

University of Samarra
College of Agriculture
Department of Food Science
Samarra University

Faculty of Agriculture
Department of Food Science



First Cycle – Bachelor’s degree (Agricultural sciences)- Food science

Bachelor of Agricultural Sciences – Food Science



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1- Vision

Excellence, innovation, creativity and leadership in the fields of food science and biotechnology at the local and international levels and community service in the field of food industries.

2. Mission

- 1. To prepare qualified graduates who are able to meet the needs of the market by providing the necessary knowledge and technical skills in the field of food science.*
- 2. Providing distinguished cadres in the field of food science, using modern scientific technology in the field of food industries, and cooperating with community groups.*
- 3. Supporting and encouraging advanced scientific research in the field of food science with the aim of improving food safety and quality*
- 4. Contributing to the development of society by providing technical consultations and services to the food industry, and promoting food and health awareness among the public*

1. Program Specification

240	ECTS	Agricultural Engineering	Bachelor of Agricultural Sciences:
Full-time	Attendance and departure	4 years, 8 courses	Duration of the study:

2. Objectives

General Objectives:

Preparing scientifically and practically qualified cadres in the field of food sciences, who possess the necessary knowledge and skills to ensure the quality and safety of food, and the ability to innovate and scientific research, in accordance with the requirements of the labor market and the standards of sustainable food security.

Specific Objectives:

- 1 Qualifying scientific cadres specialized in food sciences that are able to meet the needs of the local and regional market, and are able to compete in the fields of food processing.
- 2 Encourage applied scientific research, seminars, workshops, and awareness courses that contribute to solving and developing problems related to the food industry, including improving the quality and safety of food products.
- 3 Enhancing cooperation, partnerships, exchange of experiences, and providing scientific services and consultations with academic, research and industrial institutions at the local and international levels.
- 4 Finding cheap alternatives from non-traditional plant or animal sources to produce additives, subsidies, or prepared for use in the food industry and contributing to the community's awareness of the importance of healthy and balanced food.

- 5 Interest in the development of food processing technologies that are environmentally sustainable, including reducing food loss and waste.**
- 6 Working to develop food processing methods and increase the efficiency of production processes through the application of modern technology and focusing on manufacturing industries.**
- 7 Developing curricula periodically and focusing on the practical aspect to comply with scientific and technological developments**

Learning Outcomes

Student Learning Outcomes

In the College of Agriculture, Department of Food Science, students acquire a wide range of knowledge and skills that prepare them to work in multiple fields related to food processing, quality assurance, and food product development. Here are some of the key educational outcomes that students can expect after graduation:

1. Scientific Knowledge:

- Understand the fundamentals of food science, including biochemistry, microbiology, and food technology.
- Knowledge of basic processes in food processing, such as freezing, drying, canning, and fermentation.
- Understanding the principles of food safety and quality, including the application of systems such as HACCP (Hazard Analysis and Critical Control Points)

2. Practical Skills:

- Ability to perform chemical, physical, and biological analyses on food.
- Skills in developing new food products and improving existing products.
- Ability to use modern equipment and techniques in food processing and processing.

3. R&D Skills:

- Ability to design and implement scientific research in the field of food science.
- Analyzing data and interpreting results to develop innovative solutions to the problems of the food industry.

4. Quality Management Skills:

- Understanding and applying international quality standards in the food industry.
- Ability to monitor and evaluate the quality of food products at various stages of production.

5. **Administrative and Marketing Skills:**

- Understand the basics of project management and production in the food industry.
- Skills in marketing food products and understanding consumer behavior.

6. **Environmental Awareness and Sustainability:**

- Understand the impact of the food industry on the environment and how to apply sustainable practices.
- Knowing ways to reduce waste and waste in the food supply chain.

7. **Soft Skills:**

- Teamwork and collaboration with multidisciplinary teams.
- Effective communication skills, both with colleagues and with customers and consumers.

8 **Subspecialties:**

- Students can specialize in specific areas such as:
 - Food technology.
 - Food safety.
 - Human nutrition.
 - Development of food products.
 - Food Microbiology.

9 - **Job Opportunities:**

- Working in food factories and food companies.
- Working in nutritional analysis and quality control laboratories.
- Working in the field of research and development in research institutions and universities.
- Working in the field of food safety and quality consultancy.
- Working in government agencies regulating the food industry.

- 10 **Continuing Education:**

- Ability to pursue postgraduate studies in areas such as food science, nutrition, or quality management.
- Participate in specialized training courses to keep knowledge and skills up to date.

These outputs reflect the interdisciplinary nature of food science, which combines basic science, technology, and management, to meet the needs of the modern food industry.

3. **Academic Staff**

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3. Credits , Grading and GPA .

Credit Hours

The Faculty of Agriculture at the University of Samarra adopts the Bologna Credit Hour System (ECTS). The total number of credit hours in a degree program is 240 credit hours, with an average of 30 credit hours per semester. One credit hour is equivalent to 25 hours of workload, including structured and unstructured workload.

Evaluation

Before the evaluation, the results are divided into two subgroups: Pass and Fail. Hence, the results do not depend on the students who failed in any course. The evaluation system is defined as follows:

GRADING SCHEME				
Grading Chart				
Group	Grade	Recognition	Marks (%)	Definition
Success	A - Excellent	Privilege	90 - 100	Outstanding Performance

Group (50 - 100)	B - Very Good	Very good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Medium	60 - 69	Fair but with major shortcomings
	E - Sufficient	Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	Deposits - In Process	(45-49)	More work required but credit awarded
	F – Fail	Fail	(0-44)	Considerable amount of work required
Note:				
Decimals above or below 0.5 will be rounded to the highest or lowest full sign (for example, 54.5 will be rounded to 55, while 54.4 will be rounded to 54). The University has a zero-tolerance policy for "near-success failures", so the only adjustment to the marks awarded by the original proofreaders would be the automatic rounding described above.				

Calculating GPA

Calculation of the Cumulative Grade Point Average (CGPA)

1. The cumulative GPA is calculated by adding the grades of each unit multiplied by its European points, and then the total is divided by the total points of the ECTS program.

Cumulative GPA for the 4-year Bachelor of Science degree:

$$GPA = [(First\ Module\ Grade \times ECTS) + (Second\ Module\ Grade \times ECTS) + \dots] / 240$$

4. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
USAGFS1101	Mathematics	48	52	4	B	
UOS-1101	Applications in Computer	48	27	3	B	
USAGFS1103	Engineering Drawing	48	52	4	B	
USAGFS1104	Principles of Animal Production	78	47	5	C	
USAGFS1105	General Chemistry	78	72	6	C	
USAGFS1106	Principles of Microbiology	78	72	6	C	
UOS-12011	English	33	17	2	B	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
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USAGFS12011	Statistics	75	50	5	C	
USAGFS1209	Dairy Principles	90	85	7	C	
USAGFS12010	Principles of Food Industries	90	85	7	C	
USAGFS1208	Quantum chemistry	90	85	7	C	
UOS-12012	Arabic Language	30	20	2	B	
UOS-2013	Freedoms and Human Rights	33	17	2	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

4. **Contact**

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