Academic Program Description Form

University Name: Tikrit University

Faculty/Institute: College of Agriculture

Scientific Department: Food Sciences

Academic or Professional Program Name: Bachelor of Agricultural Sciences/ Food Sciences

Final Certificate Name: Bachelor of Agricultural Sciences/ Food Sciences

Academic System: Season

Description Preparation Date: 14/9/2025

File Completion Date: 14/9/2025

Signature:

Head of Department Name:

professor Dr.Adal abd alrahman Aljumaily

Date:

Signature:

Scientific Associate Name:
Professor Dr. Mohammed saleh Mohammed

Date: 14/9/2025

The file is checked by:

Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Professor Dr. Maysaloon Wail Ibraheem

Date: 14.9.2025
Signature:

Approval of the Dean

Dr. Sami Khader Saeed

14/9/2025

1. program Vision

Preparing scientifically qualified personnel and engaging with the community to transfer modern agricultural technologies and keep up with global developments.

In the agricultural sector. And imparting to students the nature, methods, and techniques of agriculture. And providing students with information regarding programs related to modern agricultural methods.

2. Program Mission

The main goal of the department is to provide the community with skilled individuals and teams working in various educational and pedagogical fields, as well as in industrial, banking, security, and economic sectors through:
1- Graduating agricultural engineers with high-level qualifications capable of modernizing the infrastructure in the field of agriculture.
2- Developing students and equipping them with modern technologies, and providing services to the community and the labor market.
3- Building leadership qualities in graduates by training them to work as a cohesive team.
4- Supporting and providing a good working environment for students and faculty members.
5 - Caring for and supporting the outstanding students and encouraging them.

3. program Objectives

1. Preparing graduates with high theoretical and practical skills to meet the needs of the industry, technological development, and community service in the field of agricultural engineering. Preparing graduates with high theoretical and practical skills to meet the needs of the industry, technological development, and community service in the field of agricultural engineering.
2. Equipping graduates with practical application skills and the necessary engineering background according to the scientific developments in the curriculum and modern teaching methods to pursue postgraduate studies in various agricultural engineering specialties. Equipping graduates with the necessary practical skills and engineering background in accordance with the scientific developments in the curriculum and modern teaching methods to pursue postgraduate studies in various fields of agricultural engineering.
3. Preparing graduates for effective participation in the construction and reconstruction of the country and achieving economic and social benefits for the community. Preparing graduates for effective participation in the construction and reconstruction of the country and achieving economic and social benefits for the community.

4. Programmatic Accreditation

The curricula for all stages and for the coming years

5. Other external influences

The instructions and guidelines related to the program

6. Program Structure

Notes *	Percentage	Study unit	Number of courses	Program Structure
Essential	9.90%	17	14	Institutional requirements
Essential	% 39.06	67	21	College requirements
Essential	51.02%	87.50	27	Department requirements
			1	Summer internship
				Other

* The notes may include whether the course is mandatory or elective.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
3	001230	Food Plant Engineering	2	3
	001230	Food Chemistry	2	3
	001203	Grain Processing	2	3
	001230	Molecular Biology	2	3
	001230	Food Microbiology	2	
	001230	Principles of Human Nutrition	2	3
	011203	Liquid Dairy Products	2	
	002230	Agricultural Marketing	2	3
	002230	Dairy Chemistry	2	3
	002203	Bread and Pastries	2	3
	002230	Genetic Engineering	2	3
	002203	Dairy Microbiology	2	3
	002230	Metabolic Pathways	2	3
	012203	Date and Sugar Processing	1	
	001240	Computer Applications 3	2	3

4	**001240**	Food Processing 1	**2**	**3**
	001240	Cheese Production	**2**	**3**
	001240	Biotechnology 1	**2**	**3**
	001240	Food Analysis	**2**	**3**
	011204	Meat and Fish Processing	**2**	**3**
	002240	Handling and Storage	**2**	**3**
	002240	Food Processing 2	**2**	**3**
	002240	Butter and Ice Cream	**2**	**3**
	002240	Biotechnology 2	**2**	**3**
	002240	Quality Control	**2**	**3**
	102204	Therapeutic Nutrition	**1**	
	102240	Seminars	**1**	

8. Expected learning outcomes of the program

Knowledge

- The student should possess the ability to comprehend the principles, theories, and fundamentals of agricultural engineering.
- The student should have the ability to understand modern and advanced scientific topics in the field of agricultural engineering.
- The student should be able to understand the mathematics and equations specific to their field of study.
- The student should be able to solve engineering problems, design agricultural parts, and understand the fundamentals of their theoretical applications.
- The student should be able to understand the fundamentals of how laboratory devices used in agricultural testing work.

Skills

- Description and analysis of agricultural applications.
- Analysis of problems related to agricultural engineering and discussion of possible solutions.
- Using agricultural engineering software programs to analyze those problems

Fundamentals

- Preparation of engineering designs for agricultural parts and systems.
- Analyzing engineering test results and discussing them to be used in design and evaluation processes.
- The ability to write and formulate technical engineering reports on the results of inspections and scientific tests.

9. Teaching and learning strategies

- Daily theoretical lectures.
- Practical lectures in the laboratories.
- Graduation projects for final-year students and their discussion.

10. Evaluation methods

- Monthly and semester written exams.
- Quizzes.
- Homework.
- Writing scientific reports.

N	The full name	Academic Qualification	Academic title	Mobile number	E.mail
1.	karkaz Mohammed Thalj Abdoun Al-Jubouri	PhD	Professor	7722414466	kthalij@tu.edu.iq
2.	Feryal Farouq Hussein Ali Al-Azzawi	PhD	Professor	7703013663	feryal_alazawi@tu.edu.iq
3.	Mohammed Ahmed Jasim Mohammed Al-Jubouri	PhD	Professor	7707533250	kkk.aa91@tu.edu.iq
4.	Hani Sabbar Aed Hassan Al-Shammari	PhD	Professor	7705132696	Dr.hani.ayed@tu.edu.iq
5.	Shaimaa Abd Mohammed Ali Al-Rubaie	PhD	professor	7729283329	sheimaa.abed@tu.edu.iq
6.	Ahmed Ismail Ahmed Mahmoud Al-Nazzal	PhD	Assistant	7707595921	ad-ahmadalnazzal@tu.edu.iq
7.	Ahmed Mohsen Ali Ahmed Al-Janabi	PhD	Assistant	7703019931	ahmedmuhsinal@tu.edu.iq
8.	Khalaf Nahr Ahmed Hamad Al-Jubouri	PhD	Assistant	7706152544	khalafalgburi@tu.edu.iq
9.	Sami Khudr Saeed Abd Al-Obaidi	PhD	Assistant	7736875516	alsaeed910@tu.edu.iq
10.	Sabraa Saad Yaseen Ali Al-Samarrai	PhD	Assistant	7702626488	aliaaman211@tu.edu.iq
11.	Adel Abdulrahman Mustafa Hadi Al-Jumaili	PhD	Assistant	7708312028	adelabd083@tu.edu.iq
12.	Abdulkhaliq Suleiman Khalaf Ibrahim Al-Jubouri	PhD	Assistant	7702098364	abdsuleman86@tu.edu.iq
13.	Ghazwan Mahdi Saleh Ahmed Al-Jubouri	PhD	Assistant	7705137354	gozwanmahdy@tu.edu.iq
14.	Marwa Ibrahim Abdulhamid Al-Janabi	PhD	Assistant	7701996976	marwaibraheem@tu.edu.iq
15.	Manal Saleh Mahdi Shaher Al-Shammari	PhD	Assistant	7701716728	manal-salihu@tu.edu.iq
16.	Noor Jumaa Fadil Hishan Al-Shishawi	PhD	Assistant	7719683725	dr.noorjumhaa@tu.edu.iq
17.	Yasmin Ismail Khalil Mohammed Al-Hadidi	PhD	Assistant	7705166297	yasameen.koo2@tu.edu.iq
18.	Intisar Dawood Mustafa Hamad Al-Nasiri	PhD	Assistant	7705873836	entsar.daood81@tu.edu.iq
19.	Anwar Ahmed Khalaf Hazaa Al-Jubouri	PhD	Assistant	7703723901	anwor.ahmed@tu.edu.iq
20.	Ziyad Tariq Sameer Ali Al-Janabi	PhD	Assistant	7705695696	a.zead11@tu.edu.iq
21.	Saad Dhamen Aliwi Mutlaq Al-Jubouri	PhD	Assistant	7702008449	saaddhamin2@tu.edu.iq
22.	Tariq Khaled Mahmoud Abd Al-Jubouri	PhD	Assistant	7723457122	tariqkhald3@tu.edu.iq
23.	Abdulkarim Abdulrazzaq Karim Abbas Al-Jawari	PhD	Assistant	7703220111	kareemjua@tu.edu.iq
24.	Nema Khalaf Hamza Mohammed Al-Jubouri	PhD	Assistant	7702302489	neamhalamzah@tu.edu.iq
25.	Numeir Khairallah Mohammed Jasim Al-Ajmi	PhD	Lecturer	7725322522	nameer@tu.edu.iq
26.	Ahmed Salah Al-Din Mohi Al-Din Ali Al-Qazzaz	PhD	Lecturer	7702308041	ahmedalkzaz@tu.edu.iq
27.	Enas Khaled Ahmed Faraj	PhD	Lecturer	7706131077	enaskhalid@tu.edu.iq

28.	Basheer Mohammed Aqdeem Mutab Al-Janabi	PhD	Lecturer	7710671000	bashir.m@tu.edu.iq
29.	Hussein Issa Hamad Mishhan Al-Janabi	PhD	Lecturer	7722217169	husseinessa2019@tu.edu.iq
30.	Khattab Abdulsalam Khattab Omar Al-Nasiri	PhD	Lecturer	7707535715	khattabsalam90@tu.edu.iq
31.	Duraid Hamada Ayyash Hamad Al-Jubouri	PhD	Lecturer	7707581036	jobdur86@tu.edu.iq
32.	Abdulrahman Mahfouz Khalil Abdullah Al-Douri	PhD	Lecturer	7722424466	Abdulrahman2020@tu.edu.iq
33.	Orooba Bahjat Shihab Hamad Al-Jubouri	PhD	Lecturer	7709520637	oroba325@tu.edu.iq
34.	Ali Hassan Abdulwahab Jameel	PhD	Lecturer	7705161617	ali.h.abdalwahab@tu.edu.iq
35.	Ali Hussein Jameel Mohammed Al-Jubouri	PhD	Lecturer	7732128145	alihussen@tu.edu.iq
36.	Ali Nizar Abdulghaffar Abdulmajeed	PhD	Lecturer	7736225854	ali.nazar.99879@tu.edu.iq
37.	Ghina Hamed Abdulkarim Hassan	PhD	Lecturer	7703714134	ghnaa.hamad@tu.edu.iq
38.	Faris Saleh Mahal Huwaija Al-Jubouri	PhD	Lecturer	7701810700	farisalmahal@tu.edu.iq
39.	Mohammed Tahseen Mohammed Omar Al-	PhD	Lecturer	7709393144	t363966@tu.edu.iq
40.	Muhannad Laith Khalil Mahmoud Al-Amin	PhD	Lecturer	7703363602	mohanad_layth@tu.edu.iq
41.	Naseer Mousa Farhan Mahmoud Al-Douri	Master's	Assistant teacher	7709550553	naseeralnajar73@tu.edu.iq
42.	Yasser Abdulsalam Saber Abdulaziz Al-Rifai	Master's	Assistant teacher	7701816555	yasser.alsalam@tu.edu.iq
43.	Al-Hakam Ali Khalif Mughayer Al-Dughan	Master's	Assistant teacher	7708979616	hkmaldoghan@tu.edu.iq
44.	Sura Ali Zughair Ali Al-Shammari	Master's	Assistant teacher	7733562278	suraaB024@tu.edu.iq
45.	Issam Khudair Zain Dahi Al-Janabi	Master's	Assistant teacher	7703025384	isam.k4@tu.edu.iq
46.	Ali Mohammed Saeed Abdulhadi Al-Maamari	Master's	Assistant teacher	7702864434	alialmamaree337@tu.edu.iq
47.	Imad Salem Hosi Asmi	Master's	Assistant teacher	7705135849	imad.s.hosee@st.tu.eduiq
48.	Fatima Shakir Mahmoud Shihab Al-Douri	Master's	Assistant teacher	7704717292	fatima.shihab@tu.edu.iq
49.	Fattah Falih Hamdan Ahmed	Master's	Assistant teacher	7806880741	fatah.f.h0140@st.tu.ed.iq
50.	Mohammed Jasim Mohammed Houri	Master's	Assistant teacher	7702021122	mohammed.alhoory@tu.edu.iq
51.	Noha Mohammed Jiyad Hardan Al-Obaidi	Master's	Assistant teacher	7722217169	Nuha.mjiyad.a@tu.edu.iq
52.	Hiba Ahmed Ibrahim Hussein Al-Jubouri	Master's	Assistant teacher	7832715619	hiba.a.ibrahim@tu.edu.iq
53.	Saad Saleh Mahdi Darwish Al-Jubouri	Master's	Assistant teacher	7723413738	saad.salih1995@tu.edu.iq
54.	Shahd Rasool Mutlaq Haif Al-Mohammadi	Master's	Assistant teacher	7823739164	shahid.r.mutlaq@tu.edu.iq
55.	Abeer Majeed Saleh Qadoori	Master's	Assistant teacher	7733562278	Aber_maged@tu.edu.iq
56.	Dina Kamal Salem Hassan	Master's	Assistant teacher	7703025384	Dena2021@tu.edu.iq
57.	Nema Khalaf Hamza Mohammed	Master's	Assistant teacher	7702864434	Nemaa_kalaf@tu.edu.iq

Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full—time, and part—time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

11. Acceptance Criterion
(Setting regulations related to enrollment in the college or institute, whether central admission or others)
central

12. The most important sources of information about the program
State briefly the sources of information about the program.
1. The college and university website 2. University guide 3. Central Library 4. The most important books and sources for the department 5.Textbooks 6. Internet

13. Program Development Plan
1. Regularly review curricula and educational production units to identify strengths and weaknesses and address scientific gaps. 2. Conduct ongoing assessments of labor market needs in the poultry and ruminant sector to align graduates' skills with actual requirements. 3. Develop a performance measurement system that includes field tests and practical skills assessments alongside traditional theoretical program assessments. 4. Integrate artificial intelligence and environmental sustainability into core courses to keep pace with global developments in animal production.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
3	001230	Food Plant Engineering	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	001230	Food Chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	001203	Grain Processing	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	001230	Molecular Biology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	001230	Food Microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	001230	Principles of Human Nutrition	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	011203	Liquid Dairy Products	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	002230	Agricultural Marketing	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	002230	Dairy Chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	002203	Bread and Pastries	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	002230	Genetic Engineering	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	002203	Dairy Microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	002230	Metabolic Pathways	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	012203	Date and Sugar Processing	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	001240	Computer Applications 3	Basic	*	*	*	*	*	*	*	*	*	*	*	*

