

Department of Food Science and Nutrition

1. Basic Information about the Program: Food Science and Nutrition	
Program Title and Final Award	Bachelor of Science in Food Science and Nutrition
Awarding Body/ Institution	Faculty of Agriculture, Foods, and Environment
Teaching Institution/ Responsible Department	Department of Food Science and Nutrition - Faculty of Agriculture, Foods, and Environment
Program Type	Independent (*), Joint with Other Department(s) () Multi-Departmental ()
Other Departments Involved in Teaching the Program	Faculty of Agriculture, Foods, and Environment
Medium of Instruction	Arabic
Program Start Year	2020/ 2021
Study Mode	Full-time (mandatory attendance)
Place of Study	Faculty Classrooms, Laboratories, and Farm
System of study	Annual System (Two Semesters per Year)
Time Required for Graduation	Four years (143 credit hours)
Prerequisite Qualifications	High School Certificate (Scientific Section)
Required Average Grade for Admission	At Least 70%
Other Requirements	
Program Coordinator	
Date of Program Specification/ Latest Accreditation	The program is pursuing accreditation.

Department Vision:

Excelling in teaching, learning, scientific research, and community service in the fields of food science and human nutrition.

Department Mission:

The Department of Food Science and Nutrition aims to qualify and prepare highly skilled scientific and research cadres who are capable of meeting the demands of the labor market. This is achieved through a strong commitment to quality, development, continuous self-learning, and scientific research, all of which serve to benefit and advance the community. The department also strives to foster productive collaborations with scientific institutions and relevant local communities, with the

ultimate goal of achieving sustainable development of both human and natural resources.

Department Aims:

1. Preparing qualified cadres in the fields of food science and nutrition who can meet the demands of the labor market and serve the community while maintaining a strong connection with them.
2. Conducting scientific research related to nutrition, food technology, and dairy industries and studies to contribute to improving nutrition and developing food processing, thereby enhancing self-sufficiency and achieving food security.
3. Developing students' abilities and skills to raise nutritional awareness in the community and participate in development and interaction with the environment.
4. Establishing links between research, scientific activities, and community service by creating channels of cooperation and communication with government agencies, the private sector, research centers, and relevant local and international organizations.
5. Organizing scientific conferences, seminars, and training courses to enhance the competence of graduates and employees.
6. Exchanging scientific expertise with Arab and international universities in the field of food and nutrition, providing technical consultations, and conducting specialized scientific studies that meet the requirements of the labor market and serve the community.
7. Strengthening cooperation and coordination with international organizations and bodies related to the field.
8. Solving problems related to increasing production while ensuring quality and safety in the food and dairy industries based on modern scientific principles that align with the requirements of the local and global markets.

Career Opportunities for Graduates of the Department of Food Science and Nutrition

- ✓ Food and dairy companies and factories throughout the country.
- ✓ Grain silos and flour mills.
- ✓ Yemeni Standardization and Metrology Organization (YSMO).
- ✓ Food inspection and monitoring bodies such as the Environmental Health Department.
- ✓ Customs Authority (quality control laboratories) at customs outlets such as airports, seaports, and land crossings.
- ✓ Ministries of Higher Education and Technical Education (such as Yemeni universities and agricultural and veterinary institutes).

- ✓ Ministry of Agriculture, the Agricultural Cooperative Union, and dairy farms in various governorates.
- ✓ Rural development projects of international organizations.
- ✓ International organizations and institutions related to the field, such as international health organizations, the Food and Agriculture Organization, and the World Food Program.
- ✓ Ministry of Public Health and Population (nutrition departments, central health laboratories, therapeutic nutrition, and meal planning sections in hospitals).
- ✓ Food supervision of main hospital restaurants, airlines, sports teams, army nutrition, and other human gatherings.
- ✓ Yemen Economical Corporation (YECO) (food industry sector, refrigerated warehouses, automated bakeries).
- ✓ Social Fund for Development projects.
- ✓ Projects and freelance work in the field of food and dairy product manufacturing.
- ✓ These are in addition to job opportunities available outside Yemen in similar and diverse fields for food science graduates.

Graduate Attributes:

Upon successful completion of this program, the graduate will be able to:

- Acquire the skills, knowledge, and information necessary to conduct studies and research in the fields of food science and nutrition.
- Understand the basic sciences and their applications in the fields of agricultural science, food technology, and nutrition.
- Plan and implement agricultural and industrial operations to produce safe and high-quality food.
- Understand and analyze issues related to agricultural, food, and nutritional problems to find the most appropriate solutions.
- Develop the skills necessary to develop food products that meet consumer preferences and ensure food safety and health.
- Acquire skills in dealing with modern technologies related to the development and improvement of the quality of food products, the application of correct specifications and standards in accordance with consumer preferences, and ensuring food safety and health.
- Develop nutritional guidance and education programs to raise nutritional awareness, change unhealthy dietary patterns, plan meals, and conduct nutritional assessments for individuals and communities.

- Implement good agricultural practices and food processing skills with high nutritional value and quality.
- Keep up with the requirements of the labor market by being familiar with the latest developments in the fields of food science and human nutrition.
- Conduct authentic, applied research in the field to meet the needs of the labor market and serve the community.
- Develop a variety of skills and knowledge, such as information technology, food analysis, self-learning, critical thinking, and communication with others.

