



**SZKOŁA GŁÓWNA
GOSPODARSTWA
WIEJSKIEGO**

Study programme

Food Science - Technology and Nutrition

Faculty:	Faculty of Food Technology
Level of study:	first cycle (bachelor's degree)
Education profile:	General academic
Form of study:	full-time studies
Academic year:	2023/24

Table of contents

Basic information	3
Major characteristics	4
Indication of the socio-economic needs of creating a major	5
Study plan	6

Basic information

Faculty name:	Faculty of Food Technology
Major name:	Food Science - Technology and Nutrition
Level of study:	first cycle (bachelor's degree)
Profile of study:	General academic
Form of study:	full-time studies
Duration of studies (number of semesters):	6
Number of ECTS required to complete the studies:	180
The number of ECTS points a student obtains during classes conducted with the direct participation of academic teachers or other persons conducting classes:	100
Professional title awarded to graduates:	licencjat
ISCED code:	0721
Language of study:	english

Assigning the major to the fields and disciplines to which the learning outcomes relate

Food technology and nutrition	100%
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Major characteristics

Major characteristics

The Food Science – Technology and Nutrition (FSTN) study programme offers students a modern teaching in the field of food technology and human nutrition based on the latest scientific achievements. The assumed learning outcomes are achieved using contemporary techniques, resources and research infrastructure, and with the huge support of highly experienced academics of the Institute of Food Sciences and the Institute of Human Nutrition Sciences (WULS-SGGW), therefore the FSTN study programme provides an attractive and interdisciplinary offer to everyone who is interested in acquiring the knowledge, competences and skills in the field of food technology and human nutrition.

The Food Science – Technology and Nutrition study programme offers the students a large number of contact hours, including lectures, practical laboratory activities (such as, performing experiments in groups or individually), as well as project-based activities. In addition to knowledge related to technological processes and the impact of food and nutrition on human health, the graduates will be able to identify chemical, biological and physical hazards during food production, processing, distribution and storage. The proposed study offer focuses also on the organization of technological processes, especially on the high-quality products and the implementation of processes with the use of the most modern and innovative techniques, standards and sustainable food systems, as well as allows to acquire knowledge and skills regarding the impact of food and nutrition on restoring and maintaining the health.

Learning objectives

The studies is aimed to provide the students the most up-to-date knowledge, as well as developing skills and competences in the field of food technology, food processing and human nutrition. The aim of the FSTN studies is also to prepare the graduate for further professional development, to carry on scientific research, and to enable the graduate to continue the education at the second-degree studies. The university mission is based on intellectual and social development of Polish and international society. This is implemented e.g. by distinguishing it as an attractive, friendly, safe and prejudice-free place to study, as well as equipping graduates with qualifications highly valued by enterprises and public and social institutions.

Education concept

The concept of the education in the field of study assumes that students have the opportunity to acquire knowledge and skills in the field of the organization of the production processes, basics economics, and marketing in a food industry enterprise and mass catering establishments, as well as the basics of production management. They also understand the rules of the food market and the essence of food marketing and consumer behavior, as well as they acquire the knowledge about the nutrition-related aspects of health.

Description of work placement (if provided for in the study programme)

Graduate profile

Graduates have knowledge in the field of food technology and nutritional sciences, with particular emphasis on the processing, preservation, and storage of food of plant and animal origin, food biotechnology, food analysis, and evaluation of food quality, food engineering, and the impact of the production processes on the nutritional, dietary and health aspects of food products. The graduates of first-cycle can work in various food processing companies, in research or research and development institutes, in laboratories, institution branches of the food industry, in food distribution units, in catering, in disseminating knowledge institutions, in consulting and auditing companies, and in other institutions of the food chain.

Indication of the socio-economic needs of creating a major

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Ensuring food security related to the availability of food for citizens at any time in terms of physical, economic, and health security, remains a priority for national governments, therefore the labour market will always need qualified specialists in food production and human nutrition. Graduates of the faculty are prepared to meet the needs of the modern labour market, which indicates the need to constantly deepen their knowledge and skills and to shape appropriate social competences, included in the study programme. The concept of teaching and didactic content in the field of study is enriched with practical aspects to help graduates enter the labour market and function in it. Graduates have competences enabling them to take up professional work in positions requiring high qualifications. Educating students in this field of study includes two basic trends. The implementation of teaching in an international environment enriches graduates with key competences related to the labour market with the ability to function in such an environment. It also creates an opportunity to exchange experiences in the field of food production technology, and nutrition culture, including regional production.