4	001240	Food Processing 1	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	001240	Cheese Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	001240	Biotechnology 1	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	001240	Food Analysis	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	011204	Meat and Fish Processing	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	002240	Handling and Storage	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	002240	Food Processing 2	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	002240	Butter and Ice Cream	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	002240	Biotechnology 2	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	002240	Quality Control	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	102204	Therapeutic Nutrition	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	102240	Seminars	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	001230	Food Plant Engineering	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	001230	Food Chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	001203	Grain Processing	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*

Ministry of Higher Education and Scientific Research
Tikrit University
College of Agriculture
Department of Agricultural Economics and Extension

Academic Program and Course

2025–2026

Academic Program Description Form

University Name: Tikrit University

Faculty/Institute: College of Agriculture

Scientific Department: Department of Agricultural Economics and Extension

Academic or Professional Program Name: Bachelor of Science in Agriculture/Agricultural Economics and Extension

Final Certificate Name: Bachelor of Science in Agriculture/Agricultural Economics and Extension

Academic System: Season

Description Preparation Date: 1/9/2025

File Completion Date: 1/9/2025

Signature:

Head of Department Name:
professor Dr. Raad Muhammad Nada

Date: 1/9/2025

Signature:

Scientific Associate Name:
Professor Dr. Mohammed saleh Mohammed

Date:

The file is checked by:

Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Professor Dr. Maysaloon Wail Ibraheem

Date: 14.9.2025

Signature:

Approval of the Dean

Dr. Sami Khader Saeed

14/9/2025

Introduction

The educational program is a coordinated and organized package of courses that includes procedures and experiences organized into course ,vocabulary. Its main purpose is to build and refine the skills of graduates making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit .procedures and programs, such as the external examiner program

The academic program description provides a brief summary of the program's main features and courses, indicating the skills that students are working to acquire based on the academic program's objectives. The importance of this description is evident in that it represents the cornerstone for obtaining program accreditation, and it is written by the teaching staff under the supervision of the scientific committees in the .academic departments

This second edition of the guide includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the developments and changes in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, semester system), as well as adopting the generalized academic program description according to the Department of Studies' letter T M3/2906 dated 3/5/2023 with regard to programs that .adopt the Bologna Process as the basis for their work

In this regard, we cannot but emphasize the importance of writing descriptions of academic programs and courses to ensure the smooth .running of the educational process

Concepts and terminology:

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

Course description: This provides a concise summary of the course's key features and expected learning outcomes, demonstrating whether the student has made the most of the available learning opportunities. It is derived from the program .description

Program Vision: An ambitious vision for the future of the academic program to be a .sophisticated, inspiring, motivating, realistic and applicable program

,Program Mission: Briefly outlines the goals and activities necessary to achieve them .and identifies the program's development paths and directions

Program objectives: These are statements that describe what the academic program .intends to achieve within a specific time period and are measurable and observable

Curriculum structure: All courses/study materials included in the academic program ,according to the approved learning system (semester, annual, Bologna track) whether required (Ministry, University, College and Scientific Department), with the .number of study units

Learning outcomes: A consistent set of knowledge, skills, and values acquired by the student after the successful completion of the academic program. The learning outcomes for each course must be defined in a way that achieves the program's .objectives

Teaching and learning strategies are the strategies used by faculty members to enhance student teaching and learning. They are plans followed to achieve learning objectives. In other words, they describe all classroom and extracurricular activities .aimed at achieving the program's learning outcomes

1. Program Vision
The Department of Agricultural Economics and Extension, with its available human resources, strives to prepare specialized scientific personnel who meet the demands of the labor market, and to ensure that these personnel excel in their respective fields by providing educational, research, and consulting services to the local community in the areas of agricultural economics and extension, in order to achieve self-sufficiency in agricultural .products and sustainable agricultural development

2. Program message
The Department of Agricultural Economics and Extension, along with other departments, contributes to achieving the college's mission by supporting students with information, knowledge, and skills. The economic and social aspects related to the specialization, and the preparation of highly qualified graduates capable of contributing to the development and growth of the agricultural sector in Iraq. By disseminating and implementing knowledge of economic aspects and guidance programs within the local community

3. Program objectives
1- Preparing highly competent graduates who can transfer their academic experiences and knowledge to the agricultural masses in the countryside.
2- Conducting economic, financial, marketing and feasibility studies for agricultural projects of all types.
3- Strengthening the link between the department and various state institutions through graduate student research that provides solutions to any agricultural problem they face.
4- Serving the local community through guidance activities such as holding scientific courses and seminars and providing consulting services.
5- Developing the performance of affiliates and increasing their scientific and practical efficiency through seminars, conferences, training courses, workshops and other activities.

4. Program accreditation
ABET accredited by the Ministry of Higher Education and Scientific Research

5. Other external influences
Infrastructure, financial and human resources

6. Program Structure / Economics Branch				
* comments	Percentage	Study unit	Number of courses	Program structure
Basic	7.35	10	10	Institutional requirements
Basic	28.67	39	13	College requirements

Basic	63.98	87	34	Department requirements
				Summer training
				Other

.The notes may include whether the course is core or elective *

7. Program Structure / Guidance Branch				
* comments	Percentage	Study unit	Number of courses	Program structure
Basic	7.14	10	10	Institutional requirements
Basic	32.14	45	15	College requirements
Basic	60.72	85	31	Department requirements
				Summer training
				Other

8. Program Description				
Credit Hours		Course name	Course code	Year / Level
(Practical) 3	2 (Theoretical)	agricultural economy		First stage
(Practical) 3	2 (Theoretical)	mathematics		
(Practical) 3	2 (Theoretical)	Animal production		
(Practical) 3	2 (Theoretical)	Gardening basics		
(Practical) 3	2 (Theoretical)	field crops		
--	1 (Theoretical)	English language 1/		

	) 1 (Theoretical	rights		
(Practical) 3	---	Computers/1		
(Practical) 3	2 (Theoretical)	Social psychology		
(Practical) 3	2 (Theoretical)	rural community		
(Practical) 3	2 (Theoretical)	Soil principles		
(Practical) 3	2 (Theoretical)	Principles of Industries		
(Practical) 3	2 (Theoretical)	Agricultural mechanization		
--	1 (Theoretical)	English language /2		
(Practical) 3	---	Computers /2		
(Practical) 3	2 (Theoretical)	Partial theory		Phase Two
(Practical) 3	2 (Theoretical)	Principles of Statistics		
(Practical) 3	2 (Theoretical)	Guiding principles		
(Practical) 3	2 (Theoretical)	Basics of prevention		
(Practical) 3	2 (Theoretical)	Poultry production		
(Practical) 3	---	Computers /3		
(Practical) 3	2 (Theoretical)	Vegetable production		
---	) 1 (Theoretical	English language /3		
(Practical) 3	2 (Theoretical)	Agricultural marketing		

(Practical) 3	2 (Theoretical)	adult education		
(Practical) 3	---	Computers /4		
----	) 1 (Theoretical	Freedom and democracy		
(Practical) 3	2 (Theoretical)	Irrigation and drainage		
(Practical) 3	2 (Theoretical)	Health and Diseases		
(Practical) 3	2 (Theoretical)	Partial theory /2		/ Phase Three Economics
(Practical) 3	2 (Theoretical)	Macroeconomics /1		
(Practical) 3	2 (Theoretical)	Agricultural statistics methods		
(Practical) 3	2 (Theoretical)	Agricultural accounting		
(Practical) 3	2 (Theoretical)	farm management		
(Practical) 3	2 (Theoretical)	Mathematical economics		
---	2 (Theoretical)	Technology transfer		
(Practical) 3	2 (Theoretical)	Macroeconomics /2		
(Practical) 3	2 (Theoretical)	Production economics		
(Practical) 3	2 (Theoretical)	Agricultural cost accounting		
(Practical) 3	2 (Theoretical)	Banana basics		
---	2 (Theoretical)	Price Analysis		

---	2 (Theoretical)	monetary and fiscal policy		
---	1 (Theoretical)	English language /4		
(Practical) 3	2 (Theoretical)	Community development		/ Phase Three Economics
(Practical) 3	2 (Theoretical)	Technology transfer		
(Practical) 3	2 (Theoretical)	Guidance methods		
(Practical) 3	2 (Theoretical)	Economic insects		
(Practical) 3	2 (Theoretical)	Jungles and methods of combating them		
(Practical) 3	2 (Theoretical)	Groups and leadership		
(Practical) 3	2 (Theoretical)	Guidance tools and aids		
(Practical) 3	2 (Theoretical)	Guidance communication methods		
(Practical) 3	2 (Theoretical)	farm management		
(Practical) 3	2 (Theoretical)	Research methods		
(Practical) 3	2 (Theoretical)	agricultural pest control		
(Practical) 3	2 (Theoretical)	Banana basics		
----	) 1 (Theoretical	English language /4		
----	2 (Theoretical)	Agricultural development		

(Practical) 3	2 (Theoretical)	Standard Economics 1/		/ Phase Four Economics
----	2 (Theoretical)	Resource Economics		
(Practical) 3	2 (Theoretical)	grain crops		
----	2 (Theoretical)	agricultural policy		
----	1 (Theoretical)	Research methods and episodes		
----	1 (Theoretical)	Research project		
(Practical) 3	2 (Theoretical)	Financing and lending		
(Practical) 3	2 (Theoretical)	Standard Economics 2/		
(Practical) 3	2 (Theoretical)	Project evaluation		
----	2 (Theoretical)	agricultural planning		
----	2 (Theoretical)	foreign trade		
----	2 (Theoretical)	Economic thought and systems		
----	1 (Theoretical)	Research project		
(Practical) 3	2 (Theoretical)	Guidance environment		/ Phase Four Guidance
(Practical) 3	2 (Theoretical)	Guidance training		
(Practical) 3	2 (Theoretical)	Guidance Management		
(Practical) 3	2 (Theoretical)	Program planning		

(Practical) 3	2 (Theoretical)	Theories of change		
-----	1 (Theoretical)	Graduation research		
(Practical) 2	---	episodes		
(Practical) 3	2 (Theoretical)	Evaluation of guidance programs		
(Practical) 3	2 (Theoretical)	Public Relations Guidance		
(Practical) 3	2 (Theoretical)	Guidance for women and rural youth		
(Practical) 3	2 (Theoretical)	Educational Psychology		
(Practical) 3	2 (Theoretical)	Agricultural extension programs		
(Practical) 2	----	episodes		
-----	1 (Theoretical)	Research project		

9. Expected learning outcomes of the program
Knowledge
1- To provide students with knowledge and understanding of everything related to the field of economics and agricultural extension 2- Knowledge of general principles in the field of agricultural engineering
Skills
Developing students' thinking and analytical skills and enabling them to apply what they have learned
Values
To enable the student to understand the ethical and professional issues and responsibilities in their field of specialization, to instill positive attitudes, and .to improve their ability to think rationally

10. Teaching and learning strategies

1- .The languages of instruction are Arabic and English
2- Teaching is conducted using the latest technological tools and audio-visual .educational techniques
3- Field visits

11. Assessment methods

.(**quiz**) Surprise exams .1
.Monthly exams .2
.Reports .3
.Homework .4

12. Faculty

Faculty members

Faculty preparation		Academic title and certificate		Specialization		**and the name Scientific title**
lecturer	angel			private	general	
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M. M. Yasmin Hatem Hassan Jumaa Al-Samarrai
	angel	PhD	assistant professor	Macroeconomics	agricultural economy	Dr. Najla Salah Madloul Ahmed
	angel	PhD	teacher	agricultural policy	Agricultural economy	M. M. Shahla Kamel Ismail Hamad Al-Abbasi
	angel	PhD	.Mr	Agricultural production economics	agricultural economy	Prof. Dr. Jadou Shehab Ahmed Ali Al-Jumaili
	angel	Master's	.Mr	Adopting agricultural innovations	Agricultural guidance	A. Mahmoud Hadith Jassim Malouh Al-Jumaili
	angel	Master's	.Mr	Transfer of agricultural technologies	Agricultural guidance	A. Majid Khalil Ali Mohsen Al-Zubaidi

	angel	PhD	.Mr	Agricultural production economics	agricultural economy	Prof. Dr. Yousry Tarek Bakr Hussein Al- Bajari
	angel	PhD	Mr	Agricultural marketing	agricultural economy	A. D. Firas Ibrahim Rahim Khaloufi Al-Lahibi
	angel	PhD	assistant professor	Agricultural development	agricultural economy	Prof. Dr. Muhammad Omar Sharif Hazza Al-Tikriti
	angel	PhD	teacher	Standard economy	agricultural economy	Dr. Omar Adel Jassim Mohammed Al- Ani
	angel	PhD	teacher	microeconomics	agricultural economy	Dr. Hashem Attallah Abdul Eid Al- Tai
	angel	PhD	assistant professor	Economics of Education	economy	Prof. Dr. Muhammad Kamil Abdullah Nasser Al-Azzawi
	angel	Master's	assistant professor	Transfer of agricultural technologies	Agricultural guidance	A. M. Raafat Riad Abdel Wahab Samir
	angel	PhD	teacher	Macroeconomics	agricultural economy	Dr. Munther Saber Mustafa Abdullah
	angel	PhD	teacher	Marketing Department	business management	Dr. Muhannad Abdul Karim Armidh Numan
	angel	Master's	Assistant teacher	Production economics	agricultural economy	M.M. Hadeel Faleh Hameed Mohammed Al- Shammari
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M.M. Sarah Saeed Latif Hussein Al- Zubaidi
	angel	Master's	Assistant teacher	Guidance call	Agricultural guidance	M. M. Riyadh Saeed Hamoud Nassif Al-Obaidi
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M. M. Bashar Awad Musa Khalaf Al-Dulaimi
	angel	PhD	Mr	Guidance Management	Agricultural guidance	Prof. Dr. Majid Hadi Saleh Mahal Al-Hamdani
	angel	PhD	teacher	Macroeconomics	agricultural economy	Dr. Elaf Taha Hamid Jassim Al- Douri
	angel	Master's	assistant professor	Guidance Management	Agricultural guidance	A. M. Ahmed Sakr Abdullah Hassan Al-Ajili
	angel	Master's	Assistant teacher	economy	economy	M. M. Mohammed Jassim Abdullah Mohammed Al-Jumaili
	angel	Master's	Assistant teacher	economy	economy	M. M. Saad Khalaf Mahous Hamad Al-Jubouri
	angel	Master's	assistant professor	Guidance training	Agricultural guidance	A.M. Maha Saeed Shadda Jumaa Al-Nasiri
	angel	Master's	Assistant Professor	Organizational theory and behavior	business management	A. M. Mazhar Abdullah Ahmed Abbas Al-Dulaimi
	angel	Master's	teacher	General Administration	General Administration	M.A. Ibrahim Mohammed Saleh Dhunoun Al-Jubouri

