	Nun	nber of Credit Hours (Total) / Nun	nber of Units (Tot	al)			
۲ tł	neoreti	cal <sup>Y</sup> practical	units <sup>۳</sup>				
۳۱.	Cou	rse administrator's name (mention	all, if more than o	one name)			
Nar	ne: Pro	of. Dr. Kahraman Hussein habib					
Em	ail: : <u>k</u> a	ahraman@uowasit.edu.iq					
۳۲.	Cou	rse Objectives					
Course Obj	ecti	• The student gets to know the	e science of soil fertili	ty			
		• The student should classify t	the types of elements	and their import	tance to plant		
		<ul> <li>The student should detail th</li> <li>The student will be familiar</li> </ul>	with soil fertility eval	luation			
		<ul> <li>The student will be fullimate</li> <li>The student should evaluate</li> </ul>	the soil elements acc	ording to their in	mportance to		
		plants		_			
۳۳.	Tea	ching and Learning Strategies					
Strategy		۰-Explanation and clarificat	cion				
		۲- Lecture method					
		۳- Student groups					
		٤- Practical lessons					
		۰- Scientific trips					
		٦ - Self-learning method					
۳٤. Cours	se Strue	cture					
Week	Hour	<b>Required Learning Outcomes</b>	Unit or subject	Learning	Evaluatio		
	S	The student sets to know growth and	name Fortilizer technology	method	n method		
First	Z	the factors affecting it	rerunzer technology	explanation,	the exam		
				the model a			
				lecture			
the secon	٤	The student gets to know the types	Fertilizer technology	Explanation,	the exam		
		nutrients		presentation			
				lecture			
the third	٤	The student recognizes the movement :	Fertilizer technology	Explanation,	the exam		
		absorption of elements in the soil		presentation			

				the model a	
				lecture	
the fourtl	٤	The student gets to know the types	Fertilizer technology	Explanation,	the exam
		elements in the soil		presentation	
				the model a	
				lecture	
Fifth	٤	The student gets to know the necess	Fertilizer technology	Explanation,	the exam
		elements		presentation	
				the model a	
				lecture	
Sixth	٤	The student gets to know the ma	Fertilizer technology	Explanation,	the exam
		elements		presentation	
				the model a	
				lecture	
Seventh	٤	The student gets to know the smal	Fertilizer technology	Explanation,	the exam
		elements		presentation	
				the model a	
				lecture	
Eighth	٤	The student gets to know the useful a	Fertilizer technology	Explanation,	the exam
0		encouraging elements for growth		presentation	
				the model a	
				lecture	
Ninth	٤	For the student to recognize the distinct	Fertilizer technology	Explanation,	the exam
		between elements		presentation	
				the model a	
				lecture	
The tenth	٤	For the student to get to know	Fertilizer technology	Explanation,	the exam
		Factors affecting the readiness		presentation	
		elements		the model a	
				lecture	
Eleventh	٤	The student gets to know nitrogen and	Fertilizer technology	Explanation,	the exam
		factors		presentation	
				the model a	
				lecture	
Twelfth	٤	The student gets to know phosphorus a	Fertilizer technology	Explanation,	the exam
		potassium and their factors		presentation	
				the model a	
				lecture	
Thirteent	٤	The student gets to know sulfur, calci	Fertilizer technology	Explanation,	the exam
		magnesium, and trace elements		presentation	
				the model a	
				lecture	
fourteent	٤	The student will be familiar with	Fertilizer technology	Explanation,	the exam
		evaluation of soil fertility		presentation	
				the model a	
			T (1) ( )	lecture	4
Fifteenth	z	Ine student will be familiar with	Fertilizer technology	Explanation,	the exam
		organic matter		presentation	
				the model a	
٣٠ 0	Г	1		lecture	
<sup>18</sup> . Cou	irse Ev	aluation			
1-Theoretic	cal tests	07			
Y- Practical	tests	10			
۳- Final exa	m	٦.			

