University of Basrah

جامعة البصرة

First Cycle – Bachelor's degree (B.Sc.) – Agricultural Machines and Equipment

بكالوريوس علوم - المكائن والآلات الزراعية

جدول المحتويات Table of Contents

1. Mission & Vision Statement

Vision Statement

The Department of Agricultural Machines and Equipment at the College of Agriculture, University of Basrah, is committed to cultivating a deep understanding of agricultural machinery and technology through a rigorous integration of coursework, hands-on laboratory experiences, cutting-edge research, and practical fieldwork. We believe that this comprehensive educational approach empowers our students to develop innovative, sustainable solutions for the challenges facing global agriculture. By fostering close collaboration between faculty and students in an environment characterized by small class sizes and supportive mentorship, we aim to produce highly skilled professionals who will lead the future of agricultural technology**.**

Mission Statement

The Department of Agricultural Machines and Equipment at the College of Agriculture, University of Basrah, is committed to a multifaceted mission. Our program strives to provide all students with a solid foundation in agricultural machinery and technology while offering specialized knowledge in key field areas. The curriculum and advising are designed to prepare graduates for a variety of professional paths, whether they choose to innovate in the design and development of agricultural equipment, pursue postgraduate studies in agricultural engineering, or contribute to sustainable farming practices. Additionally, our program supports other academic pursuits by providing essential knowledge and practical experience in agricultural machinery, which is integral to the broader disciplines of agricultural science, environmental management, and resource sustainability. Through this comprehensive approach, we aim to equip our students with the skills and expertise needed to excel in the evolving landscape of global agriculture.

2. Program Specification

Programme code:	BSc-AgriMachines	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

The Agricultural Machines and Equipment program at the College of Agriculture, University of Basrah, offers a comprehensive and dynamic education in the field of agricultural technology. The program is designed to equip students with the knowledge and skills needed to address the challenges of modern agriculture, focusing on the development and application of advanced machinery and systems.

The emphasis of the program is on the integration of theoretical knowledge with practical applications, ensuring that students gain a holistic understanding of agricultural machinery, from the fundamental engineering principles to the operation and maintenance of complex systems. The degree is popular among students for its breadth and depth, appealing to those interested in both broad-based knowledge and specialized expertise.

In the first level, students are introduced to the core concepts of agricultural machinery and technology, providing a solid foundation for progression within the program. The curriculum is structured to offer flexibility, allowing students to explore various aspects of the field and choose specialized modules that align with their interests. By the end of the first year, students have the opportunity to transfer into specialized tracks, such as Precision Agriculture, Farm Machinery Design, or Sustainable Agricultural Systems, depending on their career aspirations.

At Level 2, the program delves deeper into specific topics, preparing students for advanced, research-led modules at Levels 3 and 4. The curriculum emphasizes the importance of research in informing practice, in line with the University and College mission statements. Students are encouraged to engage with cutting-edge research, participate in hands-on laboratory work, and apply their knowledge in real-world scenarios.

Throughout Levels 2, 3, and 4, students have the flexibility to select modules that reflect the diverse nature of agricultural systems, from machinery design and automation to resource management and sustainability. This approach allows students to tailor their education to their interests while ensuring they develop a comprehensive understanding of the field.

A strong research ethos is fostered from the outset, with practical sessions embedded in lecture modules, dedicated research seminars, and tutorials. A compulsory field course in Level 1 introduces students to the practical aspects of agricultural machinery, which they must pass to progress to Level 2. Optional field courses are available in Levels 2, 3, and 4, providing further opportunities for hands-on learning.

In the final year, all students undertake an independent research project, which can be either a comprehensive literature review, a data analysis project, or a practical field or laboratory-based study.

This capstone project allows students to apply their knowledge and skills to address real-world challenges in agricultural technology.

Academic tutorials are held regularly at Levels 1 and 2, with each student assigned a personal tutor who provides continuous guidance and support throughout their studies. These tutorials include workshops focused on developing essential skills, such as technical writing and project management, with opportunities for students to apply these skills in a subject-specific context.

The program also offers international study opportunities and industrial placements, allowing students to gain valuable experience in different cultural and professional settings. Individual needs and aspirations are discussed with academic advisors to ensure that each student's educational journey is tailored to their goals.

