



Academic Program Description Form for the Department of Horticulture and Landscape Design

University Name: University of Mosul

College: College of Agriculture and Forestry

Scientific Department: Department of Horticulture and Landscape Design

Program Name: Doctor of Philosophy (PhD) in Horticulture and Landscape Engineering

Final Degree Title: Doctor of Philosophy (PhD) in Horticultural Sciences and Landscape Engineering

Study System: Semester / Courses

Date of Preparing the Description: 10/9/2025

Date of Completing the File: 10/9/2025

Signature:

Name of the Scientific Assistant:

Prof. Dr. Hameed Hammood Ali

Date:

Signature:

Name of the Head of the Department

Prof. Dr. Asmaa Mohammed Adel

Verified by:

Quality Assurance and University Performance Division

Name of the Head of the Quality Assurance and Performance Evaluation Division:

Assistant Lecturer :Oday Abdulhadi Adday

Head of the Quality Assurance Unit: Lecturer Dr. Ramia Amer Khalil

Date: 11/9/2025

Signature:

Dean's Approval: Prof. Dr. Ali Farouq Al-Ma'athedi

1. Program Vision

To achieve leadership and excellence in education and scientific research in the field of horticulture and landscape engineering through preparing specialized academic and professional cadres capable of developing scientific knowledge and applying modern technologies to serve the agricultural sector and achieve sustainable development.

2. Program Mission

To prepare specialized academic and professional cadres in horticulture and landscape engineering who possess scientific competence and research and practical skills, are committed to professional ethics, and are capable of meeting the needs of society and the agricultural sector and contributing to sustainable development through scientific research and continuous learning.

3. Program Objectives

- 1. To prepare specialized cadres possessing scientific and practical competence in the field of horticulture and landscape engineering and capable of meeting labor market requirements.**
- 2. To provide a modern educational and research environment that promotes creativity, continuous learning, and the use of advanced technologies.**
- 3. To establish professional ethics and commitment to regulations, professional standards, and academic quality.**
- 4. To support the principles of sustainable development, efficient management of natural resources, and environmental conservation.**
- 5. To develop scientific research, planning, and analytical skills in horticultural fields and modern technologies.**
- 6. To equip students with skills in management, production, marketing, and dealing with contemporary agricultural challenges.**

4. Program Accreditation

Not available.

5. Other External Influences

- ✓ The family and social circumstances of students directly affect their academic performance level.**

- ✓ and their continuity in the program.
- ✓ Extracurricular and non-curricular activities contribute to enhancing students' skills and supporting their achievements within the academic program.
- ✓ Students' economic status and their engagement in part-time jobs negatively affect their academic attainment and academic participation.
- ✓ The educational competence acquired during secondary education is considered one of the key indicators of students' excellence and their ability to succeed in the academic program.

6. Program Structure

Program Structure	Number of Courses	Credit Hours	Percentage	Notes*
University Requirements	2	Fulfilled	%10	Core
College Requirements	3	4	%15	Core
Department Requirements	15	45	%75	Core
Others				

The Notes may include whether the course is Core or Elective.

7. Program Description / PhD

	First Semester (Fall)				
Course Title (in English)	Course Code	Theoretical Hours	Practical Hours	Credit Units	Course Type
Organic Agriculture	Ag.H.702	2	3	3	Core
Evergreen fruit Tree production	Ag.H.709	2	3	3	Elective
Leafy vegetable production	Ag.H.705	2	3	3	Elective
Tubers and bulbs vegetables production	Ag.H.707	2	3	3	Core
Flowening Physiology	Ag.H.701	2	3	3	Core

Seminar 2	Ag.Co.701	1	0	1	Core
Computer 3	Ag.Co.702	2	0	Fulfilled	Core

Second Semester (Spring)					
Course Title (in English)	Course Code	Theoretical Hours	Practical Hours	Credit Units	Course Type
grape production	Ag.H.712	2	3	3	Elective
Vegetable production under Condition environment	Ag.H.715	2	3	3	Elective
Vegetable Breeding	Ag.H.732	2	3	3	Elective
planting trees in cities	Ag.H.736	2	3	3	Elective
Horticultural Crops Morphology and Anatomy	Ag.H.704	2	3	3	Core
Horticultural Plant Nutrition	Ag.H.703	2	3	3	Core
Minor Deciduous Fruits production	Ag.H.708	2	3	3	Elective
Vegetable Crops Physiology	Ag.H.720	2	3	3	Elective
Methodology/2	Ag.Co.738	2	0	2	Core
Seminars 3	Ag.Co.701	1	0	1	Core
Cut Flower Production	Ag.H.724	2	3	3	Elective
English Language 3	Ag.Co.703	2	0	Fulfilled	Core