۳٦. Learning and Tead	ching Resources				
Required textbooks (currice Soil fertility Y.) ٤/a. Dr. Nour El-Din Shawky Ali					
books, if any)					
Main references (sources)	Fertilizer technologies and uses, Yony, Prof. Dr. Nour El-				
	Shawqi Ali				
Recommended books and	Iraqi academic scientific journals				
references (scientific					
journals, reports)					
Electronic Reference	Soil Science Society Of America				
Websites	Library Genesis				

۳۷.	Course Name:
	Research methodology
۳۸.	Course Code:
٣٩.	Semester / Year:
	Spring Semester
٤٠.	Description Preparation Date:
	1/9/7•72
٤١.	Available Attendance Forms:
	Actual presence
٤٢.	Number of Credit Hours (Total) / Number of Units (Total)
	۲ theoretical ۲ units
٤٣_	Course administrator's name (mention all, if more than one name)
Name	: Dr. Jawadin talib abd
Email	: jalkooranee@uowasit.edu.ig
٤٤.	Course Objectives
Course Objecti	This line shill according to the stades $t^2$ shill to The second of this shill is
	) - I hinking skill according to the student's ability. The goal of this skill is
	for the student to believe in what is tangible and understand when, what and
	how he should think and work to improve the ability to think reasonably
	Y-Observation and perception
	٤ - Preparation and evaluation
	<ul> <li>Critical thinking strategy in learning.</li> </ul>
٤٥.	Teaching and Learning Strategies

[							
Streeteerry		). Why do we do scientific research and how do we choose the topic?					
Strategy		۲. Identify the foundations of scientific writing.					
۳. Introducing the student to the components of scientific research in					ch in		
		detail					
		• What skills must the research	or posses?				
		2 - What skins must the research	1 possess :				
		•- Learn how to use software to	express results	5.			
		٦- Interpretation of the results					
٤٦. Cours	se St	ructure					
Week	Η	Required Learning Outcomes	Unit or	Learning	Evaluatio		
	ou rs		subject name	method	n method		
First	۲	Scientific research its goals and requirements	Research methodology	Explanation, presentation of model and lecture	the exam		
the secon	۲	Scientific writing	Research methodology	Explanation, presentation of model and lecture	the exam		
the third	٢	Components of Scientific research	Research methodology	Explanation, presentation of model and lecture	the exam		
the fourtl	٢	Components of Scientific research	Research methodology	Explanation, presentation of model and lecture	the exam		
Fifth	٢	Characteristics of research and ethical	Research methodolog	Explanation, presentation of model and lecture	the exam		
Sixth	٢	Exam	Research methodolog	Explanation, presentation of model and lecture	the exam		
Seventh	۲	Data collection	Research methodolog	Explanation, presentation of model and lecture	the exam		
Eighth	٢	Data Analysis	Research methodolog	Explanation, presentation of model and lecture	the exam		
Ninth	۲	Show results	Research methodolog	Explanation, presentation of model and lecture	the exam		
The tenth	٢	Link the results obtained	Research methodolog	Explanation, presentation of model and lecture	the exam		
Eleventh	٢	Abstract of results	Research methodolog	Explanation, presentation of model and lecture	the exam		

Twelfth	۲	Exam		Research	Explanation,	the exam
				methodolog	presentation of	
				0	model and lecture	
Thirteent	۲	Use of scientific references	S	Research	Explanation,	the exam
				methodolog	presentation of	
-				<b>D</b>	model and lecture	4
fourteent	۲	Plagiarism		Research	Explanation,	the exam
				methodolog	presentation of	
E:ft a anoth	۲ ۲	Publishing in scientific journal +	cour	Docoarch	Fynlanation	the exam
Filteenth	'	review	cour	mothodolog	nresentation of	the chum
		Teview		methodolog	model and lecture	
٤٧. Co	urse	Evaluation	1			
)-Theoreti	cal te	ests Yo				
۲- Practica	l test	s 10				
۳- Final ex	am	٦.				
٤٨. Lea	arnin	g and Teaching Resources				
	-	8				
Required	textl	books (methodology, if any)				
Main refere	ences	(sources)				
-			Iragi academic scientific journals			
Recomme	ende	d supporting books and	1		<b>)</b>	
references (scientific journals, reports)						
Electronic	c refe	erences, Internet sites				

