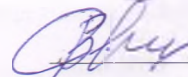


**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
SYMY NATIONAL AGRARIAN UNIVERSITY**

Technology of Nutrition Department

«Approved by»

Head of Department

 (F.V. Pertsevoi)

«25» 06 2020 .

EDUCATIONAL PROGRAM (SYLABUS)

FOOD QUALITY MANAGEMENT

Specialty: 181 «Food technologies»

Educational program: Food technologies

Faculty: Food technologies

2020 – 2021 academic year

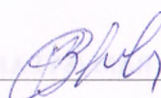
Educational program of subject «**Food Quality Management**» for students by specialty 181 “Food technologies” educational degree “Master”

Developed by: PhD, Associate Professor of Food Technology Department
Stepanova T.M.

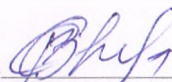


The educational program is approved at the meeting of the **Technology of Nutrition Department**

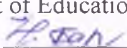
Protocol from “ 25 ” June 2020 № 16

Head of Department  (Pertsevoi F.V.)

Agreed:

Guarantor of the educational program  (Pertsevoi F.V.)

Dean of the Faculty  (O.Yu. Melnyk)

Methodist of the Department of Education Quality,
Licensing and Accreditation  (_____)

Registered in electronic database: date: 28.08. 2020.

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1. Description of the discipline

Name of indicators	Branch of knowledge, direction of training, educational and qualification level	Characteristics of the discipline	
		full-time education	external form of education
Amount of credits – 5	Branch of knowledge: <u>18 «Production and technology»</u>	Normative	
	Specialty: <i>181 Food technology</i>		
Modules - 2		Year of education:	
Content modules - 2		2020-2021	2020-2021
		Course	
		1	
Total hours – 150		Semester	
	1		
Weekly hours for full-time study: classroom – 1,5 independent work of the student – 1,5	Educational degree: Master	Lectures	
		14 hours	
		Practical, seminars	
		-	-
		Laboratory	
		60 hours	
		Independent work	
76 hours			
Individual tasks			
Type of control: Computer testing, defence of laboratory works, defence of independent works and abstracts, exam.			

Note.

The ratio of the number of hours of classroom studies to independent work is (%):for full-time education – 47/53 (42/48)

1. Purpose and tasks of the discipline

Purpose: obtaining knowledges about harmful substances that may be in food products and abilities to apply measures to reduce the harmful effects of hazardous substances in food products on the human body.

Tasks: training of future specialists who clearly understand the problem of food safety, the criteria for hygienic assessment of food production and are guided by modern food safety systems.

Learning outcomes of the discipline (LOD)

As a result of studying the discipline the student will be able to demonstrate:

- ability to use professional knowledge in the field of food quality and safety management for the development and implementation of HACCP and ISO product quality and safety management systems.
- ability to analyze and take into account in practice the trends of scientific and technical development of food science, to choose the most promising and rational areas of scientific and technical activities.
- ability to develop programs for the development and operation of enterprises in the industry, to implement rational methods of managing production processes, to plan the need for resources.
- ability to form and implement their own models of professional activity, taking into account the best practices of scientific and industrial activities
- ability to develop and implement innovative technological solutions to solve existing problems and further development of food technology, to reproduce the results of research and testing in the production environment of real enterprises, to develop foreign economic relations of food industry and restaurants.

1. Content of the course

Content module 1. Effect of technological, culinary and normative-legal factors on the quality of food products.

Topic 1. Introduction. Regulatory basis of quality and safety of food products.

Key Indicators of Food Security. Documents regulating the quality and safety of food products in EU countries. Normative base of Ukraine.

Topic 2. Factors of food quality.

The content and composition of proteins, lipids, carbohydrates as a factor in quality. The content and composition of vitamins, minerals, as a factor of quality.

Water of food products as a factor in quality.

Topic 3. Food contamination and prevention.

Contamination of food products with heavy metals.