8. Expected Program Learning Outcomes	
Knowledge	
A1	Demonstrate advanced knowledge of the basic and applied sciences related to horticulture and landscape engineering, and employ them in analyzing agricultural problems and finding appropriate solutions.
A2	Analyze the concepts of biodiversity and strategies for conserving natural resources within sustainable horticultural systems and green space

	management.
A3	Evaluate the risks associated with horticultural activities and apply sustainable management methods and occupational safety practices in accordance with modern standards.
A4	Interpret and develop methods for recycling and processing plant residues within environmentally friendly horticultural production systems.
A5	Analyze the social, cultural, and economic dimensions of agricultural communities and their relationship to the development of horticultural projects and green space development.
A6	Demonstrate advanced understanding of agricultural legislation, professional ethics, and quality management systems and their applications in horticulture and landscape engineering.
A7	Employ advanced scientific terms and concepts in horticulture and rural environments in scientific research and academic communication.
A8	Possess advanced knowledge of computer skills, languages, and human rights, supporting scientific research and specialized professional practice.
Skills	
B1	Apply advanced agricultural practices to increase production and achieve agricultural sustainability while preserving the environment and natural resources.
B2	Develop safe and healthy food production systems for humans and animals with optimal management of agricultural resources.
B3	Prepare economic budgets for agricultural projects and plan agricultural operations based on market analyses and different economic conditions.
B4	Plan and implement agricultural research and agricultural extension programs efficiently, with the ability to work independently and make decisions.
B5	Design, manage, and evaluate agricultural projects using modern financial and technical evaluation methods.
B6	Employ modern technology and information technology in agricultural applications while adopting sustainable and advanced technologies.
B7	Sustainably manage natural and water resources and adapt to environmental and economic changes and contemporary agricultural policies.
B8	Improve the quality and safety of agricultural products across value chains, with efficient diagnosis and management of pests and diseases.
C1	Analyze agricultural problems through data collection and interpretation, and employ scientific knowledge to develop effective solutions.
C2	Design and conduct agricultural experiments, analyze their results, and draw accurate scientific conclusions that support decision-making.

C3	Evaluate different alternatives and make evidence-based decisions to achieve optimal outcomes in managing agricultural activities and projects.
General and Transferable Skills	
D4	Effective communication in Arabic and English, both orally and in writing, and the use of modern tools for presenting data and scientific results.
D5	Use computers, statistical applications, and information technology in data analysis, knowledge management, and professional communication.
Values	
E1	Commitment to professionalism, research ethics, and regulations and legislation related to the agricultural field and its specialized practices.
E2	Demonstrate environmental and economic awareness in professional practice and decision-making to achieve agricultural sustainability and protect natural resources.

9. Teaching and Learning Strategies

Interactive lectures, brainstorming, dialogue and discussion, assignments and reports, model presentations, and the blackboard.

10. Assessment Methods

Evaluation of dialogue and discussion, quick questions, assignment evaluation, short tests, written exams, homework assignments, and report evaluation.

11. Teaching Staff

Faculty Members

Academic Rank	Specialization		Special Requirements	Number of Faculty Members	
	General	Specific		Employee	Adjunct Lecturer

Professor	Horticulture and Landscape Design			Not available	9	
Assistant Professor	Horticulture and Landscape Design			Not available	6	
Lecturer	Horticulture and Landscape Design			Not available	12	
Assistant Lecturer	Horticulture and Landscape Design			Not available	8	

Professional Development

Orientation of New Faculty Members

- ✓ **Develop advanced scientific research skills, analytical and critical thinking, and enhance self-confidence and a positive orientation toward a culture of quality and academic accreditation, contributing to professional responsibility, teamwork, and commitment to ethical values in scientific and practical practice.**
- ✓ **Evaluate and develop academic courses and study plans in coordination with scientific departments, ensuring alignment with scientific advances, labor market requirements, and sustainable development needs.**
- ✓ **Possess academic advising and scientific guidance skills for students, with the ability to support them in educational and research aspects and develop their cognitive and skill capacities.**
- ✓ **Ability to prepare and produce advanced teaching and research materials in accordance with quality standards, including curricula, educational media, lectures, and modern technologies supporting teaching and learning.**

Professional Development of Faculty Members

- ✓ **Develop teaching and academic skills through the use of modern and diverse teaching strategies, positive engagement with feedback and**

its analysis, and the use of advanced educational technologies, contributing to the development of students' intellectual, research, and competitive abilities.

✓ Develop skills in diagnosing and addressing problems and phenomena affecting the teaching and research process, and proposing appropriate scientific solutions that enhance the quality of academic and institutional performance.

✓ Enhance the ability to evaluate and update curricula and academic plans in coordination with scientific departments, ensuring alignment with scientific developments, labor market requirements, quality standards, and academic accreditation.