٤٩.	Course Name:
	Soil microbiology
۰.	Course Code:
٥١.	Semester / Year:
	Spring Semester
٥٢.	Description Preparation Date:
	1/9/2025
٥٣.	Available Attendance Forms:
	Actual presence
٥٤.	Number of Credit Hours (Total) / Number of Units (Total)
۲t	heoretical ۲ practical units ۳
٥٥.	Course administrator's name (mention all, if more than one name)
Na	ame: Prof. Dr. Radhi Kadhim
En	nail: : <u>radhi_alrashidi@ahoo.com</u>

٥٦.	(	Course Objectives					
Course Obj	<ul> <li>Course Objecti</li> <li>The student gets to know the classification and types of Soil microbiology an their importance</li> <li>For the student to learn about methods of Soil microbiology</li> <li>For the student to recognize method of Soil microbiology</li> <li>The student should evaluate Soil microbiology</li> </ul>						
٥٧.	Г	Feaching and Learning Strategies					
Strategy          \-Explanation and clarification             \-Explanation and clarification							
Week	H	Required Learning Outcomes	Unit or	Learning	Evaluatio		
,, con	ou rs	Acquired Learning Outcomes	subject name	method	n method		
First	٤	Historical overview, definition, and	Soil Microbiology	Explanation, presentation of model and lecture	the exam		
the secon	ź	importance of studying soil microbioloន្ Sections of soil microbiology	Soil Microbiology	Explanation, presentation of model and lecture	the exam		
the third	٤	Soil microbial groups: bacteria, fui algae, actinomycetes, archa mycorrhizae.	Soil Microbiology	Explanation, presentation of model and lecture	the exam		
the fourtl	٤	Organic matter: carbon cycle, enzyma activity in soil	Soil Microbiology	Explanation, presentation of model and lecture	the exam		
Fifth	٤	Biotransformations of N, nitrogen cy urea decomposition, nitration proce mineralization and assimilation, C/N ra	Soil Microbiolog	Explanation, presentation of model and lecture	the exam		
Sixth	٤	Biological nitrogen fixation	Soil Microbiolog	Explanation, presentation of model and lecture	the exam		
Seventh	٤	Biological transformations of phosphor its cycle and the role of microorganisms its transformations	Soil Microbiolog	Explanation, presentation of model and lecture	the exam		
Eighth	٤	Biological transformations of phosphor its cycle and the role of microorganisms its transformations	Soil Microbiolog	Explanation, presentation of model and lecture	the exam		
Ninth	٤	Biological transformations of sulf sulfur cycle, mineralization, microl metabolism, oxidation, and reduction inorganic sulfur compounds.	Soil Microbiolog	Explanation, presentation of model and lecture	the exam		

The tenth	٤	Biotransformations of iron: oxidati reduction, and decomposition of orga iron compounds	Soil Microbiolog	Explanation, presentation of model and lecture	the exam
Eleventh	٤	Biotransformations of iron: oxidati reduction, and decomposition of orga iron compounds	Soil Microbiolog	Explanation, presentation of model and lecture	the exam
Twelfth	٤	Decomposition of pesticides in soil	Soil Microbiolog	Explanation, presentation of model and lecture	the exam
Thirteent	٤	Relationships between microorganis the area surrounding the ro (rhizosphere) and the activity microorganisms in this area Factors affecting the growth of	Soil Microbiolog	Explanation, presentation of model and lecture	the exam
fourteent	٤	microorganisms, growth microorganisms	Soil Microbiolog	Explanation, presentation of model and lecture	the exam
Fifteenth	٤	Factors affecting the growth microorganisms, growth microorganisms	Soil Microbiolog	Explanation, presentation of model and lecture	the exam
٥٩. Cou	ırse	Evaluation			
۱-Theoreti	cal t	ests Yo			
۲- Practical	l tes	its 10			
۳- Final exa	am	٦.			
<u>۲۰</u> . Lea	.rnii	ng and Teaching Resources			
Required te	extb	ooks (curricy) - Soil Microbiology, Dr	: Ghayath M	luhammad Al-So	urji
dooks, 11 an	y)	۲-Lectures			
Main refere	nces	s (sources)			
Recommended books and references (scientific description of the scientific description of the science of the sc					
journals, rej	port	Boforond			
Websites		Soil Micrology			

۱. Course Name:
Soil Chemistry
<sup>7</sup> . Course Code:
۳. Semester / Year:
Spring Semester
٤. Description Preparation Date:

			۱/٩/	T•T£		
°. Ava	ilable At	tendance Forms:				
			Actu	al presence		
٦. Nun	nber of C	Credit Hours (Tota	l) / Numb	er of Units (Total)		
۲	theoret	ical <sup>۲</sup> prae	ctical	units <sup>۳</sup>		
۲. Cou	rse admi	nistrator's name (1	mention al	l, if more than one name	e)	
Nan	ne: Assis	tant Professor Dr.	Mahdi wa	sami sahib		
Ema	il: malai	edy@uowasit.edu	ı.iq			
<sup>A</sup> . Course Objectives						
Course Obje	Course Objectives The soil chemistry course aims to explain the principles used in stu the chemical composition of soil. During this course, the stude introduced to all the chemical properties of soil and how to estimat calculate them practically and in the field. During this course					
	chemical properties of soil are linked to other branches of soil science					
۹. Tead	ching and	d Learning Strateg	gies			
Strategy					1	
		• Make the learne	r active ar	d effective in education	al situations.	
		• Teach students ( • Denefit from ot)	o respect	anterent opinions and va	alue others	
Course Structure						
Week	Veek Hours Required Unit or Learning method Evaluation method					
VV CCIX	liouis	Learning	subject	Loui inig incensu	L'unuuron memou	
		Outcomes	name			
First	٤	The importance	Soil	Explanation, presentation	Exam	
		studying soil	chemist	the model and lecture		
	1	chemistry,	0.11	E		
the second	Ζ	Ion excha	ar Soll	Explanation, presentation the model and lecture	Exam	
		equations,	cnemist			
		physicochemical				
the third	4	chemical equation	o Soil	Explanation, presentation	Evam	
	-	soil anion eyele	u sun	the model and lecture	L'Adill	
		canacity				
the fourth	٤	Solubility bal	ar Soil	Explanation, presentation	Exam	
		in soil	chemist	the model and lecture		
Fifth	٤	Carbonate	Soil	Explanation, presentation	Exam	
		equilibrium, C	chemist	the model and lecture		
		HYO syst	te			
		CaCO <sup>r</sup> -H <sup>r</sup> O-CO	C			
		system in soil				
Sixth	٤	Phosphorus bala	n Soil	Explanation, presentation	Exam	
		ionization	chemist	the model and lecture		
		phosphorus in	se			
		phosphorus				
		reactions				

Seventh	ź	Chemical potent of ions in the s system - s	Soil chemist	Explanation, presentation the model and lecture	Exam
Eighth	٤	phosphorus dissolution Soil acidity a alkalinity	Soil chemist	Explanation, presentation the model and lecture	Exam
Ninth	٤	curves in Al <sup>†</sup> O <sup>r</sup> -Fe <sup>†</sup> O <sup>r</sup> - CaO-P <sup>†</sup> O <sup>o</sup> -H <sup>†</sup> O system	Soil chemist	Explanation, presentation the model and lecture	Exam
Tenth	٤	the importance studying the deg of soil reaction	Soil chemist	Explanation, presentation the model and lecture	Exam
Eleventh	٤	sources of acidity the soil, methods measuring acid and alkalinity	Soil chemist	Explanation, presentation the model and lecture	Exam
Twelfth	ź	effect of the deg of reaction on cation exchar capacity.	Soil chemist	Explanation, presentation the model and lecture	Exam
Thirteenth	٤	Equilibrium curv soil bufferii acidity	Soil chemist	Explanation, presentation the model and lecture	Exam
Fourteenth	٤	alkalinity of soils dry and semi-a areas, calcareoussoils, a gypsum soils.	Soil chemist	Explanation, presentation the model and lecture	Exam
۱۱. Cou	rse Evalu	ation			
Distributing	the score	out of <i>\</i> according	to the task	s assigned to the student suc	h as daily preparation,
daily oral, m	onthly, or	written exams, report	s etc	5	• -
17. Lean	rning and	l Teaching Resourc	ces		
Required books if any	textbooks	s (currict S	oil chem	istry	
Main referen	nces (sourc	ces) B	Books rela	ated to the subject and sc	eientific research
Recommend references reports)	led boo (scientific	ks and journals,			
Electronic R	eferences,	Websites ht	tps://onlinelib	rary.wiley.com/doi/full/۱۰,۱۰۰۲/۹۷۸	11198VIY.wstsYo

