AL-Qasim Green University

Bachelor of Food Science - Dairy Science and Technology

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1. Mission & Vision Statement

Vision Statement

The Department of Dairy Science and Technology was established starting from the academic year 2013-2014 and the period of study in the college is four years. The graduate student is granted a bachelor's degree in food science, where the graduates of the preparatory study of the scientific branch are accepted for both sexes and the graduate is prepared to work in scientific bodies and institutions that work in the field of dairy and food science and technology to develop the reality of local production in this field

Mission statement.

Providing a good educational service in terms of undergraduate and graduate studies and developing academic and applied research, whether on scientific degrees or solving manufacturing problems, in addition to the guiding role of service and development of work in the field of dairy science and technology. Thedepartment's activity extends in addition to the educational process in other fields, including conducting scientific research, developing appropriate proposals to solve problems related to the field of gum technology, holding training courses at the local and regional levels, holding scientific conferences in cooperation with the relevant local authorities and foreign universities, and joint supervision of research projects, in addition to preparing some solid scientific references for dairy science and technology .

2. Program Specification

Programme	Bsc.	**120 ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	equipancy

The Dairy Science and Technology Department provides a good educational environment in terms of undergraduate and graduate studies, the development of academic and applied research, the solution of manufacturing problems, in addition to the guiding role of serving and developing work in the field of dairy science and technology. The department's activity extends in addition to the educational process in other fields, including conducting scientific research, developing appropriate proposals to solve problems related to the field of dairy technology, holding training courses at the local and regional levels, holding scientific conferences in cooperation with the relevant local authorities and foreign universities, and joint supervision

of research projects, in addition to preparing some solid scientific references for dairy science and technology.

Within the first level, the student learns about the basic sciences and their implications, most of which are among the compulsory requirements of the university and the college, including the Arabic language to increase the language skills of students and how to conduct official correspondence, in addition to physics, analytical chemistry, human rights, democracy, computer and the paved lessons that students must complete in order to be able to move to the higher level, including the mathematics course, which is considered a prelude to the subject of life statistics and the foundations of the engineering workshops that paved the subject of dairy engineering and organic chemistry that the student must understand in order to be able to study biochemistry

At the second level, the lessons are a prelude to moving to the third and fourth levels, where the student acquires abundant skills and information in both life chemistry, which is an important study and a prelude to other lessons such as enzyme science, food analysis, nanoscale applications, food processing principles, dairy laboratory engineering, microbiology, computer applications in manufacturing units, physical chemistry, English language, and dairy principles, which are the basic basis for understanding the lessons and courses of the department, as the prelude to the majority of the lessons of the third and fourth levels, in addition to the manufacture of liquid and powdered milk and dairy microbiology, through which the student can understand and identify the basis of the work of the valleys and the fermentation process that takes place for dairy products such as milk and other fermented dairy products

.When moving to the third level, the lessons are more specialized in the field of dairy, such as dairy chemistry, which is a basic pillar in the Department of Dairy Science and Technology, through which the scientific basis of all food industries is understood and the chemical reactions of the product are known in addition to enzymes, quality control and quality control, which give students sufficient experience to detect manufacturing errors and industrial adulteration. The important specialized lessons that are the basis of the dairy industry are the material of powders technology and fermentations , manufacturing with thermal and non-thermal treatments of dairy, human nutrition, food manufacturing and by-products, and environmental pollutants of dairy products and fatty dairy products through which the foundations of butter, cream and free fat are identified.

Upon reaching the fourth level, the student will be able to make cheese of all kinds, in front of him with all the scientific foundations of the industry, in addition to gaining high experience in the methodology of scientific research, professional ethics, food packaging, evaluating and developing dairy products, manufacturing special dairy products and milk novelties, studying all the changes that occur to dairy products within the vocabulary of food analysis, and identifying modern technologies such as nanotechnology applications.

The student acquires sufficient experience in the manufacture of ice cream due to his knowledge of the raw materials used in the manufacture of ice cream andhow to calculate the components of the mixtures

And the manufacture of different types of milk ice cream and the manufacture of ice cream powder in addition to developing its capabilities to evaluate and judge the ice cream and conduct the most important tests for milk ice cream and work on the management of all devices and equipment for the production of milk ice cream

3. Program Objectives:

- Preparing specialists and researchers to work in scientific bodies and institutions, government and private factories , laboratories and research centers that work in various fields of dairy science and technology.
- Conducting applied research to solve manufacturing problems and improve the quality of production at work in factories and companies working in the field of food processing and preservation.
- Holding training and guidance courses to raise the scientific and practical efficiency of workers in the field of dairy science and technology.
- Providing specialized scientific consultations and appropriate solutions to the problems facing food processing in our beloved country.
- Holding scientific conferences and seminars specialized in the field of food and dairy science and technology and cooperating with local , regional and international scientific bodies by holding scientific seminars and training courses in the field of dairy science and technology.
- Contribute to the preparation and provision of scientific references in Arabic and English on topics related to dairy science and technology.

4. Student Learning Outcome 4

Providing a good educational service in terms of undergraduate and graduate studies and developing academic and applied research, whether on scientific degrees or solving manufacturing problems, in addition to the guiding role of service and development of work in the field of dairy science and technology. Thedepartment's activity extends in addition to the educational process in other fields, including conducting scientific research, developing appropriate proposals to solve problems related to the field of dairy technology, holding training courses at the local and regional levels, holding scientific conferences in cooperation with the relevant local authorities and foreign universities, and joint supervision of research projects, in addition to preparing some solid scientific references for dairy science and technology.

A- Knowledge Objectives

A1- Enabling students to obtain knowledge and understanding of the intellectual and skill framework of dairy science and technology.

A2- Enabling students to obtain knowledge of food and dairy processing methods.