	angel	PhD	teacher	Macroeconomics	agricultural economy	Dr. Hadeel Ghaleb Hassan Mohammed Al-Douri
	angel	PhD	teacher	agricultural economy	agricultural economy	Dr. Manar Saleh Hamad Hassan Al-Obaidi
	angel	PhD	teacher	Adopting agricultural innovations	Agricultural guidance	Dr. Walid Sabbar Ayed Hassan Al-Shammari
	angel	PhD	teacher	microeconomics	agricultural economy	Dr. Maher Mustafa Shbeeb Ghadban
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	M. M. Tasneem Saad Yassin Latif Al-Tikriti
	angel	PhD	teacher	agricultural economy	agricultural economy	M. D. Imad Muzahim Muhammad Marmous
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	M. M. Nibras Rabee Shaker Mahmoud
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	M.M. Sarah Marbad Taha Bakr Al- Obaidi
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M. M. Mahmoud Essam Suleiman Moussa
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M. M. Amani Abbas Fadhil Aziz Al-Dulaimi
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M. M. Safa Ayad Younis Mahmoud Al-Tikriti
	angel	Master's	Assistant teacher	Economic development and planning	economy	M. M. Hassan Haitham Ismail Abdul-Razzaq
	angel	PhD	teacher	Project evaluation	agricultural economy	Dr. Omar Baban Abdullah Salman Al- Jubouri
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M. M. Khalaf Jassim Saleh Khalaf Al-Jubouri
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	M.M. Ali Ibrahim Ayash Muhammad Al- Jubouri
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	M.M. Sarah Lazem Mohammed
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	M.M. Sajid Nabil Abdulaziz Abdulkarim Al- Badri
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	M.M. Adnan Ali Ati
	angel	PhD	teacher	agricultural economy	agricultural economy	Dr. Arwa Osama Ibrahim Mohammed
	angel	PhD	teacher	agricultural economy	agricultural economy	M.M. Ruwaida Aziz Jajan
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	M.M. Amna Hamid Ma'youf

	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	Omar Ali Daham Mohammed Al-Douri
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	Tariq Ziad Khalaf Hussein
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	Maher Taif Maher Hassan Al-Ghadiri
	angel	Master's	Assistant teacher	Agricultural guidance	Agricultural guidance	Rasha Raad Jaber Sakran Al-Nasiri
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	Nawaf Mu'ayyad Hamidi Jassim Al-Hamdani
	angel	Master's	Assistant teacher	agricultural economy	agricultural economy	Safaa Hafez Saleh Hammadi Al-Majma'i

Professional Development

Orienting new faculty members

- .Iraqi Ministry of Higher Education and Scientific Research (in all its details)

Professional development of faculty members

- Urging and encouraging faculty members to publish research, participate in conferences, seminars, workshops and training courses held in the field of general specialization, auditing or the field of academic work in general, and scientific .cooperation with various institutions inside or outside the country

13. Admission standard

According to the instructions of the Iraqi Ministry of Higher Education and Scientific Research

14. Key sources of information about the program

- Textbooks
- Lecturers' lectures
- The International Information Network (Internet)

15. Program development plan
1- .Attracting as many students as possible 2- .Increase field visits to government and private projects 3- Encouraging students to continue visiting the college or university .library 4- He urged students to take advantage of summer training .opportunities in government institutions 5- Improving research projects, whether at the level of doctoral theses and dissertations or graduation research 6- Increased cooperation with various scientific institutions inside and outside Iraq

Program Skills Plan															
Learning outcomes required from the program															
Values				Skills				Knowledge				Essential or optional	Course Name	Course code	Year / Level
Q4	Part 3	Part 2	Part 1	B4	B3	B2	B1	A4	A3	A2	A1				
√	√	√	√	√	√	√	√	√	√	√	√	essential	agricultural economy		First stage 2025-2026
√	√	√	√	√	√	√	√	√	√	√	√	essential	mathematics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Animal production		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Gardening basics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	field crops		
√	√	√	√	√	√	√	√	√	√	√	√	essential	English language /1		
√	√	√	√	√	√	√	√	√	√	√	√	essential	rights		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Computers/1		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Social psychology		
√	√	√	√	√	√	√	√	√	√	√	√	essential	rural community		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Soil principles		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Principles of Industries		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural mechanization		
√	√	√	√	√	√	√	√	√	√	√	√	essential	English language /2		

√	√	√	√	√	√	√	√	√	√	√	√	essential	Computers /2		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Partial theory		Phase Two 2025-2026
√	√	√	√	√	√	√	√	√	√	√	√	essential	Principles of Statistics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Guiding principles		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Basics of prevention		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Poultry production		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Computers /3		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Vegetable production		
√	√	√	√	√	√	√	√	√	√	√	√	essential	English language /3		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural marketing		
√	√	√	√	√	√	√	√	√	√	√	√	essential	adult education		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Computers /4		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Freedom and democracy		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Irrigation and drainage		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Health and Diseases		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Partial theory /2		/ Phase Three Economics 2025-2026
√	√	√	√	√	√	√	√	√	√	√	√	essential	Macroeconomics /1		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural statistics methods		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural accounting		

√	√	√	√	√	√	√	√	√	√	√	√	essential	farm management		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Mathematical economics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Technology transfer		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Macroeconomics /2		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Production economics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural cost accounting		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Banana basics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Price Analysis		
√	√	√	√	√	√	√	√	√	√	√	√	essential	monetary and fiscal policy		
√	√	√	√	√	√	√	√	√	√	√	√	essential	English language /4		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Community development		/ Phase Three Guidance 2025-2026
√	√	√	√	√	√	√	√	√	√	√	√	essential	Technology transfer		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Guidance methods		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Economic insects		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Jungles and methods of combating them		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Groups and leadership		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Guidance tools and aids		

√	√	√	√	√	√	√	√	√	√	√	√	essential	Guidance communication methods		
√	√	√	√	√	√	√	√	√	√	√	√	essential	farm management		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Research methods		
√	√	√	√	√	√	√	√	√	√	√	√	essential	agricultural pest control		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Banana basics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	English language /4		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural development		/ Phase Four Economics 2025-2026
√	√	√	√	√	√	√	√	√	√	√	√	essential	Standard Economics /1		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Resource Economics		
√	√	√	√	√	√	√	√	√	√	√	√	essential	grain crops		
√	√	√	√	√	√	√	√	√	√	√	√	essential	agricultural policy		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Research methods and episodes		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Research project		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Financing and lending		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Standard Economics /2		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Project evaluation		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural planning		
√	√	√	√	√	√	√	√	√	√	√	√	essential	foreign trade		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Economic thought and systems		

√	√	√	√	√	√	√	√	√	√	√	√	essential	Research project		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Guidance environment		/ Phase Four Guidance 2025-2026
√	√	√	√	√	√	√	√	√	√	√	√	essential	Guidance training		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Guidance Management		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Program planning		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Theories of change		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Graduation research		
√	√	√	√	√	√	√	√	√	√	√	√	essential	episodes		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Evaluation of guidance programs		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Public Relations Guidance		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Guidance for women and rural youth		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Educational Psychology		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Agricultural extension programs		
√	√	√	√	√	√	√	√	√	√	√	√	essential	episodes		
√	√	√	√	√	√	√	√	√	√	√	√	essential	Research project		

- Please check the boxes corresponding to the individual learning outcomes of the program that are subject to .evaluation

Academic Program Description Form

University Name: Tikrit University
Faculty/Institute: College of Agriculture
Scientific Department: Agricultural Machinery and Equipment Department
Academic or Professional Program Name: Bachelor of Agricultural Sciences/ Agricultural Machinery and Equipment
Final Certificate Name: Bachelor of Agricultural Machinery and Equipment
Academic System: Semester
Description Preparation Date: 14/9/2025
File Completion Date: 14/9/2025

Signature:
Head of Department Name:
Professor Dr. Momtaz Isaak Hammood
Date: 14/9/2025

Signature:
Scientific Associate Name:
Professor Dr. Mohammed Saleh Mohammed
Date: 14-9-2025

The file is checked by:

Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Professor Dr. Maysaloon Wail Ibraheem
Date: 14.9.2025
Signature:

Approval of the Dean

Dr. Sami Khader Saeed

14/9/2025

Teaching staff in the Department of Agricultural Machinery and Equipment

No	Names teaching staff	Academic title	Degree	General Specialization	Subspecialization	Email	Notes
1	Momtaz Isaak Hommood	Professor	PhD	Agricultural Mechanization	Agricultural Machinery and Equipment	momtaz.isaak@tu.edu.iq	Head of Department
2	Thaer Turki Abdul Karim	Professor	PhD	Agricultural Machinery and Equipment	Agricultural Machinery and Power	thaerturky@tu.edu.iq	Department Rapporteur
3	Ahmed Abdul Ali Abtan	Lecturer	PhD	Agricultural Mechanization	Agricultural Machinery and Equipment	ahmedabtan@tu.edu.iq	
4	Ahmed Imad Saleh	Lecturer	PhD	Food Science	Food Science	a.emad004@tu.edu.iq	
5	Ahmed Dawood Salman	Lecturer	PhD	Soil Science	Soil Physics	a.dawood006@tu.edu.iq	
6	Abdullah Azawi Issa	Assist. Professor	Master's	Agricultural Mechanization	Agricultural Machinery and Equipment	abdullah.azawi@tu.edu.iq	PhD Student, University of Baghdad
7	Abdul Qader Ghaleb Nasser	Lecturer	Master's	Agricultural Mechanization	Agricultural Machinery and Equipment	abdalkader.ghalib@tu.edu.iq	PhD Student, UPM, Malaysia
8	Sara Namas Ahmed	Assist. Lecturer	Master's	Soil Science	Soil Physics	sara.namis@tu.edu.iq	PhD Student, Tikrit University

1. Program Vision

Advancing and excelling in agricultural engineering and biosystems engineering and their applications to prepare specialized and qualified personnel to meet the needs of the labor market, so that the department becomes a leader among agricultural college departments locally and regionally.

2. Program Mission

Preparing distinguished personnel capable of meeting labor market needs and conducting scientific research to keep pace with global developments, transferring knowledge, and localizing technology, with a focus on providing exceptional services for environmental development and community service. This includes the advancement of agricultural engineering, mechanized agriculture, and the use of agricultural machinery through graduates holding bachelor's, master's, and doctoral degrees.

3. Program Objectives

1. Preparing students both theoretically and practically through specialized curricula and courses.

2. The department awards a Bachelor of Science degree in Agricultural Sciences, specializing in Agricultural Machinery and Equipment, to supply the labor market with specialists in agricultural machinery engineering, agricultural power engineering, irrigation and drainage systems, water management, food processing engineering, agricultural structures, environmental control, and energy engineering.

3. The department aims to equip and train students theoretically and practically in the operation of agricultural machinery and equipment in both plant and animal production and food processing technologies, ensuring scientific and technical accuracy. This includes maintenance and repair of all agricultural machinery, optimal management and utilization of agricultural equipment, and training in service operations such as welding, grinding, and turning, while promoting respect for manual labor in the field, workshop, and laboratory.

4. Collaborating with other scientific departments in the college and university to prepare agricultural professionals, researchers, and planners across various fields and specialties by providing them with knowledge development related to agricultural engineering technology (agricultural machinery and equipment) relevant to their specialization.

5. Enhancing the curriculum of the Agricultural Machinery and Equipment department to align with modern advancements in the use of contemporary technologies and the application of quality standards and accreditation to improve students' performance in perception, learning, interaction, planning, and addressing development challenges in the community.

4. Program Accreditation

The department seeks program accreditation.

5. Other external influences

Ministry of Higher Education and Scientific Research – Republic of Iraq

6 Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews•
Institution Requirements	12	18	12.41 %	
College Requirements	18	49	33.79 %	
Department Requirements	30	78	53.79 %	
Summer Training				
Other				

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

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	Practical
First Stage / First Semester	AGRFC01	Field crop production technology	2	3
	AGRSS01	Principles of Soil Science	2	3
	AGRAM04	General Physics	2	3
	MATH105	Mathematics 1	3	-
	AGRAM01	Engineering Drawing	-	3
	UOT004	Democracy and Human rights	2	-
	UOT002	English language /1	2	-
First Stage / Second Semester	AGRAM05	Surveying and Land leveling	2	3
	AGRAM03	Agricultural Tractors	2	3
	AGRHL01	Horticulture & Landscaping Engineering	2	3
	UOT003	Computer Applications 1	-	3
	AGREG01	Transfer of agricultural technologies	2	-
	AGRAM02	Workshop 1	-	3
	UOT001	Arabic Language 1	2	-

Second Stage / First Semester	UOT011	Arabic language 2	2	-
	UOT005	Crimes of the Bath Regime in Iraq	2	-
	AGRPP01	Plant protection principles	2	3
	AGRFT01	Fundamentals of Food Technology	2	3
	AGRMT02	Metallurgy	2	3
	AGREM02	Engineering Mechanics	2	3
Second Stage / Second Semester	UOT012	English language 2	2	-
	UOT013	Computer Application 2	-	3
	AGREDE1	Experimental Design and Analysis	2	3
	AGRACE1	Agricuture Career Ethics	2	-
	AGRMD1	Mechanical Drawing	-	3
	AGRSM1	Soil Mechanics	2	3
Third Stage / First Semester		Thermodynamics	2	3
		Soil Preparation Equipment	2	3
		Mechanization of Animal Production	2	3
		Seeding and Fertilization Equipment	2	3
		Fluid Mechanics	2	3
		Irrigation and Drainage	2	3
		Computer Applications 3	3	-
Third Stage / Second Semester		Tractors Performance Mechanics	2	3
		Horticulture equipment and crop	2	3
		Irrigation and Drainage Equipment	2	3
		Design of Agricultural Equipment and Machinery	2	3
		Internal Combustion Engines	2	3
		Design and Analysis of Experiments	2	3
		English Language 3	1	-
Fourth Stage / First Semester		Maintenance and Repair of Agricultural Machinery and Equipment	2	3
		Heavy Machinery and Equipment	2	3
		Hydraulic Equipment and Systems	2	3
		Food Processing Equipment	1	3
		Electrical Systems of Agricultural Machinery	2	3
		Plant Protection Equipment	2	3
		Graduation Project 1	1	2
Fourth Stage / Second Semester		Harvesting and Threshing Equipment	2	3
		Post-Harvest Equipment	2	3
		Management and Economics of Agricultural Machinery	2	3
		Agricultural Buildings	2	3
		Forages Equipment	1	3
		Graduation Project 2	-	2
		English Language 4	1	-
		Seminars	1	-

8. Expected learning outcomes of the program

Knowledge

1. Clarifying the fundamentals and basic principles of engineering sciences and their applications in various agricultural fields.