		<b>Course Des</b>	cription	n Form			
۱. C	• Course Name:						
		Engl	lish Langu	uage			
۲. С	ourse (	Code:					
T Se	emeste	r / Year·					
	emeste	Sp	ring seas	on			
٤. D	escript	ion Preparation Date:					
ο Λ	voilabl	Attendence Forme	1/4/1.12				
•. A	vallaul		Actual pr	esence			
٦. N	umber	of Credit Hours (Total) / Nu	mber of	Units (Total)			
		theoretical		units <sup>\</sup>			
۷. C	ourse	administrator's name (me	ntion all	, if more than one name)			
	т	Name:prof. Dr. Qassim har Imai.ghammadi@uauuagit	nmadi				
Å C	ourse (	hiectives	euu.iq				
Course Objective	es	* Teaching students, the basic con to the English language for studen * The student gets to know the con * Enabling students to know how	ncepts rela nts of the C ncept of th to deal wit	ted to access to the simple basics o College of Agriculture. e English language. h the English language	f an introduct		
۹. Т	eaching	and Learning Strategies					
Strategy		)-Explanation and cl	arificatio	on			
~8,		۰ - Lecture method					
		$\epsilon$ - Practical lessons					
		°- Scientific trips					
		۲ - Self-learning met	hod				
۱۰. Cou	urse Str	ucture					
Week	Hour s	Required Learning Outcomes	Unit or subject	Learning method	Evaluatio n method		
	5		name		n mounou		
First	1	It's a wonderful world: - Tenses - Auxiliary verbs - Short answers - What's in a word? - Social expressions	`	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class		
Second	1	Get happy! - Simple or continuous? - Passive - Sport - Numbers and dates	۲	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and activities in class		
Third	١	Telling tales: - Past tenses - Passive - Art and literature	٣	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and		

		- Giving opinions			activities in
Fourth	1	Doing the right thing: - Modal verbs \ - Obligation and permission - Nationality words - Requests and offers	٤	Explanation, presentation of model and lecture	class The exam, Quizzes, Reports, and activities in class
Fifth	1	On the move: - Future forms - The weather - Travelling	0	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class
Sixth	1	I just love it: - Like - Verb patterns - Describing food, towns, and people - Signs and sounds	۹	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and activities in class
Seventh	``	The world of work: - Present perfect active and passive - Phrasal verbs - On the phone	V	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class
Eighth	)	Just imagine! - Conditionals - Time clauses - Base and strong adjectives - Making suggestions	٨	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and activities in class
Ninth	)	Getting on together: - Modal verbs <sup>۲</sup> - Probability - Character adjectives - So do I! Neither do I!	٩	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class

tenth	)	Obsessions: - Present perfect continuous - Time expressions - Compound nouns - Quantity	1.	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class
Eleventh	`	Tell me about it! - Indirect questions - Question tags - The body - Informal English	11	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and activities in class
Twelfth	1	Life's great events! - Reported speech - Reporting verbs - Birth, marriage, and death - Saying sorry	17	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class
Thirteent	1	Writing: - Correcting mistakes \	1-17	Explanation, presentation of	The exam, Quizzes,

	- M - A I - V - W - Co	- Letters and emails - A narrative \ - For and against laking a reservation - A description \ letter of Application - A narrative \ - A description \ Writing a biography Vords that join ideas prrecting mistakes \		model and lecture	Reports, and activities in class				
fourteent '	- Re	Pairwork activities: - Practice - Vocabulary ading and speaking - Problems	1-17	Explanation, presentation of model and lecture	the exam, Quizzes, Reports, and activities in class				
Fifteenth )		Reviewing	1-17	Explanation, presentation of model and lecture	The exam, Quizzes, Reports, and activities in class				
Course Evaluation									
۲-Theoretical tests ۲- Quizzes, Reports, and Class's Activities ۳- Final exam									
۲.Learning and Teaching Resources									
Required textbo books, if any)	oks (curricu	Intermediate Student's Book: New Headway Plus (John and Soars) Oxford University Press							
Main references (	(sources)	2	<u>v</u>						
Recommended references journals, reports	books and (scientific )								
Electronic Refere	ences, Websit	Internet	network						