Indication of compliance of learning outcomes with socio-economic needs

The learning outcomes have been focused on the current needs of the labor market, where the food technology experts are in great demand, due to the continuous development of the food industry and the catering service. The dynamic development of this field in the world is related to the constantly growing population, which is linked to ensuring food security and environmentally sustainable development of the agriculture and food production sector. Educating specialists in the field of food technology and nutrition may have a decisive influence on the further development of this activity, which is important for humans.

Study plan

Semester 1

In semester 1, students complete library training and a health and safety course on a platform available at <https://szkolenia.sggw.pl>

Subject	Number of hours	ECTS points	Form of verification
OHS training	OHS training: 4	0	Pass O
Biology	Lecture: 30 Laboratory exercises: 15	4	Pass with grade O
Mathematics	Lecture: 15 Auditorium exercises: 30	4	Pass with grade O
General and organic chemistry	Lecture: 30 Laboratory exercises: 30	4	Pass with grade O
Sustainable food systems	Lecture: 15 Auditorium exercises: 30	3	Pass with grade O
Information Technology	Lecture: 15 Laboratory exercises: 45	4	Pass with grade O
Food raw materials	Lecture: 15 Laboratory exercises: 30	4	Pass with grade O
Foreign language 1	Language course: 60	3	Pass with grade G
Student chooses foreign language classes			
Polish	Language course: 60	3	Pass with grade F
English	Language course: 60	3	Pass with grade F
Spanish	Language course: 60	3	Pass with grade F
German	Language course: 60	3	Pass with grade F
Russian	Language course: 60	3	Pass with grade F
Humanities electives	Contact hours: 45	4	Pass with grade G
Student chooses classes from an open list			
Nutrition sociology	Lecture: 15 Auditorium exercises: 30	4	Pass with grade F
Polish culture	Lecture: 15 Auditorium exercises: 30	4	Pass with grade F
Sum	409	30	

Semester 2

Subject	Number of hours	ECTS points	Form of verification
Food chemistry	Lecture: 30 Laboratory exercises: 30	5	Exam O

Subject	Number of hours	ECTS points	Form of verification	
General and food microbiology	Lecture: 30 Laboratory exercises: 30	5	Exam	O
Introduction to food processing	Lecture: 15 Auditorium exercises: 40	5	Pass with grade	O
Introduction to human nutrition	Lecture: 20 Laboratory exercises: 30	4	Pass with grade	O
Basic statistics	Lecture: 15 Laboratory exercises: 30	3	Pass with grade	O
Engineering Graphics	Lecture: 15 Laboratory exercises: 45	4	Pass with grade	O
Foreign language 2	Language course: 60	3	Pass with grade	G
Students complete classes in a foreign language chosen in semester 1.				
Polish	Language course: 60	3	Pass with grade	F
English	Language course: 60	3	Pass with grade	F
Spanish	Language course: 60	3	Pass with grade	F
German	Language course: 60	3	Pass with grade	F
Russian	Language course: 60	3	Pass with grade	F
Confirmation B2 foreign language	Contact hours: 2	1	Exam	O
Physical education	Physical education: 30	0	Pass	O
Sum	422	30		

Semester 3

Subject	Number of hours	ECTS points	Form of verification	
Biochemistry & enzymology	Lecture: 30 Laboratory exercises: 30	4	Exam	O
Basics of human anatomy and physiology	Lecture: 30 Laboratory exercises: 30	5	Exam	O
General food technology	Lecture: 30 Laboratory exercises: 45	5	Exam	O
Plant-origin food technology	Lecture: 15 Laboratory exercises: 30	4	Pass with grade	O
Food production equipment	Lecture: 15 Laboratory exercises: 30	4	Pass with grade	O
Basics of food engineering	Lecture: 15 Laboratory exercises: 30	4	Exam	O
Instrumental methods of food analysis	Lecture: 15 Laboratory exercises: 45	4	Pass with grade	O
Physical education	Physical education: 30	0	Pass	O
Sum	420	30		