2. Acquiring knowledge in maintenance, repair, and preservation of agricultural machinery and equipment.

3. Developing the ability to follow agricultural development and expansion plans, including land cultivation and the adoption of modern agricultural practices.

4. Gaining knowledge in optimizing resource use, such as water resources, and utilizing available supplies through advanced irrigation methods that have proven effective in practice.

5. Achieving knowledge in improving post-harvest processes and food production to reduce losses in the agricultural sector and opening markets for national agricultural products that meet global production and quality standards.

Skills

1. Acquiring the ability to maintain, repair, and preserve agricultural machinery and equipment.
2. Developing skills in land cultivation and the adoption of modern agricultural practices.
3. Enhancing skills in the use of advanced irrigation methods.
4. Developing the ability to improve post-harvest processes and food product manufacturing.
5. Enhancing skills in improving modern agricultural production systems in line with market trends and the requirements for qualified human resources to manage those systems.

Ethics

- Explanation and clarification through lectures.
- Presentation of scientific materials using projection devices: data show, smart boards.
- Self-directed learning through conducting mini-discussion sessions within lectures.
- Implementing some lessons in the workshop, which includes models of agricultural machinery and equipment.
- Conducting field visits to agricultural fields to observe the problems facing the agricultural sector.

9. Teaching and Learning Strategies

1. Interest and active participation in the study environment (classroom, laboratory, agricultural field) as a reflection of the student's commitment and sense of responsibility.
2. Adherence to deadlines for submitting reports, assignments, and required research from the student.
3. Midterm and final exams that reflect the student's interest in knowledge and skill acquisition.
4. Seminars and mini-discussions and their role in solidifying scientific knowledge for the student on the subject matter.

10. Evaluation methods

- Homework assignments.
- Assigning grades based on participation and interaction during lectures.
- Writing reports after the practical application period to assess students' ability to diagnose problems and find solutions.
- Seminars and reports presented and discussed by students.
- Adhering to deadlines for submitting assignments and required research.
- Daily, midterm, and final exams that reflect the student's interest in knowledge and skill acquisition.
- Extracurricular activities (creativity, skills in the field of specialization).

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	**Lecturer**
Professor	Agricultural Mechanization	Agricultural Machinery and Equipment	PhD		√	
Professor	Agricultural Machinery and Equipment	Agricultural Machinery and Power	PhD		√	
Lecturer	Soil Science	Soil Physics	PhD		√	
Lecturer	Food Science	Food Science	PhD		√	
Lecturer	Food Science	Food Science	PhD		√	
Assistant Professor	Agricultural Mechanization	Agricultural Machinery and Equipment	PhD		√	
Lecturer	Agricultural Mechanization	Agricultural Machinery and Equipment	Master's		√	
Lecturer	Agricultural Mechanization	Agricultural Machinery and Equipment	Master's		√	
Assist. Lecturer	Soil Science	Soil Physics	Master's		√	

Professional Development

Mentoring new faculty members

1. Identifying University and Department Needs: The needs of the university and department are identified in terms of required teaching staff and preferred specialties.

2. Developing Orientation Programs: Customized orientation programs are designed for new members, visitors, and full-time and part-time faculty based on their needs and specialties.

3. Introducing the University Environment: A comprehensive introduction to the university and the mathematics department is provided, including its history, vision, goals, and available services.

4. Providing Support Resources: Necessary resources and support are provided to new members, including training courses, practical workshops, and technical assistance.

5. Academic Guidance: New members are guided regarding the curricula, research areas, and teaching methods used in the department.

6. Administrative Guidance: New members are directed on administrative procedures, responsibilities, university policies, and codes of conduct.

7. Ongoing Support: Continuous support is provided for new faculty members, visitors, and both full-time and part-time staff through consultation sessions, workshops, and regular evaluations.

Professional development of faculty members
1. Identifying Needs and Setting Goals: The needs of faculty members are identified through surveys and performance evaluations, followed by the establishment of specific goals to be achieved within the framework of the program. 2. Designing the Development Program: Based on the identified needs and goals, a comprehensive development program is designed, including a range of activities, training courses, workshops, and educational resources. 3. Implementing the Program: The development program is implemented regularly and systematically, which includes organizing workshops, conducting training sessions, and providing appropriate educational resources. 4. Using Effective Teaching Strategies: Faculty members learn to utilize and apply modern and effective teaching strategies, such as cooperative learning, active learning, and educational technology. 5. Evaluating Learning Outcomes: The effectiveness of the development program is assessed by evaluating the learning outcomes of faculty members, such as the increase in knowledge levels, teaching skills, and interactions with students. 6. Continuous Development: Ongoing feedback and support are provided to faculty members to enhance their continuous professional and academic development.

12. Acceptance Criterion
Central Admission for Daytime Studies: However, the ministry is provided annually with the number of available seats in the scientific department based on the department's capacity, the number of faculty members, and the availability of educational resources.

13. The most important sources of information about the program
• Curricular and supplementary books • Websites of local and foreign universities, as well as local and foreign university libraries • Workshops organized by the Ministry of Higher Education, in addition to the ministry's standards

14. Program Development Plan
1) Continuous monitoring and evaluation: Conducting periodic assessments of the program to measure goal attainment and identify areas needing improvement, including curriculum and instructional material analysis, teaching and assessment methods, as well as infrastructure and facilities. **2) Industry and Job Market Needs Survey:** Conducting interviews and surveys with employers and professionals in the agriculture industry to identify skills and knowledge that need to be enhanced in students. Evaluating technological advancements and innovations in the field of agricultural machinery and incorporating them into the curriculum. **3) Curriculum and Material Updates:**

Developing and updating curricula to incorporate the latest developments in agricultural engineering and technology fields. Adding new study materials covering topics such as artificial intelligence, sustainability, and robotics control techniques in agriculture.

4) Enhancing Practical Experiences:

Expanding opportunities for training and practical learning through partnerships with local industries and farms. Establishing advanced laboratories equipped with the latest technologies to enable students to experience and apply theoretical concepts.

5) Promoting Research and Innovation:

Enhancing scientific research in various areas of agricultural machinery and equipment by providing support to students and faculty. Establishing platforms for knowledge exchange and collaboration among students, researchers, and industry to promote innovation and develop new solutions.

6) Strengthening Teaching Skills:

Providing training programs and workshops for faculty members to enhance teaching skills and utilize best educational practices. Encouraging faculty members to participate in academic and industrial research and development activities.

Program Skills Outline

Year/ Level	Course Code	Course Name	Basic option	Required program Learning outcomes											
				Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First year		Field crop production technology	Core	√	√	√	√	√	√	√	√	√	√	√	√
		Principles of Soil Science	Core	√	√	√	√	√	√	√	√	√	√	√	√
		General Physics	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Mathematics 1	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Engineering Drawing	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Democracy and Human rights	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		English language /1	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Surveying and Land leveling	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Agricultural Tractors	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Horticulture & Landscaping Engineering	Core	√	√	√	√	√	√	√	√	√	√	√	√
		Computer Applications 1	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Transfer of agricultural technologies	Core	√	√	√	√	√	√	√	√	√	√	√	√
		Workshop 1	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Arabic Language 1	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
Second year		Arabic language 2	Core	√	√	√	√	√	√	√	√	√	√	√	√
		Crimes of the Bath Regime in Iraq	Core	√	√	√	√	√	√	√	√	√	√	√	√
		Plant protection principles	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Fundamentals of Food Technology	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Metallurgy	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Engineering Mechanics	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		English language 2	Core	√	√	√	√	√	√	√	√	√	√	√	√
		Computer Application 2	Core	√	√	√	√	√	√	√	√	√	√	√	√
		Experimental Design and Analysis	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Agricuture Career Ethics	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Mechanical Drawing	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Soil Mechanics	Comp.												
Third year		Thermodynamics	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Soil Preparation Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Mechanization of Animal Production	Comp.	√	√	√	√	√	√	√	√	√	√	√	√

		Seeding and Fertilization Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Fluid Mechanics	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Irrigation and Drainage	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Computer Applications 3	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Tractors Performance Mechanics	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Horticulture equipment and crop	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Irrigation and Drainage Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Design of Agricultural Equipment and Machinery	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Internal Combustion Engines	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Design and Analysis of Experiments	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		English Language 3	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
Fourth year		Maintenance and Repair of Agricultural Machinery	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Heavy Machinery and Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Hydraulic Equipment and Systems	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Food Processing Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Electrical Systems of Agricultural Machinery	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Agricultural Buildings	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Graduation Project 1	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Harvesting and Threshing Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Post-Harvest Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Management and Economics of Agricultural Machinery	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Plant Protection Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Forages Equipment	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Graduation Project 2	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		English Language 4	Comp.	√	√	√	√	√	√	√	√	√	√	√	√
		Seminars	Comp.	√	√	√	√	√	√	√	√	√	√	√	√

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Academic Program Description

University Name: Tikrit University

Faculty/Institute: College of Agriculture

Scientific Department: Horticulture and Landscape

Academic or Professional Program Name: BSC.

Final Certificate Name: Bachelor in Agricultural Sciences\ Horticulture and Landscape

Academic System: Semesters

Description Preparation Date: 14-9-2025

File Completion Date: 14-9-2025

Signature:
Dr. Angham Ayad
Head of Department Name:

Date: 14-9-2025

Signature:
Pro.Dr. Mohammed Salehmohammed
Associate Dean for Scientific Affairs:

Date: 14/9/2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department: Dr. mag Salman

Date: 14.9.2025

Signature:

Dr. Sa

Approval of the Dean

sami khudhur saeed

Dean

1. Program Vision

Leadership in education, scientific research, and practical application in the field of horticulture and landscape engineering, contributing to smart and sustainable agriculture that supports the green economy and addresses climate change challenges.

2. Program Mission

To prepare qualified and specialized scientific cadres in horticulture and landscape engineering capable of employing smart agriculture technologies and environmental innovation, contributing to the development of the green economy through applied scientific research, community service, and the promotion of sustainable natural resource management.

3. Program Objectives

1. Develop academic curricula in line with global advancements in smart agriculture and modern technologies in horticultural production.
2. Support scientific research in sustainable agriculture and environmentally and economically efficient horticultural crop production.
3. Strengthen partnerships with governmental and private sectors and civil society to apply green economy concepts in horticultural projects.
4. Enhance students' and researchers' abilities to use modern technologies (such as precision agriculture, agricultural IoT, and artificial intelligence) to improve productivity and resource efficiency.
5. Promote biodiversity conservation and the preservation of local and traditional plant varieties within a sustainable environmental perspective.
6. Encourage green entrepreneurship in horticulture by supporting graduation projects and environmentally friendly agricultural innovation.

7. Contribute to urban beautification and the expansion of green spaces through the development of urban landscape engineering using innovative ecological solutions.
8. Provide training and service programs that meet community needs and support smart agriculture practices among farmers and agricultural engineers.

4. Program Accreditation

The Department of Horticulture and Landscape Engineering seeks to obtain national programmatic accreditation in accordance with the standards of the Ministry of Higher Education and Scientific Research through curriculum development, strengthening applied research, and improving the educational environment, thereby ensuring the quality of learning outcomes and meeting labor market requirements.

5. Other external influences

The department recognizes the nature of external factors and their impact on its performance and adopts flexible policies for strategic planning and continuous development to ensure the sustainability of program quality and the achievement of its educational and research objectives despite environmental, economic, and regulatory challenges.

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews•
Institution Requirements	8	8	13	
College Requirements	7	19	12	
Department Requirements	45	122	75	
Summer Training	-	-	-	There is summer training
Other	-	-	-	

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

. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	Practica
First	HOR101	Agricultural Machinery and Equipment	2	3
First	HOR102	Plane Surveying	1	3
First	HOR103	Principles of Soil Science	2	3
First	HOR104	Mathematics	2	–
First	HOR105	General Botany	2	3
First	HOR106	Organic Chemistry	2	3
First	HOR107	Computer I	1	–
First	HOR108	Human Rights and Public Freedoms	1	–
First	HOR109	Principles of Field Crops	2	3
First	HOR110	Principles of Animal Production	2	3
First	HOR111	Principles of Food Industries	2	3
First	HOR112	Statistics	1	3
First	HOR113	Computer Applications II	–	3
First	HOR114	Principles of Agricultural Economics	2	–
First	HOR115	Crimes of the Baath Party	1	–
First	HOR116	Engineering Drawing	–	3
Second	HOR201	Principles of Microbiology	2	3
Second	HOR202	Plant Anatomy	2	3
Second	HOR203	Plant Physiology	2	3
Second	HOR204	Principles of Landscape Design	2	3
Second	HOR205	Genetics	2	3
Second	HOR206	Horticultural Entomology	1	3
Second	HOR207	Computer Applications II	–	3
Second	HOR208	Plant Nutrition	2	3
Second	HOR209	Biochemistry	2	3
Second	HOR210	Plant Ecology	2	3
Second	HOR211	Organic Agriculture	2	3
Second	HOR212	Nurseries and Propagation	2	3
Second	HOR213	Principles of Agricultural Extension	2	–
Second	HOR214	Weeds and Control Methods	2	3
Second	HOR215	Freedom and Democracy	1	–

Third	HOR301	Deciduous Fruits I	2	3
Third	HOR302	Vegetable Production I	2	3
Third	HOR303	Ornamental Plants I	1	3
Third	HOR304	Experimental Design and Analysis	2	3
Third	HOR305	Plant Growth Regulators	2	3
Third	HOR306	Medicinal and Aromatic Plants	2	3
Third	HOR307	Irrigation and Drainage	2	3
Third	HOR308	Deciduous Fruits II	2	3
Third	HOR309	Vegetable Production II	2	3
Third	HOR310	Ornamental Plants II	1	3
Third	HOR311	Beekeeping	2	3
Third	HOR312	Horticultural Plant Diseases	1	3
Third	HOR313	Plant Breeding	2	3
Third	HOR314	Computer Applications III	–	3
Fourth	HOR401	Evergreen Fruits	2	3
Fourth	HOR402	Vegetable Seed Production	2	3
Fourth	HOR403	Protected Agriculture	2	3
Fourth	HOR404	Farm Management	1	3
Fourth	HOR405	Graduation Research Project	–	3
Fourth	HOR406	Seminar	1	–
Fourth	HOR407	Grapes and Small Fruit Production	2	3
Fourth	HOR408	Date Palm Production	2	3
Fourth	HOR409	Landscape Engineering	2	3
Fourth	HOR410	Harvesting and Postharvest of Horticultural Crops	2	3
Fourth	HOR411	Tissue Culture	2	3
Fourth	HOR412	Graduation Research Project	–	3

8. Expected learning outcomes of the program

Knowledge

Graduates of the program are expected to be able to:

1. Explain the scientific foundations of horticultural sciences and horticultural crop production.
2. Interpret physiological, chemical, and biological processes in plants.
3. Distinguish soil and environmental characteristics and their effects on plant production.
4. Identify plant pests and diseases and apply scientific management methods.
5. Understand the principles of landscape design and green space planning.

