

MINISTRY OF HIGHER EDUCATION, SCIENCE AND
INNOVATIONS OF THE REPUBLIC OF UZBEKISTAN
MINISTRY OF HEALTHCARE OF THE REPUBLIC OF UZBEKISTAN
TASHKENT STATE MEDICAL UNIVERSITY



“APPROVED”

Vice-rector for educational affairs

K.N.Khaitov

SYLLABUS IN FOOD HYGIENE SCIENCE
For the daytime section

Knowledge sector:	900 000	– Health care and social security
Education sector:	910 000	– Health care
Educational sectors:	60910400	– Medical preventive work

SYLLABUS IN FOOD HYGIENE SCIENCE

Faculty of medical prevention and public health

60910400- Medical preventive work educational direction

Name of science:	NUTRITIONAL HYGIENE
Type of science:	Mandatory
Code of science:	OG16-1015
Year:	2025/2026
Semester:	5-6
Form of education:	daytime
Form of classes and hours allocated for the semester:	120
Lecture	14
Practical training	46
Laboratory training	-
Seminar	-
Independent education	60
Loan amount:	4
Assessment form:	final control (test)
The language of science:	Uzbek, Russian and English

The purpose of science (PS)	
PS1	The food hygiene module provides theoretical and practical training for conducting state sanitary control in controlled objects, teaching practical skills in conducting state sanitary control in food enterprises regardless of the form of ownership. For this, it is necessary to teach the medical-biological criteria of product safety, the sanitary-chemical examination of food products, the health status of the population related to the nature of nutrition, the prevention of alimentary diseases and the rationalization of the population's diet.
Basic knowledge necessary for mastering science	
1.	general hygiene
2.	medical chemistry
3.	microbiology
4.	physiology

Educational results (ER)	
	In terms of knowledge:

ER1	Public health - knowledge of methods for its study, socio-hygienic significance, socio-hygienic and environmental factors, as well as the role of lifestyle in the formation of public health;
ER2	Knowledge of the most important diseases, their socio-hygienic significance, theoretical foundations of healthcare and the organization of medical care for the urban and rural population, protection of motherhood and childhood, sanitary-epidemiological service, promotion of a healthy lifestyle, organization of medical and labor expertise, knowledge of the basics of healthcare management, planning, financing and assessment;
ER3	Methodological guidance of the maintenance, collection, and analysis of state and departmental medical statistics, conducting necessary examinations and surveys to identify factors negatively affecting public health;
	Fundamentals of nutrition hygiene:
ER4	Possess skills in developing all types of preventive measures for diseases associated with nutrient deficiency, widespread among the population.
ER5	Knowledge of healthy nutrition
ER6	Knowledge and skills in food microbiology
	Interpersonal Communication (IC)
ER7	IC.1. Must master the skills of taking food samples for laboratory testing, performing visual, instrumental, computational, and laboratory tests to assess the main nutrients in food products.
ER8	IC.2. Application of IC skills when communicating in a team, with colleagues, with specialists of other fields
	Personal development (PD)
ER9	PD.1. Working within the framework of personal competence, knowing the reasons for the inability to fulfill one's functional duties
ER10	PD.2. Knowledge of ethical norms, ability to manage stress, make decisions, work on one's image, and manage conflict situations.
ER11	must have skills (including hygienic practical skills) such as developing a plan of health improvement measures for workers and employees of food enterprises and improving sanitary, hygienic, and epidemiological measures in the production, storage, transportation, and distribution of products.