Semester 4

Subject	Number of hours	ECTS points	Form of verification
Advanced human nutrition	Lecture: 15 Laboratory exercises: 45	5	Pass with grade O
Animal-origin food technology	Lecture: 15 Laboratory exercises: 30	3	Pass with grade O
Food biotechnology	Lecture: 30 Laboratory exercises: 30	5	Exam O
Pathogens in water and food	Lecture: 15 Laboratory exercises: 30	4	Pass with grade O
New food products development	Lecture: 30 Laboratory exercises: 15	4	Pass with grade O
Food additives and contaminants	Lecture: 25	1	Exam O
Sensory analysis	Lecture: 15 Laboratory exercises: 30	4	Pass with grade O
Consumer behaviour	Lecture: 15 Project exercises: 30	4	Pass with grade O
Sum	370	30	

Semester 5

Subject	Number of hours	ECTS points	Form of verification
Food production hygiene	Lecture: 15 Laboratory exercises: 30	3	Pass with grade O
Catering technology	Lecture: 15 Laboratory exercises: 30	3	Pass with grade O
Food packaging and contact materials	Lecture: 15 Laboratory exercises: 30	3	Pass with grade O
Basics of dietetics	Lecture: 15 Laboratory exercises: 30	3	Pass with grade O
Nutrition of selected population groups	Lecture: 15 Laboratory exercises: 30	3	Pass with grade O
Electives 1	Contact hours: 225	15	Pass with grade G
Student chooses five classes from an open list			
Alcoholic beverages and human being	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F

Subject	Number of hours	ECTS points	Form of verification
Contemporary methods of management	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Drugs, medicines and smart food components and additives	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Functional food	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Dietary prevention	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Trends in food and consumption	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Alternative diets	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Environment, diet and health	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Sum	450	30	

Semester 6

Subject	Number of hours	ECTS points	Form of verification
Protection of intellectual property	Lecture: 15	1	Exam O
Technological design electives	Lecture: 15 Project exercises: 45	4	Pass with grade G
Students chooses one subject			
Technological design of food industry plants	Lecture: 15 Project exercises: 45	4	Pass with grade F
Technological design of food gastronomy plants	Lecture: 15 Project exercises: 45	4	Pass with grade F
Methodological electives	Auditorium exercises: 30	2	Pass with grade G
Students chooses one subject			
Methodology in technological projects	Auditorium exercises: 30	2	Pass with grade F
Methodology in nutritional projects	Auditorium exercises: 30	2	Pass with grade F
Food safety and quality management electives	Lecture: 15	1	Pass with grade G
Students chooses one subject			

Subject	Number of hours	ECTS points	Form of verification
Food safety and quality management in food production	Lecture: 15	1	Pass with grade F
Food safety and quality management in gastronomy	Lecture: 15	1	Pass with grade F
Project electives	Project exercises: 60	5	Pass with grade G
Students chooses one subject			
Technological projects	Project exercises: 60	5	Pass with grade F
Nutritional project	Project exercises: 60	5	Pass with grade F
Seminar	Project exercises: 30	2	Pass with grade G
Students chooses one subject			
Seminar (food technology)	Project exercises: 30	2	Pass with grade F
Seminar (human nutrition)	Project exercises: 30	2	Pass with grade F
Electives 2	Contact hours: 225	15	Pass with grade G
Student chooses five classes from an open list			
Bioengineering in food industry	Lecture: 30 Laboratory exercises: 15	3	Pass with grade F
Cutting-edge technologies in food industry	Lecture: 30 Laboratory exercises: 15	3	Pass with grade F
Design thinking in food industry	Lecture: 30 Project exercises: 15	3	Pass with grade F
Drying	Lecture: 30 Laboratory exercises: 15	3	Pass with grade F
Herbs, food and health	Lecture: 30 Laboratory exercises: 15	3	Pass with grade F
Physical properties of food	Lecture: 30 Laboratory exercises: 15	3	Pass with grade F
Prevention of food quality	Lecture: 30 Laboratory exercises: 15	3	Pass with grade F
Public health nutrition	Lecture: 30 Auditorium exercises: 15	3	Pass with grade F
Sum	435	30	

O - Obligatory subjects
G - Mandatory group
F - Elective subjects