Skills

Graduates of the program are expected to be able to:

1. Perform applied agricultural practices in fields, nurseries, and greenhouses.
2. Efficiently use agricultural equipment, instruments, and modern technologies.
3. Design gardens and green spaces based on scientific and engineering principles.
4. Analyze agricultural data, conduct research experiments, and interpret results.
5. Diagnose plant production problems and propose appropriate solutions.

Values

Graduates of the program are expected to demonstrate:

1.Commitment to professional agricultural ethics and scientific integrity.
2.Respect for environmental sustainability principles and conservation of natural resources.
3.Professional responsibility and teamwork spirit.
4.Community service and contribution to the development of the agricultural sector.
5.Commitment to lifelong learning and keeping pace with scientific and technological advancements.

9. Teaching and Learning Strategies

The program adopts diverse student-centered teaching and learning strategies that integrate theoretical, practical, research-based, and technological approaches, ensuring the achievement of the intended learning outcomes and the development of students' scientific and applied thinking skills.

10. Evaluation methods

The program adopts a comprehensive assessment system that includes formative, summative, practical, and research-based evaluation methods. It is grounded in clear and objective criteria to ensure accurate measurement of learning outcomes and to achieve fairness and transparency in assessing students' performance.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)	Number of the teaching staff	
	General	Special		Staff	**Lecturer**
Professor	Agriculture	Horticulture		14	
Assistant Professor	Agriculture	Horticulture		4	
Lecturer	Agriculture	Horticulture		10	
Assistant Lecturer	Agriculture	Horticulture		7	

Professional Development

Mentoring new faculty members

Orientation of New Faculty Members

The program is committed to providing a supportive academic environment for newly appointed faculty members to ensure their effective integration into the educational and research system. This is achieved through:

An academic orientation program introducing the program's mission, objectives, and learning outcomes.

A faculty handbook outlining academic policies, assessment systems, and teaching regulations.

Professional development of faculty members

The program adopts a sustainable professional development plan aimed at enhancing faculty members' scientific, teaching, research, and technical competencies through training, conferences, research collaboration, and the use of modern technologies.

12. Acceptance Criterion

The program adopts clear and objective admission criteria that align with national admission regulations and ensure the selection of academically qualified students capable of fulfilling the program requirements and achieving its learning outcomes.

13. The most important sources of information about the program

The program provides diverse and up-to-date educational and research resources—print, electronic, and practical—to support learning and ensure the achievement of learning outcomes in line with academic quality standards.

14. Program Development Plan

The program follows a continuous development plan based on periodic performance analysis and indicators, aligned with academic quality standards and labor market needs, to enhance learning outcomes and achieve institutional excellence.

Program Skills Outline																
				Required program Learning outcomes												
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	
First	HOR101	Agricultural Machinery and Equipment	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR102	Plane Surveying	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR103	Principles of Soil Science	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR104	Mathematics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR105	General Botany	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR106	Organic Chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR107	Computer I	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR108	Human Rights and Public Freedoms	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR109	Principles of Field Crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR110	Principles of Animal Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR111	Principles of Food Industries	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR112	Statistics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR113	Computer Applications II	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR114	Principles of Agricultural Economics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR115	Crimes of the Baath Party	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
First	HOR116	Engineering Drawing	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR201	Principles of Microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR202	Plant Anatomy	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR203	Plant Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR204	Principles of Landscape Design	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR205	Genetics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR206	Horticultural Entomology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR207	Computer Applications II	Basic	*	*	*	*	*	*	*	*	*	*	*	*	
Second	HOR208	Plant Nutrition	Basic	*	*	*	*	*	*	*	*	*	*	*	*	

Second	HOR209	Biochemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Second	HOR210	Plant Ecology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Second	HOR211	Organic Agriculture	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Second	HOR212	Nurseries and Propagation	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Second	HOR213	Principles of Agricultural Extension	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Second	HOR214	Weeds and Control Methods	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Second	HOR215	Freedom and Democracy	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR301	Deciduous Fruits I	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR302	Vegetable Production I	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR303	Ornamental Plants I	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR304	Experimental Design and Analysis	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR305	Plant Growth Regulators	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR306	Medicinal and Aromatic Plants	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR307	Irrigation and Drainage	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR308	Deciduous Fruits II	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR309	Vegetable Production II	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR310	Ornamental Plants II	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR311	Beekeeping	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR312	Horticultural Plant Diseases	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR313	Plant Breeding	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Third	HOR314	Computer Applications III	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR401	Evergreen Fruits	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR402	Vegetable Seed Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR403	Protected Agriculture	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR404	Farm Management	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR405	Graduation Research Project	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR406	Seminar	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR407	Grapes and Small Fruit Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR408	Date Palm Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR409	Landscape Engineering	Basic	*	*	*	*	*	*	*	*	*	*	*	*

Fourth	HOR410	Harvesting and Postharvest of Horticultural Crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR411	Tissue Culture	Basic	*	*	*	*	*	*	*	*	*	*	*	*
Fourth	HOR412	Graduation Research Project	Basic	*	*	*	*	*	*	*	*	*	*	*	*

*Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

Academic Program Description Form

University Name: Tikrit University

Faculty/Institute: College of Agriculture

Scientific Department: Field Crops Department

Academic or Professional Program Name: Bachelor of Agricultural Sciences/Field Crops

Final Certificate Name: Bachelor of Agricultural Sciences/Field Crops

Academic System: Season

Description Preparation Date: 14/9/2025

File Completion Date: 14/9/2025

Signature:

Head of Department Name:

Ass. Professor Dr. Salah Hameed Jumaa

Date: 14-9-2025

Signature:

Scientific Associate Name:

Professor Dr. Mohammed Saleh Mohammed

Date: 14-9-2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Professor Dr. Maysaloon Wail Ibraheem

Date: 14.9.2025

Signature:

Approval of the Dean

Dr. Sami Khader Saeed

14/9/2025

1. Program Vision

The Field Crops Department aspires to be a distinguished and leading academic and research center at both the national and regional levels in the fields of field crop production and improvement. This will be achieved through the adoption of high-quality education, the development of applied scientific research that contributes to food security and sustainable agricultural development, and the application of modern technologies. These technologies include the introduction of smart agriculture programs, genetic engineering techniques, and biotechnology, all of which will be compatible with climate change and the job market for the department's graduates.

2. Program Mission

The Field Crops Department is dedicated to preparing and qualifying scientific and professional agricultural personnel with competence and experience in field crop production, genetic improvement, agricultural management, and modern biotechnology. This is achieved through:

1- Offering advanced academic programs that keep pace with scientific developments in field crop science, adhering to quality standards and academic accreditation.

2- Conducting specialized applied research that contributes to increasing productivity and improving the quality of strategic field crops, thereby addressing contemporary agricultural challenges and supporting sustainable development plans.

3- Supporting agricultural development in Iraq by providing farmers and agricultural institutions with consultations and modern agricultural technologies.

4- Contributing to raising awareness of environmental agriculture, implementing sustainable farming methods, and reducing waste in natural resources through partnerships with state institutions and the private sector.

3. Program Objectives

- Graduating agricultural engineers specialized in the field of field crops who possess theoretical knowledge and applied skills suitable for the labor market and the advancement of the agricultural sector.

  Improving the production of field crops in quantity and quality by adopting breeding and genetic improvement programs, and using modern technologies in agricultural production management.

  Employing scientific research plans and improving it to contribute to the development of the agricultural sector and solving its problems in a way that ensures the preservation of the environment, through applied scientific research projects to address agricultural problems related to crop production, especially in light of climate challenges and scarcity of water resources.

  Keeping pace with progress and scientific development in scientific knowledge and transferring and applying modern agricultural techniques such as precision agriculture, supplementary irrigation, and the use of bio fertilizers, to reduce dependence on traditional

inputs and achieve sustainable production by introducing them into academic curricula and employing their applications in developing the capabilities of the agricultural community.

Developing curricula, academic programs and field training in accordance with modern scientific and technical developments and meeting the requirements of the labor market and the needs of society and productive sectors, and in partnership with agricultural research and production institutions..

4. Program Accreditation

nothing

5. Other external influences

nothing

6 Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews•
Institution Requirements	**9**	**9**	**15.25 %**	
College Requirements	**13**	**31**	**22.03 %**	
	37	**107**	**622.71 %**	

Department Requirements				
Summer Training				
Other				

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

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	Practical
3	FC 1301	Genetics		
	FC 1302	Field Crop Mechanization		
	FC 1303	Field Crop Insects		
	FC 1304	Land Reclamation		
	FC 1305	Forage Crops		
	FC 1306	Design and Analysis of Experiments		
	FC 1307	Field Crop Diseases		
	U011038	Specialized English 3		
	FC 2301	Fiber Crops		
	FC 2302	Cereal Crops		
	FC 2303	Legumes Crops		
	FC 2304	Beekeeping		
	FC 2305	Seed Technology		
	U021037	Computer Applications 3		
4	FC 1401	Plant Medicine		
	FC 1402	Plant Physiology		
	FC 1403	Weed Biology		
	FC 1404	Field Crop Management		
	FC 1405	Land Cultivation		
	FC 1406	Molecular Genetics		
	FC 1407	Seminars		
	FC 2401	Plant Breeding		
	FC 2402	Growth Regulators		
	FC 2403	Weed Control		
	FC 2404	Range Management		
	FC 2405	Environmental Stress		
	FC 2406	Graduation Research Project		

8. Expected learning outcomes of the program
A. Knowledge
1. A thorough understanding of the scientific fundamentals related to field crops.

2. Familiarity with scientific theories in field crops and related sciences.

3. Understanding the methodologies and ethics of scientific research and its various tools.

4. Familiarity with the necessary requirements for cultivating and producing field crops.

B. Skills

1. The student applies learned skills in developing the field of field crops.

2. The student operates modern equipment and tools used in the field of field crops.

3. The student demonstrates the ability to evaluate and assess field crop projects.

4. The student applies quality standards and health and environmental requirements in field crop management..

C.Ethics

1Thinking skills are developed according to the student's ability. The goal of these skills is for the student to believe in concrete things, understand when, what, and how to think, and work on improving their thinking and problem-solving abilities.

2. Observation and perception.

3. Analysis, interpretation, and persuasion.

4. Preparation and evaluation..

9. Teaching and Learning Strategies

10.Evaluation methods

11. Faculty

Names of Field Crops Department Lecturers 2025-2026

No	Full name	Academic qualification	Academic title	General	Specialization	Email
1	Aqeel Najm Aboud	Professor	PhD	Field Crops	Medicinal and Aromatic Plants	akeei.Nagime@tu.edu.iq
2	Mohammed Ramadan Ahmed	Professor	PhD	Field Crops	Weed Control	mmaar79@tu.edu.iq
3	Dawood Salman Madb	Assistant Professor	PhD	Field Crops	Plant Breeding	dawoodobaidy@tu.edu.iq
4	Hussein Ali Hindi	Assistant Professor	PhD	Field Crops	Plant Breeding	husseinali@tu.edu.iq
5	Atheer Saber Mustafa	Assistant Professor	PhD	Field Crops	Crop Production	atheragriculture@tu.edu.iq
6	Salah Hameed Jumaa	Assistant Professor	PhD	Field Crops	Crop Plant Ecology	shj75@tu.edu.iq
7	Inas Ismail Mohammed	Assistant Professor	PhD	Field Crops	Cereal Crop Production	enas_esmail@tu.edu.iq
8	Hussam Mamdouh Hameed	Assistant Professor	PhD	Field Crops	Crop Production	hossam1979@tu.edu.iq
9	Firas Ahmed Daraj	Assistant Professor	PhD	Field Crops	Plant Physiology	firasahmed@tu.edu.iq
10	Mudher Ismail Huwaidi	Assistant Professor	PhD	Field Crops	Seed Technology	mudhir.hwaid@tu.edu.iq
11	Omar Nazhan Ali	Assistant Professor	PhD	Field Crops	Cereal Crop Production	omarnali84@tu.edu.iq
12	Abdullah Hassan Mohammed	Assistant Professor	PhD	Field Crops	Plant Tissue Culture	abdullah@tu.edu.iq
13	Luther Khalid Ahmed	Assistant Professor	PhD	Field Crops	Plant Physiology	Lothar.khalid@tu.edu.iq
14	Wissam Hamad Hussein	Assistant Professor	M.Sc	Field Crops	Crop Production	wesam_hamad@tu.edu.iq
15	Yousif Abdul Hameed Majeed	Lecturer	PhD	Field Crops	Plant Breeding	yousiffildcrop@tu.edu.iq
16	Luay Nahar Mohammed	Lecturer	PhD	Field Crops	Genetic Engineering	luai.muhammad@tu.edu.iq
17	Noor Ali Hameed	Lecturer	PhD	Field Crops	Weed Control	noor.ali@tu.edu.iq
18	Qatada Ibrahim Abdullah	Lecturer	PhD	Field Crops	Forage and Pasture Crops	qatadaibrahim@tu.edu.iq
19	Hiba Jumaa Mahmoud	Lecturer	PhD	Field Crops	Weed Control	Hiba2020@tu.edu.iq
20	Ahmed Mohammed Zaki Ibrahim	Lecturer	PhD	Field Crops	Field Crops	Ahmedzika@tu.edu.iq
21	Abdul Qader Hameedi Jasim	Lecturer	PhD	Field Crops	Field Crops	abd.hum.jassim@tu.edu.iq
22	Afrah Abdul Kareem Hassan	Lecturer	PhD	Field Crops	Field Crops	afrah.a.alkarim@tu.edu.iq
23	Ayman Ayoub Yas	Lecturer	M.Sc	Field Crops	Fiber Crops	Aymenyas75@tu.edu.iq

24	Ammar Wabdan Maseer	Lecturer	M.Sc	Field Crops	Crop Breeding	ammar.wabdan@tu.edu.iq
25	Mohammed Jawad Kareem	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	mohameed_jawad@tu.edu.iq
26	Manal Ali Marai	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	Manal_ali@tu.edu.iq
27	Amer Hassan Hussein	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	ah231095pag@st.tu.edu.iq
28	bdullah Amer Saleh	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	abdullahamer@tu.edu.iq
29	Khansaa Mohsen Zaban	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	khansa.zein@tu.edu.iq
30	Ahmed Majeed Haroush	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	ahmed.m.harosh@st.tu.edu.iq
31	Majid Jalil Rasheed	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	majid.r.madghash@tu.edu.iq
32	Majid Rasheed Madghash	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	majid. rashid@tu.edu.iq
33	Myaad Turki Nada	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	myad.turki@tu.edu.iq
34	Nada Muad Abdullah	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	nada.m.abdullah@tu.edu.iq
35	Basim Fahad Abdullah	Assistant Lecturer	M.Sc	Field Crops	Fiber Crops	Basim.f.abd@st.tu.edu.iq

Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full—time, and part—time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12. Acceptance Criterion
(Setting regulations related to enrollment in the college or institute, whether central admission or others)
central

13. The most important sources of information about the program
State briefly the sources of information about the program.