A3-Enabling students to obtain knowledge of microbiology in dairy and how to deal with it.

A4- Enabling the student to obtain knowledge of the components of healthy and proper food.

A5- Enabling students to obtain knowledge of dairy technology from cheese and fatty substances.

A6-Enabling students to obtain knowledge of the global laws adopted in food safety

B- Program Skill Objectives

B 1 – Enable students to solve problems related to dairy processing.

B2- Enabling students to solve problems related to the manufacture of dairy products of cheese and fatty substances

B3- Enabling students to solve problems related to microbiology in dairy and how to deal with them.

B4- Enabling students to solve problems related to dairy pollution.

B5- Enabling students to solve problems related to the manufacture of ice cream and others .

B6- Enabling students to solve problems resulting from overlapping production units lines.

B7- Enabling students to solve problems related to control units in food and dairy factories

B8- Enabling students to solve problems related to food and dairy preservation

B9- Enabling students to solve problems related to food and dairy packaging

5. Academic Staff

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6. Credits, Grading and GPA

Credits

(Name) The University follows the Bologna process through the European Credit Transfer System (ECTS) credit system. The total number of ECTS degree program is 240 , 30 ECTS per semester. 1 ECTS is equivalent to 25 hours of student workload, including structured and unstructured workload.
|||*UNTRANSLATED_CONTENT_START*|||*Grading*|||*UNTRANSLATED_CONTENT_END*|||
Before the assessment , the results are divided into two subgroups: success and failure. Therefore , the results are independent of the students who failed the course. Promotions are defined as follows:

Group	**Grade**	**Marks.**	**Definition**
Success Group 50-100	Excellent	90 - 100	Outstanding Performance
	VERY GOOD.	80-89	Above average with some errors
	kwayes	70 - 79	Sound work with notable errors
	Satisfactory	60 - 69	Fair but with major shortcomings
	sufficient	50-59	Work meets minimum criteria
Fail Group 0:49	Fail	45-49	More work required but credit awarded
	Fail	0.44	Considerable amount of work required
Note:			

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	120 ECTS	-	Request
DST11001	Arabic	33	67	4	S	
DST11002	Analytical Chemistry	63	137	8	B	
DST11003	Mathematics	48	102	6	B	
DST11004	Foundations of Engineering Workshops	108	92	8	C	
DST11005	Human rights and democracy	48	52	4	S	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

* Code:	Module	SSWL	USSWL	120 ECTS	-	Request
DST12006	Physics	78	97	7.00	B	
DST12007	Organic Chemistry	78	97	7.00	B	
DST12108	Counting my life	63	87	6.00	B	
DST12009	Safety & Security	63	37	4.00	S	
DST12010	Computer	63	87	6.00	S	

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

* Code:	Module	SSWL	USSWL	120 ECTS	-	Request
DST23111	Life Chemistry	63	87	6.00	C	Organic Chemistry
DST23012	Principles of Food Processing	63	62	5.00	B	
DST23113	Dairy plant engineering	63	87	6.00	C	Foundations of Engineering Workshops
DST23014	Mabadi Dairy	63	87	6.00	C	
DST23015	Microbiology	78	97	7.00	C	

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

* Code:	Module	SSW L	USSWL	120 ECTS	-	Request
DST24116	Computer applications in manufacturing units	63	87	150	6.00	Dairy plant engineering
DST24017	Physical Chemistry	63	87	150	6.00	
DST24118	Microdairy revival	63	112	175	7.00	Microbiology
DST24119	Manufacture of liquid and powdered milk	63	137	200	8.00	Mabadi Dairy
DST24020	English	33	42	75	3.00	

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

* Code:	Module	SSW L	USSW L	120 ECTS	-	Request
DST35021	Quality control and quality control of dairy products	63	87	6.00	C	
DST35022	Economics and Marketing of Dairy Products	48	27	3.00	B	
DST35123	Dairy Chemistry	93	107	8.00	C	Mabadi Dairy
DST35124	Enzyme	63	62	5.00	B	Life Chemistry
DST35125	Technology of initiators and fermenters	93	107	8.00	C	Dairy Microbiology +Microbiology

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

*** Code:**	**Module**	**SSW L**	**USSW L**	**120 ECTS**	**-**	**Request**
DST36126	Manufacturing by thermal and non-thermal treatments of dairy	63	87	6.00	C	Dairy Principles + Dairy Chemistry
DST36127	Fatty Dairy Products	78	97	7.00	C	Mabadi Dairy
DST36128	Human Nutrition	33	67	4.00	B	Life Chemistry
DST36129	Food Processing	78	97	7.00	B	Principles of Food Processing
DST36130	By-products and environmental contaminants of dairy products	63	87	6.00	C	Mabadi Dairy

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

* Code:	Module	SSW L	USSWL	120 ECTS	-	Request
DST47131	Cheese Processing	108	117	9.00	C	Dairy Principles + Dairy Chemistry
DST47032	Research Methodology	33	42	3.00	S	
DST47133	Packaging	63	112	7.00	C	Food Processing
DST47034	Professional Ethics	33	42	3.00	S	
DST47135	Evaluate and develop dairy products	78	122	8.00	C	Dairy Principles + Dairy Chemistry

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

* Code:	Module	SSW L	USSWL	120 ECTS	-	Request
DST48136	Manufacture of special milk and milk novelties	48	77	5.00	C	Dairy Chemistry + Human Nutrition
DST47137	Nano-applications	63	62	5.00	C	Life Chemistry
DST47138	Food analysis	78	122	8.00	C	Life Chemistry
DST47139	Milk ice cream	93	107	8.00	C	Mabadi Dairy
DST47140	Graduation Research Project	33	67	4.00	S	

8. Contact

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