✓ Strengthen the ability to measure and analyze the level of satisfaction of stakeholders (faculty members, students, and the community) with the educational and research process, and utilize the results to support continuous improvement and institutional performance development.

✓ Develop skills in preparing and evaluating examinations and student assessment tools according to scientific principles and accredited quality standards, along with preparing analytical reports to monitor results and improve learning outcomes.

12. Admission Criteria

✓ Students are admitted to postgraduate programs in the college according to the instructions and regulations of the Ministry of Higher Education and Scientific Research, through officially approved application and admission channels.

✓ Students are assigned to academic specializations and programs based on graduation average, competitive ranking results, student preferences, and the capacity of the scientific departments.

✓ Applicants must be medically and physically fit according to an approved medical examination report, in line with the requirements of study and scientific research.

✓ Admission is based on the undergraduate graduation average, in accordance with the minimum requirements and admission criteria set annually by the Ministry of Higher Education and Scientific Research.

13. Key Information Sources for the Program

- ✓ The academic program is based in building and developing its scientific content on the minutes and recommendations of expert committees from equivalent departments of Horticulture and Landscape Engineering, approved by the Deans' Committee of Colleges of Agriculture as an accredited scientific and academic reference.
- ✓ The program relies on studies and recommendations prepared by the Scientific Committee and the Department Council, and approved by the College Council, which include updating agricultural specializations and keeping pace with scientific developments through benefiting from the experiences of internationally recognized equivalent academic departments.
- ✓ The academic program takes into account the needs of the local and regional labor market, contributing to the preparation of scientific and professional cadres capable of meeting the requirements of sustainable agricultural development and keeping pace with modern developments in the agricultural sector.

14. Program Development Plan

- ✓ A development plan for the academic program has been established after studying and analyzing the internal review feedback provided by faculty members, quality assurance committees, the scientific committee of the department, and the department council, in addition to the external review results of the program, students' opinions derived from course evaluation questionnaires, academic advisors' feedback, and the analysis of survey data from the college's survey committee, as well as reports on the evaluation of examination questions for all program courses. The plan includes the following axes:

Enhance the practical and applied aspect by increasing practical hours, developing laboratories and teaching fields, and activating field training programs, which contributes to improving students'

practical competencies.

- ✓ **Establish clear mechanisms to support academically struggling students through academic advising and follow-up programs, in addition to adopting motivational and incentive programs for academically outstanding students.**
- ✓ **Increase students' awareness of university regulations and instructions governing the educational process through orientation seminars, academic advising programs, and the student handbook.**
- ✓ **Review course outcomes and analyze pass rates to ensure alignment with academic assessment standards and normal distribution frameworks, and work on developing assessment and examination methods to achieve fairness and academic rigor.**

/ Year Level	Course Code	Course Title	Core or Elective	Knowledge																						
				A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	D4	D5	E1	E2
Fall Semester 2025-2026	Ag.H.702	Organic Agriculture	Core	*		*	*		*			*	*				*	*	*		*	*	*		*	*
	Ag.H.709	Evergreen fruit Tree production	Elective	*						*		*	*		*	*	*	*	*	*	*	*	*		*	*
	Ag.H.705	Leafy vegetable production	Elective	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Ag.H.705	Tuber and bulbs vegetables	Core									*								*						
	Ag.H.701	Flowening Physiology	Core	*	*				*	*		*	*		*		*	*	*	*	*	*	*			
	Ag.Co.701	Semisrars 2	Core					*	*	*					*	*				*		*	*	*	*	*
	Ag.Co.702	Computer 3	Core						*		*					*	*			*	*		*	*	*	
Spring Semester 2025-2026	Ag.H.712	grape production	Elective	*	*	*			*	*		*	*		*			*	*	*	*	*			*	*
	Ag.H.715	Vegetable production under	Elective	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Ag.H.732	Vegetable Breeding	Elective	*	*	*			*																	
	Ag.H.736	planting trees in cities	Elective	*	*			*		*		*					*	*				*	*		*	*
	Ag.H.704	Horticultural Crops	Core	*	*		*					*	*				*			*	*	*				
	Ag.H.703	Horticultural Plant Nutrition	Core	*		*				*		*					*		*	*	*	*	*		*	*
	Ag.H.708	Minor Deciduous Fruits	Elective	*						*		*	*		*	*	*	*	*	*	*	*	*		*	*
	Ag.H.720	Vegetable Crops Physiology	Elective																	*						
	Ag.Co.738	Methodology/2	Core						*	*	*				*		*			*	*	*	*	*	*	*
	Ag.Co.701	Seminars 3	Core					*	*	*					*	*				*		*	*	*	*	*
	Ag.H.724	Cut Flower Production	Elective	*	*	*		*				*			*		*			*	*					
	Ag.Co.703	English Language 3	Core								*	*				*				*		*	*	*	*	