1. The college and university website
2. University guide
3. Central Library
4. The most important books and sources for the department
5.Textbooks
6. Internet

14. Program Development Plan
1. Periodic review of curricula and educational production units to identify strengths and weaknesses and address scientific gaps. 2. Ongoing assessment of labor market needs in the field crops sector to align graduates' skills with actual requirements. 3. Development of a performance measurement system that includes field tests and practical skills assessments alongside traditional theoretical program assessments. 4. Integration of artificial intelligence and environmental sustainability into core courses to keep pace with global developments in field crops..

Program Skills Outline															
				Required program Learning outcomes											
Year/ Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
3	FC 1301	Genetics	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1302	Field Crop Mechanization	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1303	Field Crop Insects	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1304	Land Reclamation	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1305	Forage Crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1306	Design and Analysis of Experiments	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1307	Field Crop Diseases	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U011038	Specialized English 3	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2301	Fiber Crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2302	Cereal Crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2303	Legumes Crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2304	Beekeeping	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2305	Seed Technology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U021037	Computer Applications 3	Basic	*	*	*	*	*	*	*	*	*	*	*	*

4	FC 1401	Plant Medicine	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1402	Plant Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1403	Weed Biology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1404	Field Crop Management	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1405	Land Cultivation	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1406	Molecular Genetics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 1407	Seminars	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2401	Plant Breeding	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2402	Growth Regulators	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2403	Weed Control	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2404	Range Management	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2405	Environmental Stress	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	FC 2406	Graduation Research Project	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Academic Program Description Form

University Name: Tikrit University

Faculty/Institute: College of Agriculture

Scientific Department: Animal Production Department

Academic or Professional Program Name: Bachelor of Agricultural Sciences/Animal Production

Final Certificate Name: Bachelor of Agricultural Sciences/Animal Production

Academic System: Season

Description Preparation Date: 14/9/2025

File Completion Date: 14/9/2025

Signature:

Head of Department Name:
professor Dr.Tareq Khalaf Hasan Khalaf Aljumaily

Date: 14/9/2025

Signature:

Scientific Associate Name:
Professor Dr. Mohammed saleh Mohammed

Date: 14/9/2025

The file is checked by:

Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Professor Dr. Maysaloon Wail Ibraheem

Date: 14.9.2025

Signature:

Approval of the Dean

Dr. Sami Khader Saeed

14/9/2025

1. Program Vision

The Department of Animal Production aspires to achieve leadership in the animal sector, scientific research, and community service by preparing qualified personnel who possess the knowledge and applied skills necessary to develop the animal production sector and enhance food security by improving and increasing local output in line with the requirements of sustainable development and modern scientific developments.

2. Program Mission

The Department of Animal Production seeks to be a leader in providing high-quality education in the fields of animal husbandry and improving its production by offering integrated scientific curricula and advanced practical training based on modern technologies and knowledge, and by encouraging applied scientific research, enabling graduates to meet the needs of the labor market and contribute effectively to the development of the animal sector and serve the community in a way that supports food security and achieves sustainable development.

3. Program Objectives

1. To provide students with scientific knowledge and skills in the fields of animal breeding, nutrition, management, and production improvement.

2. To prepare qualified personnel capable of handling and practically applying modern technologies in animal production.

3. To conduct applied scientific research that contributes to the development of the animal production sector at the local and regional levels.

4. To prepare graduates capable of entering the job market and encourage them to establish small, medium, and sustainable enterprises.

5. To develop curricula for all levels to align with the latest advancements in modern science and technology.

6. To serve the local community by holding scientific seminars aimed at raising awareness and developing the skills of breeders working in the animal sector.

7. To organize workshops and training courses for investors and farmers on a regular basis.

8. To enhance scientific cooperation between the department and state institutions and the private sector through graduate student research projects that aim to solve real problems facing the livestock sector.

9. To work on disseminating modern technologies that improve the quality and quantity of animal products.
4. Program Accreditation
nothing
5. Other external influences
nothing

6 Program Structure				
Program Structure	Number of Courses	Credit hours	Percentage	Reviews•
Institution Requirements	**9**	**9**	**% 15.25**	
College Requirements	**13**	**31**	**% 22.03**	
	37	**107**	**% 62.71**	

Department Requirements				
Summer Training				
Other				

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

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
1	0011101	analytical chemistry	2	3
	0C11102	Principles of soil science	2	3
	0C11103	Principles of plant protection	2	3
	0011104	Principles of animal production	2	3
	0011105	Space	1	3
	U011016	Computer applications 1	-	3
	U011017	Specialized English language1	1	-
	U011018	Human rights and public freedoms	1	-
	0C21101	organic chemistry	2	3
	0021102	Principles of field crops	2	3
	0C21103	Principles of statistics	2	3
	0021104	Principles of domestic birds	2	3
	0C21105	mathematics	2	-
	0021106	General animal	2	3
2	0011201	Biochemistry	2	3
	0011202	Hygiene of the animal products	2	3
	0011203	Principles of fish	2	3
	0C11204	Principles of horticulture	2	3
	0C11205	Agricultural guidance principles	2	-
	0011206	Principles of microbiology	-	3
	0011207	Animal production mechanization	2	3
	0021201	Genetics	2	3
	0021202	Fodder crops and pastures	2	3
	0021203	Breeding and production of fish	2	3
	0021204	General principles of dairy	2	3
	0021205	Principles of agricultural	2	-

		economy		
	U021026	Freedom and democracy	1	-
	U021027	Computer applications 2	-	3
	U021028	Specialized English language2	1	-
3	0011301	Animal Physiology	2	3
	0011302	Hatching and hatchery management	2	3
	0011303	Animal nutrition	2	3
	0011304	Animal production economics	3	-
	0011305	Environment and behavior of animal	2	-
	0C11306	Design and analysis of experiments	2	3
	0C11307	Medical and veterinarian insects	2	3
	U011038	Specialized English language 3	1	-
	0021301	Poultry Physiology	2	3
	0021302	Poultry Technology	2	3
	0021303	Feed and feed	2	3
	0021304	Animal diseases	2	3
	0021305	Animal breeding	2	3
	0021306	Reproductive Physiology	2	3
	U021037	Computer applications 3	-	3
4	0011401	Poultry nutrition	2	3
	0011402	Poultry breeding	2	3
	0011403	Sheep and goat production	2	3
	0011404	Meat production	2	3
	0011405	poultry management	2	3
	06114C0	Pasture Management	2	3
	0C21407	Graduate research project	-	3
	0021401	poultry diseases	2	3
	0021402	Molecular science	2	3
	0021403	Production of dairy cattle	2	3
	0021404	Meat science	2	3
	0021405	Buffalo production	2	-
	021046U	Specialized English language 4	1	-
	0C21407	Seminars	1	-
	0C21408	Graduate research project	-	3

8. Expected learning outcomes of the program

A. Knowledge

1. Familiarity with the scientific fundamentals related to animal production.

2. Familiarity with scientific theories in animal production and related sciences.

3. Familiarity with the methodologies and ethics of scientific research and its various tools.

4. Familiarity with the necessary requirements for raising animals.

B. Skills

1. Apply learned skills to develop the field of animal production.

2. Operate modern tools and equipment used in animal production.

3. Demonstrate the student's ability to evaluate and assess animal production projects.

4. Apply quality standards and health and environmental requirements in managing animal production facilities.

C.Ethics

1. Thinking skills according to the student's ability. The goal of this skill is for the student to believe in what is tangible, understand when, what, and how to think, and work on improving their thinking and problem-solving abilities.

2. Observation and perception.

3. Analysis, interpretation, and persuasion.

4. Preparation and evaluation.

9. Teaching and Learning Strategies

10.Evaluation methods

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)	Number of the teaching staff	
	General	Special		Staff	**Lecturer**
Professor	Animal Production	Poultry Nutrition		47	
Professor	Animal Production	Poultry Physiology			
Professor	Animal Production	Poultry Breeding and Improvement			
Professor	Animal Production	Poultry Management			

Professor	Animal Production	Animal Management			
Professor	Animal Production	Meat Production			
Professor	Animal Production	Animal Nutrition			
Professor	Animal Production	Fish Nutrition			
Professor	Animal Production	Animal Physiology			
Professor	Animal Production	Poultry Breeding and Improvement / Molecular Genetics			
Professor	Animal Production	Reproductive Physiology			
Assistant Professor	Animal Production	Sheep and Goat Production			
Assistant Professor	Animal Production	Meat Production			
Assistant Professor	Animal Production	Animal Nutrition			
Assistant Professor	Animal Production	Fish Biology			
Assistant Professor	Animal Production	Poultry Technology			
Assistant Professor	Animal Production	Poultry Physiology			
Assistant Professor	Animal Production	Poultry Breeding and Improvement			
Lecturer	Animal Production	Animal Physiology			
Lecturer	Animal Production	Ruminants			
Lecturer	Animal Production	Poultry			
Lecturer	Biology	Molecular Genetics			
Assistant Lecturer	Animal Production	Fish			
Assistant Lecturer	Animal Production	Poultry			
Assistant Lecturer	Chemistry Education	Chemical Sciences			
Assistant Lecturer	Translation	English			

Names of Animal Production Department Lecturers 2025-2026

N	The full name	Academic Qualification	Academic title	Mobile number	E.mail
1	Maad Abdulkareem mahmood	Ph.D	Professor	07702889508	maadalbaddy@tu.edu.iq
2	Ahmed Taies Taha	Ph.D	Professor	07701843998	dr.att@tu.edu.iq
3	Samawal sadi abdullah	Ph.D	Professor	07703766232	samawalsadi@tu.edu.iq
4	Tareq Khalaf Hasan	Ph.D	Professor	07706643174	tariq.aljomaily@tu.edu.iq
5	Emad Ghaib Abdelrahman	Ph.D	Professor	07701705733	dr.emadghaib@tu.edu.iq
6	Maysaloon Wail Ibraheem	Ph.D	Professor	07707599653	maysaloon2019@tu.edu.iq
7	Ammar Salah aldeenAbdulwahid	Ph.D	Professor	07702814069	amarslssh@tu.edu.iq
8	Abdullah isam noaman	Ph.D	Professor	07710360001	abdullah.noaman@tu.edu.iq
9	Nuha Hameed Sadiq	Ph.D	Professor	07705140588	nuhaalbassam@tu.edu.iq
10	Abdulkhaliq Ahmed Farhan	Ph.D	Professor	07701854866	dr.abdulkhalid45@tu.edu.iq
11	Akeel Abd shelij	Ph.D	Professor	07703050432	akeelabd78@tu.edu.iq
12	Arkan Baraa Mohammed	Ph.D	Professor	07717704060	dr.arkanmohammed@tu.edu.iq
13	Mohammed Saleh Mohammed	Ph.D	professor	07708568885	dr.mohsaleh@tu.edu.iq
14	Ahmed Khalid Ahmed	Ph.D	professor	07735511729	Ahmedkhalid76700@tu.edu.iq
15	Aslam Saud Alwan	Ph.D	professor	07717415743	aslam.alwan@tu.edu.iq
16	Afraah Mustafa Mohammad	Ph.D	Assistant	07712851671	afrah_mustafa@tu.edu.iq
17	Ahmed Ramadan Muhammed	Ph.D	Assistant	07708482648	ahmed.ramadhan@tu.edu.iq
18	Mowafaq Hussein Ali	Ph.D	Assistant	07701809388	drmwaffuk75@tu.edu.iq
19	Saleh Najm Hussain	Ph.D	Assistant	07711528920	salihnjim@tu.edu.iq
20	Sadam Mohamad Hassan	Ph.D	Assistant	07710922980	sadam.mohamad@tu.edu.iq
21	Mokhalad Oraibi Hasan	Ph.D	Assistant	07714077837	mokhalad082@tu.edu.iq
22	Samah Maiser Raouf	Ph.D	Assistant	07711880472	samahmaiser@tu.edu.iq
23	Haitham Rajab Manhee	Ph.D	Assistant	07708566705	haithamalkaisi85@tu.edu.iq
24	Ashraf Kamil Azeez	Ph.D	Lecturer	07705837144	ashraf.kamil@tu.edu.iq
25	Falah hasan salih	Ph.D	Lecturer	07703715505	falahhasan1984@tu.edu.iq
26	Mohammed Abdelkader	Ph.D	Lecturer	07701342577	Moh.abd.m4224@tu.edu.iq
27	Ahmed Atallah Daoud	Ph.D	Lecturer	07705161901	ahmedaldoury@tu.edu.iq
28	Nawar Bahaa Abdul Jabbar	Ph.D	Lecturer	07704219883	nawar.a014@tu.edu.iq
29	Asaad Dhia Saber	Ph.D	Lecturer	07748108132	asaad.dh.saber@tu.edu.iq
30	Saif Ekram Jassim	Ph.D	Lecturer	07735897518	saiforg19@tu.edu.iq
31	Qais Mohammed Abdulrahman	Ph.D	Lecturer	07716000336	qais.m.abdulrahman@tu.edu.i
32	Ahmed Nizar Ismail	Ph.D	Lecturer	07712194227	ahmed.n.ismeal@tu.edu.iq
33	Muna Khalid khudhair	Ph.D	Lecturer	07703043804	mona_2017@tu.edu.iq
34	Oday Khalaf Hamad	Ph.D	Lecturer	07729299568	uday_alnasser@tu.edu.iq
35	Mohaeman abd Alsalam	Ph.D	Lecturer	07701717676	mohaeman.a.m@tu.edu.iq

