



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: Bologna

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

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:

Signature:

Scientific Associate Name:

Professor Dr. Mohammed saleh Mohammed

Date: 14.9.2025

Dr. Sami

Approval of the Dean

Dr. Sami Khader Saeed

Date: 14/9/2025

Tikrit UNIVERSITY

College of Agriculture



First Cycle – Bachelor’s Degree (B.Sc.)
– Soil and Water Resources Sciences



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1. Mission & Vision Statement

Vision Statement

To be a leading department among its counterparts in the country through its scientific staff and graduates, and to provide consultations, research, and community service in the fields of Soil Science and Water Resources.

Mission Statement

To supply society with qualified scientific talents and competent graduates, well-prepared in both theoretical and practical aspects in the fields of Soil Science and Water Resources, and to deliver rigorous research and professional consultations to those working in the agricultural sector.

2. Program Specification

Programme code:	ECO – EXT	ECTS	240
Duration:	4 levels, 8 Semesters	Method of Attendance:	Full Time

Levels of the Soil Science and Water Resources Program

The Bachelor's Program in Soil Science and Water Resources aims to prepare graduates with progressively developed professional and academic competencies across four levels, as follows:

◆ Level One (First Year): Foundational Level

Objective:

To provide students with general scientific foundations in agricultural and biological sciences.

Outcomes:

- Understanding the basic principles of biology, chemistry, statistics, and computer science.
 - Familiarity with the fundamental concepts of soil science and agricultural production.
 - Acquiring basic skills in the use of scientific terminology and laboratory equipment.
 - Building a general knowledge base for specialization.
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◆ Level Two (Second Year): Specialized Level

Objective:

To build specialized knowledge in the principles and fundamentals of Soil Science and Water Resources.

Outcomes:

- Understanding the principles and fundamentals of Soil Science and Water Resources.
 - Ability to interpret phenomena from a scientific perspective.
 - Developing skills in soil, water, and plant analysis.
 - Familiarity with scientific research methods and critical thinking.
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◆ Level Three (Third Year): Applied Level

Objective:

To integrate theoretical knowledge with practical skills in the field of Soil Science and Water Resources.

Outcomes:

- Applying scientific concepts in soil management and modern irrigation methods.
 - Conducting field scientific experiments in soil physics, soil chemistry, soil fertility, soil survey and classification, and soil microbiology.
 - Developing the ability to work collaboratively in research and field environments.
-

◆ Level Four (Fourth Year): Professional and Research Level

Objective:

To qualify graduates as professional practitioners and researchers capable of serving both academic and practical sectors.

Outcomes:

- Designing, implementing, and managing various agricultural projects.
 - Managing fertilization programs and utilizing modern technologies in agricultural projects.
 - Planning, designing, and maintaining traditional and modern irrigation systems.
 - Optimal management and rational utilization of water resources.
 - Developing biofertilization methods within the concepts of clean and sustainable agriculture.
 - Possessing skills in scientific thinking, professional communication, and sustainable planning.
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Summary of Levels

Academic Year

Preparation Level

Type of Competency Acquired

- First Year (Basic – General):

Fundamental knowledge in agricultural sciences.

- Second Year (Specialized – Fundamental):

Principles and fundamentals of Soil Science and Water Resources.

- Third Year (Applied):

Practical and field-based skills.

- Fourth Year (Professional & Research):

Advanced scientific competency and professional independence.

3. Program Goals

The educational objectives of the program are as follows:

1. Qualifying students both theoretically and practically through specialized curricula and courses.
2. The department awards 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 supply the labor market with graduates who possess the knowledge and skills necessary for sustainable and efficient soil and water resource management.
3. Training and qualifying students scientifically and practically in all fields of Soil Science and Water Resources to contribute to improving, developing, and increasing agricultural production and ensuring the efficient investment of natural resources.

4. Establishing water-use rationalization technologies and expanding agricultural land into areas previously lacking secured water allocations through the adoption of modern irrigation technologies.
5. Encouraging students toward research and innovation by adding courses that develop intellectual skills, economic and societal planning capabilities, constructive dialogue and discussion, decision-making support, and engagement with educational development programs, as well as enhancing teaching and training skills to benefit graduates through continuing education and development programs and the Graduate Follow-up Unit.
6. Conducting various research studies to address and solve agricultural problems using technical methods.