The Agricultural Machines and Equipment program at the University of Basrah is dedicated to producing graduates who are not only technically proficient but also innovative and adaptable, ready to lead the future of sustainable agricultural technology.

3. Program Objectives

1. To provide a comprehensive education in biology that stresses scientific reasoning and problem solving across the spectrum of disciplines within biology
2. To prepare students for a wide variety of post-baccalaureate paths, including graduate school, professional training programs, or entry level jobs in any area of biology
3. To provide extensive hands-on training in electronic technology, statistical analysis, laboratory skills, and field techniques
4. To provide thorough training in written and oral communication of scientific information
5. To enrich students with opportunities for alternative education in the area of biology through undergraduate research, internships, and study-abroad

4. Student Learning Outcomes

The Agricultural Machines and Equipment program at the College of Agriculture, University of Basrah, prepares graduates with a comprehensive understanding of the design, operation, and maintenance of agricultural machinery, as well as the application of technology in sustainable farming practices. The curriculum is designed to equip students with both theoretical knowledge and practical skills, ensuring they are well-prepared for careers in agricultural engineering, technology development, and resource management.

Outcome 1

Understanding of Agricultural Systems

Graduates will be able to illustrate and explain the principles of agricultural machinery design and operation, including how various components interact within complex agricultural systems to optimize productivity and sustainability.

Outcome 2

Technical Communication

Graduates will be able to effectively communicate technical information related to agricultural machinery and systems, both orally and in writing, including the ability to present research findings, technical reports, and design proposals to diverse audiences.

Outcome 3

Practical Skills and Safety Protocols

Graduates will be proficient in conducting laboratory experiments and field studies, using advanced machinery, scientific equipment, and computer technology while adhering to industry-standard safety protocols and practices.

Outcome 4

Innovation and Problem-Solving

Graduates will be able to apply critical thinking and problem-solving skills to identify challenges in agricultural systems and develop innovative solutions, leveraging emerging technologies and sustainable practices.

Outcome 5

Data Analysis and Application

Graduates will demonstrate quantitative skills, including the ability to analyze and interpret data from field studies and experiments, and apply this knowledge to improve the design and efficiency of agricultural machinery.

Outcome 6

Research and Development

Graduates will be able to design and conduct independent research projects, utilizing scientific methods to investigate issues related to agricultural technology and machinery, and contribute to the advancement of the field.

Outcome 7

Ethical and Environmental Responsibility

Graduates will understand the ethical implications of their work and be able to incorporate environmental considerations into the design, operation, and management of agricultural machinery and systems, promoting sustainability and responsible resource use.

5. Academic Staff

Majed Saleh himoud | Ph.D. Mechanization | Professor
Email: majed.himoud@uobasrah.edu.iq
Mobile no.: 07710519280

Samir Khairi Lazim | Ph.D. in Physics | Professor
Email: samir.lazim@uobasrah.edu.iq
Mobile no.: 07801321480

Salim Acher Bander| Ph.D. in Mechanization | Professor
Email: Salim.Bander@uobasrah.edu.iq
Mobile no.: 07735355588

Sadiq Jabbar muhsin | Ph.D. in Soil management/fertilization machinery and equipment | Professor
Email: sadiq.muhsin@uobasrah.edu.iq
Mobile no.: 07714226123

Majid Hazim Reshaq | Ph.D. in Mechanization | Professor
Email: majid.reshaq@uobasrah.edu.iq
Mobile no.: 07733873816

Aqeel Jony Nassir | Ph.D. in Soil management/soil preparation equipment | Professor
Email: aqeel.nassir@uobasrah.edu.iq
Mobile no.: 077233616850

Assad Yousif khudher | Ph.D. in Animal production mechanization management | Asist. Prof.
Email: assad.khudher@uobasrah.edu.iq
Mobile no.: 077055583780

---

murtadha abdulaadheim abdulnabi | Ph.D. in Soil management | Asist. Prof.
Email: murtadha.abdulnabi@uobasrah.edu.iq
Mobile no.: 07710933441

Marwan Noori Ramathan | Ph.D. in Field crops | Asist. Prof.
Email: marwan.ramathan@uobasrah.edu.iq
Mobile no.: 07803548275