Surface and structural contamination of food products with radionuclides.

Pollution by nitrates and nitrites and the possibility of reducing their amount in food products.

Fungal metabolites and prevention of their development in food products.

Content module 2. Methodology, organization and sensory control of products quality.

Topic 4. Quality of restaurant products.

Influence of products quality components on the final result of production.
Quality and product features. Evaluating product quality.

Topic 5. Methods and indicators of product quality assessment.

Quality Indicators and Product Parameters.

Methods of product quality assessment: differential, complex, mixed, statistical. Classification of methods depending on the means of measurement: measuring, registration, calculation, sociological, expert and organoleptic.

Nomenclature of the main groups of indicators of product quality according to the properties that they characterize: indicators of purpose, reliability, manufacturability, transportability, safety, standardization and unification, aesthetic, ergonomic, patent and environmental, use of raw materials, materials, fuel, energy and labor resources.

Topic 6. Organization of quality control.

Economic dependence of the employee and quality.

Product quality control at enterprises.

Quality control carried out by special laboratories.

Topic 7. HACCP Quality Control System.

History. Legislative base.

Basic concepts.

Principles of HACCP.

Advantages of the HACCP system.

4. Structure of the discipline

Names of content modules and topics	Number of hours											
	Total	Full-time including					Total	external form including				
		Lectures	Practical	Laboratory	Individual	Independent work		Lectures	Practical	Laboratory	Individual	Independent work
		2	3	4	5	6		7	8	9	10	11
Module 1. Legislative regulation of quality and safety of food products												
Content module 1. Effect of technological, culinary and normative-legal factors on the quality of food products												
Topic 1. Introduction. Regulatory basis of quality and safety of food products.	21	2		8		11						
Topic 2. Factors of food quality	21	2		8		11						
Topic 3. Food contamination and prevention.	21	2		8		11						
Total content	63	6		24		33						

module 1									
Module 2. Methods, indicators and organization of quality control.									
Content module 2. Methodology, organization and sensory control of products quality.									
Topic 4. Quality of restaurant products	25	2		12		11			
Topic 5. Methods and indicators of product quality assessment	21	2		8		11			
Topic 6. Organization of quality control	21	2		8		11			
Topic 7. HACCP Quality Control System.	20	2		8		10			
Total content module 2	87	8		16		43			
Total hours in discipline	150	14		60		76			

5. Topics and plan of lectures

No	Title of theme	Number hours
1	Topic 1. Introduction. Regulatory basis of quality and safety of food products. 1. Key indicators of food security. 2. Documents regulating the quality and safety of food products in EU countries. 3. Normative base of Ukraine.	2
2	Topic 2. Factors of food quality 1. The content and composition of proteins, lipids, carbohydrates as a factor of quality. 2. Content and composition of vitamins, minerals, as a factor of quality 3. Water of food products as a factor of quality	2
3	Topic 3. Food contamination and prevention. 1. Contamination of food products with heavy metals. 2. Contamination of food products with radionuclides. 3. Pollution of food products by nitrates and nitrites.	2
4	Topic 4. Quality of restaurant products. 1. Quality components. 2. Basic concepts, terms and definitions. 3. Planning and quality assurance of products	2

5	Topic 5. Methods and indicators of product quality assessment 1. Indicators of product quality assessment. 2. Methods of product quality assessment 3. Consumer properties of products	2
6	Topic 6. Organization of quality control 1. Economic dependence of the employee and quality. 2. Product quality control at enterprises. 3. Quality control carried out by special laboratories.	2
7	Topic 7. HACCP Quality Control System. 1. History. Legislative base. 2. Basic concepts. 3. Principles of HACCP. 4. Advantages of the HACCP system.	2
	Total	14