36	Aziz Hassan Saleh	Ph.D	Lecturer	07706133891	azeez_agr@tu.edu.iq
37	Jassim Mohammed Baqer	Ph.D	Lecturer	07706694274	Jasim.baq@tu.edu.iq
38	Sohaib Mahmood abd	Ph.D	Lecturer	07701875565	sohaibmahmood1983@tu.edu.
39	Abdul Rahim Hallo Taha	M.Sc	Assistant	07719681213	abdulraheem.hallo@tu.edu.iq
40	Mohammed AbdulMajeed Shahab	M.Sc	Assistant	07703036150	Mohammed.abd.sh@tu.edu
41	Alaa Basem Hamid	M.Sc	Assistant	07824194699	alaa.abbas@ tu. edu .iq
42	Hisham Ziyad Muhi	M.Sc	Assistant	07735901279	hesham.daham@tu.edu.iq
43	Yusuf Badr Ibrahim	M.Sc	Assistant	07807424688	youssef.b.ibrahim@st.tu.ed
44	Muzdalifa Mustafa Tuma	M.Sc	Assistant	07712106118	Muzdalifa.m.t@tu.edu.iq
45	Khalil Salem Sarheed	M.Sc	Assistant	07737310073	Khalil.s.sar025@tu.edu.iq
46	Majid Jabbar Shaker	M.Sc	Assistant	07735901526	majeed.j.s033@tu.edu.ia
47	Othman Fouad Farouk	M.Sc	Assistant	07745149531	othmanfoaad94@gmail.co

Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full—time, and part—time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12. Acceptance Criterion
(Setting regulations related to enrollment in the college or institute, whether central admission or others)
central

13. The most important sources of information about the program
State briefly the sources of information about the program.
1. The college and university website 2. University guide 3. Central Library 4. The most important books and sources for the department 5.Textbooks 6. Internet

14. Program Development Plan
1. Regularly review curricula and educational production units to identify strengths and weaknesses and address scientific gaps. 2. Conduct ongoing assessments of labor market needs in the poultry and ruminant sector to align graduates' skills with actual requirements. 3. Develop a performance measurement system that includes field tests and practical skills assessments alongside traditional theoretical program assessments. 4. Integrate artificial intelligence and environmental sustainability into core courses to keep pace with global developments in animal production.

Program Skills Outline															
				Required program Learning outcomes											
Year/ Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
1	0011101	analytical chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C11102	Principles of soil science	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C11103	Principles of plant protection	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011104	Principles of animal production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011105	area	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U011016	Computer applications 1	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U011017	Specialized English language1	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U011018	Human rights and public freedoms	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C21101	organic chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021102	Principles of field crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C21103	Principles of statistics	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021104	Principles of domestic birds	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C21105	mathematics	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021106	General animal	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011201	Biochemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011202	Hygiene of the animal products	Basic	*	*	*	*	*	*	*	*	*	*	*	*

2	0011203	Principles of fish	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C11204	Principles of horticulture	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C11205	Agricultural guidance principles	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011206	Principles of microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011207	Animal production mechanization	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021201	Genetics	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021202	Fodder crops and pastures	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021203	Breeding and production of fish	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021204	General principles of dairy	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021205	Principles of agricultural economy	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U021026	Freedom and democracy	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U021027	Computer applications 2	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U021028	Specialized English language2	Basic	*	*	*	*	*	*	*	*	*	*	*	*
3	0011301	Animal Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011302	Hatching and hatchery management	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011303	Animal nutrition	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011304	Animal production economics	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011305	Environment and behavior of animal	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C11306	Design and analysis of experiments	Basic	*	*	*	*	*	*	*	*	*	*	*	*

	0C11307	Medical and veterinarian insects	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U011038	Specialized English language 3	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021301	Poultry Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021302	Poultry Technology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021303	Feed and feed	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021304	Animal diseases	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021305	Animal breeding	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021306	Reproductive Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	U021037	Computer applications 3	Basic	*	*	*	*	*	*	*	*	*	*	*	*
4	0011401	Poultry nutrition	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011402	Poultry breeding	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011403	Sheep and goat production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011404	Meat production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0011405	poultry management	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	06114C0	Pasture Management	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C21407	Graduate research project	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021401	poultry diseases	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021402	Molecular science	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021403	Production of dairy cattle	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0021404	Meat science	Basic	*	*	*	*	*	*	*	*	*	*	*	*

	0021405	Buffalo production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	021046U	Specialized English language 4	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C21407	Seminars	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	0C21408	Graduate research project	Basic	*	*	*	*	*	*	*	*	*	*	*	*

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Academic Program Description Form

University Name: Tikrit University

Faculty/Institute: College of Agriculture

Scientific Department: Soil and Water Resources Sciences

Academic or Professional Program Name: Bachelor of Agricultural Sciences/ Soil and Water Resources Sciences

Final Certificate Name: Bachelor of Agricultural Sciences/ Soil and Water Resources Sciences

Academic System: Season

Description Preparation Date: 14/9/2025

File Completion Date: 14/9/2025

Signature:

Head of Department Name:

professor Dr. Mohammed J. Farhan

Date: 14.9.2025

Signature:

Scientific Associate Name:

Professor Dr. Mohammed saleh Mohammed

Date: 14.9.2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Professor Dr. Maysaloon Wail Ibraheem

Date: 14.9.2025

Signature:

Approval of the Dean

Dr. Sami Khader Saeed

Date: 14/9/2025

1. Program Vision

The Department of Soil Science and Water Resources aspires to be a leader among its counterpart departments in the country through its scientific staff and graduates, and by providing consultations, research, and community service in the fields of soil science and water resources.

2. Program Mission

The Department of Soil Science and Water Resources seeks to supply society with scientific competencies and qualified graduates in both theoretical and applied aspects of soil science and water resources, and to provide rigorous research and consultations to workers in the agricultural sector.

3. Program Objectives

1. Qualify students theoretically and practically through specialized curricula and courses.
2. Grant a Bachelor's degree in Soil Science and Water Resources with specializations in soil fertility and fertilizers, soil chemistry, soil physics, soil survey and classification, and soil microbiology, to provide the labor market with graduates possessing the necessary knowledge and skills in sustainable and effective soil and water resource management.
3. Qualify and train students scientifically and practically in all fields of soil science and water resources to contribute to improving, developing, and increasing agricultural production and efficient investment of natural resources.
4. Consolidate water consumption rationalization techniques and introduce new lands into the agricultural area where water shares were not previously secured by adopting modern irrigation techniques.
5. Encourage researchers in innovation by adding courses to develop mental skills, economic and social planning, constructive dialogue, and decision-making within education development programs.
6. Conduct research to address and solve agricultural problems using technical means.

4. Program Accreditation

nothing

5. Other external influences

nothing

6 Program Structure				
Program Structure	Number of Courses	Credit hours	Percentage	Reviews•
Institution Requirements	**9**	**9**	**% 15.25**	None
College Requirements	**13**	**30**	**% 22.03**	None
	37	**108**	**% 62.71**	None
Department Requirements				
Summer Training	Basic	None	0	None
Other	None	None	None	None

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

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
First	AGRSS03	Principles of Chemistry	2	3
	AGRSS05	Physics	2	3
	AGRSS07	Principles of Field Crops	2	3
	AGRSS19	Principles of Animal Production	2	3
	AGRSS02	Mathematics 1	2	-
	UOT004	Human Rights and Public Freedoms	1	-
	AGRSS04	Engineering Drawing	-	3
	UOT002	Specialized English Language 1	1	-
	AGRSS03	Organic Chemistry	2	3
	AGRSS01	Principles of Geology	2	3
	AGRSS08	Fruit Production	1	3
	AGRSS09	Principles of Agricultural Economics	2	-
	AGRSS02	Mathematics 2	2	-
	UOT003	Computer Applications 1	-	3
	AGRSS06	Plane Surveying	1	3
	UOT021	Specialized English Language 2	1	-
Second	AGRSS33	Biochemistry	2	3
	AGRSS10	Principles of Soil Science	2	3
	AGRSS11	Principles of Statistics	2	3
	AGRSS14	Principles of Microbiology	2	3
	AGRSS12	Soil Environment and Meteorology	2	3
	AGRSS13	Vegetable Production	1	3
	UOT031	Computer Applications 2	-	3
	AGRSS16	Soil, Water, and Plant Analysis	2	3
	AGRSS15	Principles of Plant Protection	2	3
	AGRSS18	Agricultural Machinery and Tools	2	3
	AGRSS17	Principles of Agricultural Extension	2	-
	AGRSS19	Plant Physiology	2	3
	AGRSS06	Land Leveling and Grading	2	3
	UOT005	Freedom and Democracy	1	-
Third	AGRSS20	Soil Physics	2	3
	AGRSS21	Soil Organic Matter	2	3
	AGRSS22	Soil Fertility	2	3
	AGRSS23	Irrigation	2	3
	AGRSS24	Soil Chemistry	2	3
	AGRSS25	Soil and Water Pollution	2	3

	AGRSS26	Design and Analysis of Experiments	2	3
	AGRSS27	Plant Improvement	2	3
	AGRSS28	Soil Salinity	2	3
	AGRSS29	Soil Morphology	2	3
	AGRSS30	Drainage	2	3
	AGRSS31	Soil Minerals	2	3
	AGRSS32	Natural Resource Economics	3	-
	UOT031	Computer Applications 3	-	3
Fourth	AGRSS34	Soil Survey and Classification	2	3
	AGRSS35	Soil and Water Conservation	2	3
	AGRSS38	Soil Microbiology	2	3
	AGRSS39	Soil-Water-Plant Relationship	2	3
	AGRSS36	Hydrology and Water Resources	2	3
	AGRSS37	Irrigation System Technologies	2	3
	AGRSS40	Graduation Research Project	-	3
	AGRSS41	Soil Management	2	3
	AGRSS42	Desertification	2	-
	AGRSS43	Plant Nutrition	2	3
	AGRSS44	Fertilizer Technologies	2	3
	AGRSS45	Land Reclamation	2	3
	AGRSS46	Seminars	1	-
	AGRSS47	Graduation Research Project	-	3

8. Expected learning outcomes of the program

A. Knowledge

1. Design, implement, and manage various agricultural projects.
2. Manage fertilization and use modern technologies in this field for agricultural projects.
3. Plan, design, and maintain traditional and modern irrigation systems.
4. Plan, design, and manage drainage networks for agricultural lands.
5. Optimize water resource management and rationalize its use.
6. Develop bio-fertilization methods within the concepts of clean and sustainable agriculture.

B. Skills

1. Practice learned skills in soil, water, and plant analysis.
2. Operate modern tools and devices used in the field of soil, water, and plant analysis.
3. Ability to evaluate and assess irrigation and drainage projects.
4. Apply quality standards and health/environmental requirements in fertilizer and nutrient management.

C.Ethics

1. Thinking skills according to the student's ability; aiming to believe in tangible facts, understanding when, what, and how to think, and improving problem-solving abilities.

2. Observation and perception.
3. Analysis, interpretation, and persuasion.
4. Preparation and evaluation.

9. Teaching and Learning Strategies

1. Explanation and clarification.
2. Lecture method.
3. Student groups.
4. Practical lessons in laboratories.
5. Scientific trips to follow up on irrigation and drainage projects in Iraq.
6. Self-learning method.

10. Evaluation methods

Discussion, report writing, scientific essays, oral presentations, teamwork skills, project completion, and self-assessment.

11. Faculty

No.	Full Name	Academic Title	Degree	Email
1	Abdul Kareem Aribi Saba	Professor	PhD	alkurtany@tu.edu.iq
2	Iyad Abdullah Khalaf	Professor	PhD	aiad2017@tu.edu.iq
3	Basim Shakir Ubaid	Professor	PhD	basimalobaidy@tu.edu.iq
4	Mohammed Jarallah Farhan	Professor	PhD	mojafd79@tu.edu.iq
5	Aws Mamdouh Khairo	Professor	PhD	awsskhairo@tu.edu.iq
6	Salah Al-Deen Hammadi Mahdi	Professor	PhD	salahaldeen@tu.edu.iq
7	Ammar Saadi Ismail	Assistant Professor	PhD	ammaryahya@tu.edu.iq
8	Hudhaifa Maan Najm	Assistant Professor	PhD	hudhaifaalhamandi@tu.edu.iq
9	Muna Mohammed Ibrahim	Assistant Professor	PhD	munamohammed3@tu.edu.iq
10	Yasir Hamood Ajrash	Lecturer	PhD	yasirhmood@tu.edu.iq
11	Hiba Abdullah Kareem	Lecturer	PhD	hiba_Kreem@tu.edu.iq
12	Mahmoud Ahmed Latif	Lecturer	PhD	mhoo_218@tu.edu.iq
13	Imad Tariq Dahham	Lecturer	PhD	imadtarriq@tu.edu.iq
14	Hiba Mohammed Yousif	Lecturer	PhD	hibaalmohameed@tu.edu.iq
15	Ahmed Abdullah Fattah	Lecturer	PhD	ahmed.abd.fatah@tu.edu.iq
16	Sahar Naseer Musa	Lecturer	PhD	sahar.n.musa@tu.edu.iq
17	Amer Ali Al-Salim	Lecturer	PhD	dr.amer.alsalim@tu.edu.iq
18	Rowayda Khalid Saber	Lecturer	PhD	rowyda.khaild1@tu.edu.iq
19	Nameer Hamid Yassin	Assistant Lecturer	Master's	nameer2019@tu.edu.iq
20	Ru'a Qais Mahmoud	Assistant Lecturer	Master's	ruaa.q010@tu.edu.iq
21	Abdullah Arkan Khalid	Assistant Lecturer	Master's	Abdullah_sciencesoil@tu.edu.iq
22	Ali Abdulkreem Qasim	Assistant Lecturer	Master's	aliabdulkreem@tu.edu.iq
23	Ahmed Muath Ahmed	Assistant Lecturer	Master's	Ahmed.m.ahmed@tu.edu.iq
24	Omar Kadhim Alawi	Assistant Lecturer	Master's	omar.k.alewi@tu.edu.iq
25	Hiba Abd Mohi	Assistant Lecturer	Master's	heba.a.mustafa@tu.edu.iq
26	Zina Laith Salah	Assistant Lecturer	Master's	zina.l.so23@tu.edu.iq
27	Oday Naji Sami	Assistant Lecturer	Master's	oday.naji.c44@tu.edu.iq
28	Raghad Qasim Kadhim	Assistant Lecturer	Master's	raghadraghad@tu.edu.iq

Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full—time, and part—time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12. Acceptance Criterion
(Setting regulations related to enrollment in the college or institute, whether central admission or others)
central

13. The most important sources of information about the program
State briefly the sources of information about the program.
1. The college and university website 2. University guide 3. Central Library 4. The most important books and sources for the department 5.Textbooks 6. Internet

14. Program Development Plan
1. Periodic review of curricula to address scientific gaps. 2. Surveying labor market needs regarding modern irrigation methods. 3. Developing performance measurement systems to include field tests. 4. Integrating AI and environmental sustainability into core courses. 5. Integrate artificial intelligence and environmental sustainability into core courses to keep pace with global developments in animal production.