Farkad Murtadh Hameed |Ph.D. in Mechanization/ Design of agricultural machinery and equipment| Lecturer
Email: Farkad.Hameed@uobasrah.edu.iq

Mobile no.: 07807770400

Hussain Abdulkareem safi | Ph.D. in Field crops | Lecturer
Email: Hussain.safi@uobasrah.edu.iq

Mobile no.: 07707076224

Akram Abduldaaem ahmed | Ph.D. in Field crop mechanization | Lecturer
Email: akram.ahmed@uobasrah.edu.iq

Mobile no.: 07722443610

Hayder Abdalhusein Shanaan | Ph.D. in Mechanization | Lecturer
Email : hayder.shanaan@uobasrah.edu.iq

Mobile no.: 07707324472

Assim Naser Dharaj | Ph.D. in Soil and water management| Lecturer
Email : Al_Mansor@uobasrah.edu.iq

Mobile no.: 07801091319

Dhyeaa Sebahi Ashour | Ph.D. in Soil management| Lecturer
Email : Dhyeaa.Ashour@uobasrah.edu.iq

Mobile no.: 07705714877

Asmaa Abdullah ahmad |M.Sc. in mechanization| Lecturer
Email : Asmaa.ahmad@uobasrah.edu

Mobile no.: 077149939260

Ali Abd almajeed alwan |M.Sc. in mechanization| Lecturer
Email : ali.alwan@uobasrah.edu.iq

Mobile no.: 07725442772

Abbas Abd-alhussein mishall |M.Sc. in Animal production| Lecturer
Email : abbas.mishall@uobasrah.edu.iq

Mobile no.: 07705611577

Qusay Sameer Sabbeh |M.Sc. in field crops |Assist Lecturer
Email : qusay.sameer@uobasrah.edu.iq

Mobile no.: 07703205170

Ali Hussein Awad |M.Sc. in field crops |Assist Lecturer
Email : ali.awad@uobasrah.edu.iq

Mobile no.: 07746920955

Mustafa Fadhil Hussein | M.Sc. in soil management |Assist Lecturer
Email : mustafa.almoosa@uobasrah.edu.iq

Mobile no.: 07706772049

Abdelahad Abbas Salim |M.Sc. in soil management |Assist Lecturer
Email : abdelahad.salim@uobasrah.edu.iq

Mobile no.: 07705796270

Ammar Salim Mousa |M.Sc. in Mechanization |Assist Lecturer
Email : ammar.salim@uobasrah.edu.iq

Mobile no.: 07707005600

---

6. Credits, Grading and GPA

Credits

Basrah University is following the Bologna 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 مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria

Fail Group (0 – 49)	FX – Fail	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				

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.

Calculation of the Cumulative Grade Point Average (CGPA)

1. 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:

   CGPA = [(1st ᵐodule score x ECTS) + (2nd ᵐodule score x ECTS) + ……] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOB102	English language اللغة الانكليزية	32	18	2	B	
UOB104	Democracy and Human rights الديمقراطية وحقوق الانسان	32	18	2	B	
MATH111	Mathematics الرياضيات	48	77	5	B	
SOIL114	Soil Science علم التربة	78	97	7	B	
FICR115	Field Crops محاصيل حقلية	78	97	7	B	
TRAC122	Agricultural Tractors الساحبات الزراعية	78	97	7	cor	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
UOB101	Arabic language اللغة العربية	32	18	2	B	
UOB103	Computer الحاسوب	48	27	3	B	
PLSU118	Plane Surveying المساحة المستوية	78	72	6	B	
ENWO121	Engineering Workshop الورش الهندسية	78	72	6	cor	
GPHY120	Physics الفيزياء	78	72	6	B	
ENDR117	Engineering Drawing الرسم الهندسي	48	127	7	B	

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request

8. Contact

Program Manager:
Salim Acher Bander | Ph.D. in Agricultural Mechanization | Professor
Email: *salim.bander@uobasrah.edu.iq*
Mobile no.: (+964) 7735355588

Program Coordinator:
Farkad Morteda Hameed | Ph.D. in Agricultural Mechanization | Lecturer
Email: *farkad.hameed@uobasrah.edu.iq*
Mobile no.: (+964) 7807770400