6. Topics of laboratory classes

№	Title of theme	Number hours
1	Study of the normative and legal basis of quality and safety of food products	8
2	Study of food products quality factors	8
3	Study of the food products contamination factors and the possibilities of preventing it	8
4	Study of the factors influencing the quality of restaurant production.	12
5	Study of product's quality control methods	8
6	Study of the organization of quality control at the enterprise	8
7	Study the HACCP system	8
	Total	60

7. Self-dependent work

№	Title of theme	Number hours
1	Key Indicators of Food Security.	11
2	Water of food as a factor in quality.	11
3	Pollution of food by metabolites of microorganisms.	11
4	Basic concepts, terms and quality of food products.	11
5	Consumer properties of food products.	11
6	Food quality control carried out by special laboratories.	11
7	HACCP quality control system: decision tree	10
	Total	76

8. Methods of training

Lectures-discussions, brainstorming, joint learning, mutual assessment, teamwork

9. Methods of assessment

Formative assessment: in each class, students receive ois feedback. According to the results of the first module - written work that gives students an idea of the level of their progress.

Summative assessment is aimed at assessing the extent to which students have achieved the planned learning outcomes through the evaluation of presentations, the implementation of written tasks.

Evaluation on a 100-point scale (distribution of points in section 10)

10. Distribution of points awarded by postgraduate students

Current testing and independent work							Total for the modules and IWS	Attestation	The final test - exam	Total
Module 1 – 35 points			Module 2 – 35 points							
Content modules										
1			2							
T1	T2	T3	T4	T5	T6	T7	70	15	15	100
10	10	15	7	15	7	6				

Scale of assessment: national and ECTS

The amount of points for all types of educational activities	Rating ECTS	Rating on a national scale	
		for the exam	for the credit
90 – 100	A	perfectly	enrolled
82-89	B	fine	
75-81	C		
69-74	D	satisfactorily	
60-68	E		
35-59	FX	unsatisfactory with the possibility of re-examining	is not enrolled with the possibility of re-examining
1-34	F	unsatisfactorily with compulsory repeated study of discipline	is not enrolled with repeated study of discipline

11. Recommended literature

1. Quality Assurance for the Food Industry: A Practical Approach / J. Andres Vasconcellos // New York. CRC Press. 2003. P. 448. <http://www.bookhut.net/wp-content/uploads/2014/05/Quality-Assurance-for-the-Food-Industry-A-Practical-Approach.pdf>
2. Food Quality Assurance. Principles and Practices / Intez Alli // New York. CRC Press. 2004. P. 154 <http://www.thanut-swu.com/images/BOT331/food%20quality%20assurance.pdf>
3. Law of Ukraine "On the quality and safety of food products and food raw materials".
4. Law of Ukraine "On Protection of Consumer Rights"
5. DSTU 4161-2003 «Food safety management systems».
6. DSTU ISO 9000-2001 «Quality management systems. Basic Provisions and Dictionary».
7. DSTU ISO 9001-2001 «Quality management systems. Requirements».
8. DSTU ISO 9004-2001 « Quality management systems. Guidelines for improving performance».
9. Law of Ukraine «On the quality and safety of food products and food raw materials».

Additional:

1. Quality Assurance in Seafood Processing: A Practical Guide/ Bonnell, A. David // Island Press. 2004. P. 228. <https://books.google.com.ua/books?id=4V31BwAAQBAJ&hl=ru>
2. Improving the quality and safety of fresh fruits and vegetables. a practical approach manual for trainers / Maya Piñeiro, Luz Berania Díaz Ríos // Food and Agriculture Organization of the United Nations Rome. 2004. P. 110. http://www.fao.org/ag/agn/cdfruits_en/others/docs/manual_completo.pdf

Information resources

1. <http://www.iso.ch>
2. <http://www.udc.com.ua>
3. <http://www.management.com.ua>
4. <http://www.standard.ru>.
5. <http://www.dstu.gov.ua>
6. <http://quality-rating.org.ua/ru/main>
7. <http://www.ukrndnc.org.ua/index.php>