Student Learning Outcomes

1. Designing, implementing, and managing various agricultural projects.
2. Managing fertilization programs and utilizing modern technologies in agricultural projects.
3. Planning, designing, and maintaining traditional and modern irrigation systems.
4. Planning, designing, and managing agricultural land drainage networks.
5. Optimal management and rational use of water resources.
6. Developing biofertilization methods within the concepts of clean and sustainable agriculture.

4- Academic Staff

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

6. Credits, Grading and GPA

Credits

Tikrit University follows Bologna Learning Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs. student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME				
Group	Grade		Marks (%)	Definition
Success Group (50 - 100)	A - Excellent		90 - 100	Outstanding Performance
	B - Very Good		80 - 89	Above average with some errors
	C - Good		70 - 79	Sound work with notable errors
	D - Satisfactory		60 - 69	Fair but with major shortcomings
	E - Sufficient		50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail		(45-49)	More work required but credit awarded
	F - Fail		(0-44)	Considerable amount of work required
Note:				
<p>Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.</p>				

Calculation of the Cumulative Grade Point Average (CGPA)

The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

$$\text{CGPA} = [(1\text{st module score} \times \text{ECTS}) + (2\text{nd module score} \times \text{ECTS}) + \dots] / 24$$

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hr.

Module Code	Module Name in	SSWL	USSWL	ECTS	Module Type	Prerequisite
		hr./Sem	hr./Sem			
UOT002	English language	33	17	2.00	B	
AGRSS04	Engineering drawing	48	77	5.00	S	
AGRSS02	mathematics	33	67	4.00	S	
AGRSS03	Fundamentals of Chemistry	78	122	8.00	S	
AGRSS01	Fundamentals of Geology	78	122	8.00	C	
UOT003	computerI	48	27	3.00	B	

Semester2 | 30 ECTS | 1 ECTS = 25 hr.

Module Code	Module Name in	SSWL	USSWL	ECTS	Module Type	Prerequisite
		hr./Sem	hr./Sem			
UOT001	Arabic	33	17	2.00	B	
UOT004	Democracy and human rights	33	17	2.00	B	
AGRSS05	General Physics	78	22	4.00	S	
AGRSS07	Fundamentals of field crops	78	47	5.00	S	
AGRSS08	Vegetable production	63	87	6.00	S	
AGRSS06	Land surveying and leveling	63	87	6.00	C	
AGRSS09	Fundamentals of Agricultural Economics	33	92	5.00	S	

Semester3 | 30 ECTS | 1 ECTS = 25 hr.

Module Code	Module Name in	SSWL	USSWL	ECTS	Module Type	Prerequisite
		hr./Sem	hr./Sem			
AGRSS10	Fundamentals of Soil Science	78	97	7.00	C	
AGRSS11	Agricultural statistics	78	22	4.00	S	
AGRSS12	Soil environment and weather	78	47	5.00	C	
AGRSS13	Sustainable development and smart agriculture	33	92	5.00	C	
AGRSS14	Fundamentals of Microbiology	78	47	5.00	S	
UOT021	English languageII	33	17	2.00	B	
UOT005	Crimes of the Ba'ath regime in Iraq	33	17	2.00	B	

Semester4 | 30 ECTS | 1 ECTS = 25 hr.

Module Code	Module Name in	SSWL	USSWL	ECTS	Module Type	Prerequisite
		hr./Sem	hr./Sem			
AGRSS15	Plant protection basics	78	47	5.00	S	
AGRSS16	Soil, water, and plant analysis	78	72	6.00	C	
AGRSS17	Fundamentals of Agricultural Extension	33	67	4.00	S	
AGRSS18	Agricultural machinery and equipment	78	47	5.00	S	
UOT011	ArabicII	33	17	2.00	B	
AGRSS19	Fundamentals of Animal Production	78	47	5.00	S	
UOT031	computerII	48	27	3.00	B	

8. Contact

Head Department:

Prof. Dr. Mohammed J. Farhan

University of Tikrit- College of Agriculture

Department of Soil and Water Resources Sciences

Mobile: +9647709398887

Email: mojafd79@tu.edu.iq

Director of the Department:

Lecturer. Dr. Ahmed A. Fattah

University of Tikrit

College of Agriculture

Department of Soil and Water Resources Sciences

Mobile No. 07700888008

Email: ahmed.abd.fatah@tu.edu.iq

Program

Coordinator:

Lecturer. Dr. Sahar Naseer Musa

University of Tikrit

College of Agriculture

Department of Soil and Water Resources Sciences

Mobile No. 077023280333

Email: sahar.n.musa@tu.edu.iq