Food Science and Nutrition Program

Program Mission

Striving to fulfill the department's mission by providing outstanding courses in the field of food science and nutrition, delivered by a highly qualified teaching staff, to achieve the desired outcomes, contributing to the achievement of the aims of the department, faculty, and university, and attaining excellence at the local and regional levels.

Program Aims:

1. Preparing and graduating highly qualified cadres equipped with extensive knowledge and advanced skills that enhance and achieve the aims of the department, faculty, and university.
2. Developing and encouraging a spirit of scientific research in the field of food science and nutrition, enabling graduates to actively contribute to community service and address relevant problems.
3. Providing students with concepts that enhance the food sector, preparing them for successful careers in government and non-governmental food regulatory and legislative bodies, and training them to conduct both basic and applied research that aligns with the needs of the food technology profession and stakeholders in the food industry.
4. Developing problem-solving skills in food manufacturing, emphasizing the practical application of these skills to promote good nutrition and support the development of local products that contribute to rural community development.
5. Developing the skills necessary to develop food products that meet consumer preferences and ensure food safety and health.

6. Equipping graduates with the appropriate knowledge and skills for the labor market in the fields of food science and nutrition through highly competent academic staff.
7. Developing knowledge in the fields of food science and human nutrition through innovative applied research that addresses the needs of the labor market and contributes to community services.
8. Raising awareness in the community about the importance and role of human nutrition in supporting health, preventing disease, and changing unhealthy dietary patterns.

Undergraduate Program Courses for Departments of the Faculty of Agriculture, Foods, and Environment - First and Second Levels

First Level Courses					
First Semester			Second Semester		
Course code	Course Title	Credit Hours	Course code	Course Title	Credit Hours
UR001	Arabic Language (1)	2	FR001	Physics & Meteorology	3
UR006	Islamic Culture	3	FR006	Principles of Statistics	2
FR111	General Chemistry	3	FR111	Organic Chemistry	3
FR112	General Botany	3	FR112	Principles of Agricultural Economics	2
FR113	Mathematics	2	FR113	General Zoology	3
FR114	Agriculture in Yemeni Environment	1	FR114	Principles of Ecology	2
UR007	National culture	2	UR002	Arabic Language (2)	2
FR115	Geology	1	UR008	Conflict with the Israeli enemy	2
Total		17	Total		19

**Undergraduate Program Courses for Departments of the Faculty of
Agriculture, Foods, and Environment - First and Second Levels**

Second Level Courses					
First Semester			Second Semester		
Course code	Course Title	Credit Hours	Course code	Course Title	Credit Hours
FR211	Soil Fundamentals	2	FR221	Principles of Food Science	2
FR112	General Microbiology	3	FR222	Principles of Crops Protection	2
FR113	Biochemistry	3	UR004	English Language (2)	2
FR114	Principles of Animal Production	2	FR127	Principles of Genetics	2
UR003	English Language (1)	2	FR223	Principles of Horticulture	2
FR114	Principles of Crops Production	2	FR224	Plant Physiology	2
FR215	Principles of Agricultural Engineering	2	FR225	Principles of Human Nutrition	2
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Total		16	Total		17

**Undergraduate Courses for the Food Science and Nutrition Program (FSN) -
Department of Food Science and Nutrition**

Third Level Courses					
First Semester			Second Semester		
Course Code	Course Title	Credit Hours	Course Code	Course Title	Credit Hours
FSN311	Fluid Milk Processing	3	FSN321	Technology of Fruits & Vegetable Products	3
FSN312	Food Chemistry and Analysis	3	FSN322	Meat & Fish Technology	3
FSN313	Food Processing and Preservation	3	FSN323	Milk Chemistry and Analysis	3
FSN314	Nutritional Status Assessment	2	FSN324	Cheese Processing and Fermented Milk	3
ANR316	Meat & Milk Production	3	FSN325	Legislation and Food Systems	2
HRT317	Handling & Storage of Hort. Crops	3	FSN326	Food Packaging	2
FR315	Agricultural Extension and Rural Community	2	FSN327	Nutritional Status Assessment	2
			FSN328	Summer Training	1
Total		19	Total		19

Fourth Level Courses					
First Semester			Second Semester		
Course Code	Course Title	Credit Hours	Course Code	Course Title	Credit Hours
FSN411	Technology of Cereal & Sugar Crops	3	FSN421	Technology of Edible Fats & Oils	3
FSN412	Microbiology of Foods and Fermentation	3	FSN422	Evaluation of Foods Quality	2
FSN413	Technology of Fatty Dairy Products & Ice Cream	3	FSN423	Dairy Microbiology	3
ETA421	Food Processing Engineering	3	FSN424	Food Plants Sanitation	2
FSN414	Therapeutic Nutrition (1)	2	FSN425	Therapeutic Nutrition (2)	2
FSN415	Functional Foods	2	FSN426	Instrumental Analysis	3
FSN416	Field Training	2	AEC428	Food Plants Economics and Management	2
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Total		18	Total		18