Program Skills Outline															
				Required program Learning outcomes											
Year/ Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
1	AGRSS03	Principles of Chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS05	Physics	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS07	Principles of Field Crops	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS19	Principles of Animal Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS02	Mathematics 1	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	UOT004	Human Rights and Public Freedoms	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS04	Engineering Drawing	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	UOT002	Specialized English Language 1	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS03	Organic Chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS01	Principles of Geology	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS08	Fruit Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS09	Principles of Agricultural Economics	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS02	Mathematics 2	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	UOT003	Computer Applications 1	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS06	Plane Surveying	Basic	*	*	*	*	*	*	*	*	*	*	*	*
	UOT021	Specialized English Language 2	Basic	*	*	*	*	*	*	*	*	*	*	*	*

2	AGRSS33	Biochemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS10	Principles of Soil Science	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS11	Principles of Statistics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS14	Principles of Microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS12	Soil Environment and Meteorology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS13	Vegetable Production	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	UOT031	Computer Applications 2	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS16	Soil, Water, and Plant Analysis	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS15	Principles of Plant Protection	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS18	Agricultural Machinery and Tools	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS17	Principles of Agricultural Extension	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS19	Plant Physiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS06	Land Leveling and Grading	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
3	UOT005	Freedom and Democracy	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS20	Soil Physics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS21	Soil Organic Matter	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS22	Soil Fertility	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS23	Irrigation	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS24	Soil Chemistry	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*

	AGRSS25	Soil and Water Pollution	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS26	Design and Analysis of Experiments	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS27	Plant Improvement	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS28	Soil Salinity	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS29	Soil Morphology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS30	Drainage	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS31	Soil Minerals	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS32	Natural Resource Economics	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	UOT031	Computer Applications 3	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
4	AGRSS34	Soil Survey and Classification	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS35	Soil and Water Conservation	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS38	Soil Microbiology	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS39	Soil-Water-Plant Relationship	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS36	Hydrology and Water Resources	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS37	Irrigation System Technologies	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS40	Graduation Research Project	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS41	Soil Management	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS42	Desertification	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS43	Plant Nutrition	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS44	Fertilizer Technologies	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*

	AGRSS45	Land Reclamation	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS46	Seminars	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*
	AGRSS47	Graduation Research Project	Basic	*	*	*	*	*	*	*	*	*	*	*	*	*

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Academic Program Description Form

University Name: Tikrit University

Faculty/Institute: College of Agriculture

Scientific Department: Plant Protection

Academic or Professional Program Name: Bachelor of Agricultural Sciences/ Plant Protection

Final Certificate Name: Bachelor of Agricultural Sciences/ Plant Protection

Academic System: Season

Description Preparation Date: 14/9/2025

File Completion Date: 14/9/2025

Signature:

Head of Department Name:
assistant professor: Awad J.Mohammed

Date: 14-9-2025

Signature:

Scientific Associate Name:
Professor Dr. Mohammed saleh Mohammed

Date: 14-9-2025

The file is checked by:

Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Professor Dr. Maysaloon Wail Ibraheem

Date: 14-9-2025

Signature:

Approval of the Dean

Dr. Sami Khudhur Saeed

sami khudhur saeed

Dean

1. Program Vision

That the Department of Plant Protection be the leading one among the corresponding departments in Iraqi universities.

2. Program Mission

The plant protection academic staff of the agriculture college at Tikrit University believe that students come to understand the discipline of most of pests through a combination of course work, laboratory experiences, Worker , and fieldwork. The combination of methods leads students to a balanced between controling the pests and keeping the ecosystem .

3. Program Objectives

1. Preparing and providing distinguished university education in the sectors of plant and insect diseases and resistance methods
2. Spreading science and knowledge among members of society through constant communication with agricultural extension departments and private beverage companies.
3. Keeping pace with developments in conducting scientific research with its clinical and laboratory courtesy, keeping up with the latest findings of the results of this research, and approving programs for integrated pest management and virus control.
4. Continuous development of curricula by amending the academic description of each course and adopting the standards described by the Ministry in evaluating the performance of teaching staff.

4. Program Accreditation

Nothing
5. Other external influences
Nothing

6 Program Structure				
Reviews•	Percentage	Credit hours	Number of Courses	Program Structure
	%6.2	9	9	Institution Requirements
	%17.24	25	5	College Requirements
	%76.56	111	40	

				Department Requirements
				Summer Training
				Other

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

7. Program Description

Credit Hours		Course Name	Course Code	Year/Level
practical	theoretical			
3	2	Entomology	**0017101**	1
3	2	Horticulture principles	**0017102**	
3	2	General Zoology	**0017103**	
	2	Agricultural economy	**1017104**	
	2	Human Rights and Democracy	**0017110**	
	2	English Language 1	**2017105**	
-	2	Computer Science 1	**3017106**	
3	2	General Botany	**0027101**	
3	2	Non-Organic Chemistry	**0027102**	
3	2	Basics of plant protection	**0027103**	
3	2	Basics of soil and water resources	**0027110**	
3	2	General Mathematics	**0127104**	
3	2	Animal production principles	**0017210**	
	2	Arbic Language 1	**0017201**	
3	2	Microbiology techniques	**0017202**	2
3	2	Biosafety and security	**0017203**	
3	2	Plant physiology	**0017204**	
3	2	Agricultural guidance and techniques transfer	**0017205**	
3	2	Machines and protective equipment	**0017206**	
	2	Baath Party crimes	**0027201**	
	2	Arbic Language 2	**0027202**	
3	2	Principles of field crops	**1027203**	
3	2	Plant nutrition	**2027204**	
3	2	Classification of insects	**0027210**	
3	2	Computer Science and Artificial Intelligence	**0027205**	

-	2	General chemistry techniques	**0027220**	
3	2	Medical and veterinary insects	**3027206**	
	2	English Language 2	**0017301**	
3	2	Genetics and plant Breeding	**0017310**	
3	2	Statistics and Design and Analysis of Experiments	**1017303**	
3	2	Insects physiology	**0017320**	
3	2	Nematode	**0017330**	
3	2	Mycology 1	**0017304**	
3	2	Ecology and Sustainable Agriculture	**0027310**	3
3	2	Plant diseases	**0027301**	
3	2	Weeds and methods of control them	**0027302**	
3	2	Biochemistry	**0027303**	
3	2	Mycology 2	**0027320**	
3	2	Apiculture	**0027330**	
3	2	Bio Techniques	**0027304**	
3	2	Pesticides and environmental pollution	**0017440**	
3	2	Insects ecology Techniques	**0017450**	
3	2	Field crop diseases	**0017460**	
3	2	Vegetable diseases and protected cultivation	**0027410**	
3	2	Storages pests	**0027420**	
3	2	Field crop insects	**0027430**	
	1	seminars	**0027440**	4
3	2	Fruit diseases	**0027450**	
3	2	Agriculture Mite	**1027400**	
3	2	Horticulture Insects	**0027460**	
3	2	Biological control	**0017101**	
-	2	Integrated pest management	**0017102**	
3	2	Viruses	**0017103**	
-	1	Agricultural engineering project	**1017104**	
3	2	Fruit diseases	**0017110**	

Special Requirements/Skills (if applicable)	Number of the teaching staff 27

name	dgree	Scintefec name	Specialization		Email
			general	Special	
Abdullah–A Hasan	pHD	professor	Biology	Fungi	Darabdullah.has67@tu.edu.iq
MAATH-A Abdul-aal	pHD	professor	Plant diseases	Virusis	Maath.alfahd@tu.edu.iq
Salih-A ismail	pHD	professor	Plant protection	Plant diseases	salihjabur2005@tu.edu.iq
Mohammed-SH Mansor	pHD	professor	Plant protection	Economic insect	mshmanor@gmail.com
Zyaid Sh. Ahmes	pHD	A.professor	Horticulture	Tissue culture	ziaddema@gmail.com
Khaldon-F Saeed	pHD	A.professor	Plant protection	IPM	khaldoonqadhi@tu.edu.iq
Muqdad-S jasim	pHD	A.professor	Plant protection	Plant diseases	md@tu.edu.iq
Khalaf –A Mohammed	pHD	A.professor	Plant protection	Plant diseases	khalaf20017vi@gmail.com
Awf A. Ahmed	pHD	A.professor	Plant protection	Plant diseases (Fungi)	Awfabd91@tu.edu.iq
Awad-J.Mohammed	pHD	A.professor	Plant protection	Insect	awad_jasim@yahoo.com
Haidar –A Ridha	pHD	Lacturar	Plant protection	Insect	Haidar.a.reda353@tu.edu.iq
Waleed –Kh. Ahmed	pHD	Lacturar	Plant protection	Fungi	waleedkhal20@gmail.com
OTHMAN-H ALI	pHD	Lacturar	Plant protection	Insect	Othman.h.ali4455@tu.edu.iq
Amina-SN.Shakir	pHD	Lacturar	Plant protection	Insect	amnanaef@gmail.com
Raghad-S. Daham	pHD	Lacturar	Plant protection	Insect	raghadsaad2493@gmail.com
BASMA-DH.Ayed	pHD	Lacturar	Plant protection	Plant diseases	Basma2020@tu.edu.iq
Omar-A.Daham	MSC	A.Lacturar	Plant protection	Insect	Omarali@tu.edu.iq
Laith-M.Abas	MSC	A.Lacturar	Plant protection	Insect	Laith_2020@tu.edu.iq
Naheda-K.Madhlom	MSC	A.Lacturar	Biology	Biology	nahda68774@gmail.com
Kefe-A.rajab	MSC	A.Lacturar	Plant protection	Plant diseases	kefaa_amer@tu.edu.iq
Ashwaq-T.Mohammed	MSC	A.Lacturar	Plant protection	Plant diseases	Ashwaqt@tu.edu.iq
Aya-M .Mohsin	MSC	A.Lacturar	Plant protection	Plant diseases	Ayaaraad298@gmail.com
Ahmed - M.mahmood	MSC	A.Lacturar	Plant protection	Plant diseases	ahmed.mohamed@tu.edu.iq
Maha – T.Ibraheem	MSC	A.Lacturar	Plant protection	Plant diseases	Maha.Samir@tu.edu.iq
Reman-	MSC	A.Lacturar	Plant	Insect	Reema.Rajih@tu.edu.iq

J.Kadhom			protection		
Sara-S.Abdulrahman	MSC	A.Lacturar	Plant protection	Insect	S.sabhan018@tu.edu.iq
Ali-K Eliewi	MSC	A.Lacturar	Plant protection	Plant diseases	Ali.k.alewi@tu.edu.iq

Mentoring new faculty members
Briefly describes the process used to mentor new, visiting, full—time, and part—time faculty at the institution and department level.
Professional development of faculty members
Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12. Acceptance Criterion
(Setting regulations related to enrollment in the college or institute, whether central admission or others)
Central

13. The most important sources of information about the program
State briefly the sources of information about the program.
1. The college and university website 2. University guide 3. Central Library 4. The most important books and sources for the department 5.Textbooks 6. Internet

14. Program Development Plan
1. Regularly review curricula and educational production units to identify strengths and weaknesses and address scientific gaps. 2. Conduct ongoing assessments of labor market needs in the poultry and ruminant sector to align graduates' skills with actual requirements. 3. Develop a performance measurement system that includes field tests and practical skills assessments alongside traditional theoretical program assessments. 4. Integrate artificial intelligence and environmental sustainability into core courses to keep pace with global developments in animal production.

Program Skills Outline															
Required program Learning outcomes															
Ethics				Skills				Knowledge				Basic or optional	Course Name	Course Code	Year/ Level
C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1				
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Entomology	0017101	1
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Horticulture principles	0017102	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	General Zoology	0017103	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Agricultural economy	1017104	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Human Rights and Democracy	0017110	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	English Language 1	2017105	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Computer Science 1	3017106	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	General Botany	0027101	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Non-Organic Chemistry	0027102	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Basics of plant protection	0027103	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Basics of soil and water resources	0027110	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	General Mathematics	0127104	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Animal production principles	0017210	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Arbic Language 1	0017201	

*	*	*	*	*	*	*	*	*	*	*	*	Basic	Microbiology techniques	**0017202**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Biosafety and security	**0017203**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Plant physiology	**0017204**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Agricultural guidance and techniques transfer	**0017205**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Machines and protective equipment	**0017206**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Baath Party crimes	**0027201**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Arbic Language 2	**0027202**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Principles of field crops	**1027203**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Plant nutrition	**2027204**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Classification of insects	**0027210**	2
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Computer Science and Artificial Intelligence	**0027205**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	General chemistry techniques	**0027220**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Medical and veterinary insects	**3027206**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	English Language 2	**0017301**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Genetics and plant Breeding	**0017310**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Statistics and Design and Analysis of	**1017303**	3

													Experiments		
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Insects physiology	**0017320**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Nematode	**0017330**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Mycology 1	**0017304**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Ecology and Sustainable Agriculture	**0027310**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Plant diseases	**0027301**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Weeds and methods of control them	**0027302**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Biochemistry	**0027303**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Mycology 2	**0027320**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Apiculture	**0027330**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Bio Techniques	**0027304**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Pesticides and environmental pollution	**0017440**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Insects ecology Techniques	**0017450**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Field crop diseases	**0017460**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Vegetable diseases and protected cultivation	**0027410**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Storages pests	**0027420**	4
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Field crop insects	**0027430**	

*	*	*	*	*	*	*	*	*	*	*	*	Basic	seminars	**0027440**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Fruit diseases	**0027450**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Agriculture Mite	**1027400**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Horticulture Insects	**0027460**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Biological control	**0017101**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Integrated pest management	**0017102**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Viruses	**0017103**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Agricultural engineering project	**1017104**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Fruit diseases	**0017110**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Entomology	**0017101**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Horticulture principles	**0017102**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	General Zoology	**0017103**	
*	*	*	*	*	*	*	*	*	*	*	*	Basic	Agricultural economy	**1017104**	

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**