The content of science	
Form of classes: lecture (L)	
L1	Basic concepts about the study of nutrition and food hygiene, the history of the development of food hygiene
L2	Nutrition theories
L3	Nutritional importance of proteins
L4	Nutritional importance of fats and oils
L5	The importance of carbohydrates in nutrition
L6	Nutritional importance of vitamins

L7	Nutritional importance of minerals
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Form of training: practical training (P)	
P1	The purpose, tasks and basic concepts of studying the science of food hygiene
P2	Importance of proteins in nutrition
P3	Importance of fats and oils in nutrition
P4	The importance of carbohydrates in nutrition
P5	The importance of vitamins in nutrition
P6	The importance of mineral elements in nutrition
P7	Methods of studying the population's nutrition
P8	Determination of the adequacy of daily energy consumption
P9	Types of body energy expenditure
P10	The procedure for determining the body's energy consumption
P11	Analysis of the body's energy expenditure
P12	Basic metabolism, digestion, and energy determination
P13	Determination of the body's need for nutrients
P14	Importance of products with high nutritional value
P15	Hygienic examination of food products. Scientific practical work. Intermediate control

Independent education (IE)		hour
1	Methods of studying the diet of the population	4
2	Hygienic importance of proteins, sources	4
3	Diseases caused by protein deficiency	4
4	New sources of proteins	4
5	Importance of traditional sources of proteins	4
6	Hygienic significance of oils, sources	4
7	Diseases caused by a violation of fat metabolism	4
8	Biological role and main sources of fats	4
9	Biological role and main sources of carbohydrates	4
10	Biological role and main sources of minerals	4
11	Types and main sources of water-soluble vitamins	4
12	Types and main sources of fat-soluble vitamins	4
13	Analysis of the body's energy expenditure	4
14	Determining the body's need for nutrients	4
15	New methods to determine the body's energy expenditure	4
	Total	60

Basic literature	
1	Shaikhova G.I. "Tutorial for practical classes on food hygiene", Tashkent.

	2014. 476 p.
2	Shaikhova G.I. A guide to practical training in food hygiene. Tashkent. 2015. 440 pages.
3	Shaikhova G.I., Ermatov N.J. Nutritionology. Textbook. - Tashkent - 2022.
4	Shaikhova G.I., Ermatov N.J., Azizova F.L., Alimukhamedov D.Sh. Food hygiene. Textbook. - Tashkent. 2023.
5	R. S. Manueva, O. V. Antipina Nutrition hygiene of an adult person. Irkutsk ISMU 2018
6	Food and nutrition handbook for extension workers October 2015
7	Nutrition and Dietetics Nutritional Biochemistry Alagappa University
Additional literature	
1	Decree of the President of the Republic of Uzbekistan dated January 28, 2022 "On the development strategy of New Uzbekistan for 2022-2026" No. PF-60
2	Decree of the President of the Republic of Uzbekistan dated December 7, 2018 No. PF-5590 "On comprehensive measures to fundamentally improve the healthcare system of the Republic of Uzbekistan"
3	Decision PQ-3071 of the President of the Republic of Uzbekistan dated June 20, 2017 "On measures to further develop the provision of specialized medical care to the population of the Republic of Uzbekistan in 2017-2021".
4	Decision PQ-4887 of the President of the Republic of Uzbekistan dated November 10, 2020 "On additional measures to ensure healthy nutrition of the population"
5	Decision PQ-4295 of the President of the Republic of Uzbekistan dated April 19, 2019 "On approval of the National program on improving the provision of endocrinology care to the population of the republic in 2019-2021"
6	Mirziyoyev Sh.M. Critical analysis, strict order, discipline and personal responsibility should be the daily rules of every leader's activity. 2017, 104 pages, "Uzbekistan" publishing house of the Press and Information Agency of Uzbekistan
7	Mirziyoyev Sh.M. We will build our great future together with our brave and noble people. 2017, 488 pages, "Uzbekistan" publishing house of the Press and Information Agency of Uzbekistan
8	Mirziyoyev Sh.M. We will build a free and prosperous, democratic country of Uzbekistan together. 2016, 56 pages, "Uzbekistan" publishing house of the Press and Information Agency of Uzbekistan
9	Iskanderova G.T., Iskanderova T.I., Romanova L.Kh. "Hygiene and Toxicology of New Domestic Pesticides". Educational manual. Tashkent-2016.
10	UzR SanR and N - 2015 - 2024 years

**In monitoring the student's mastery of the subject
the following criteria are recommended:**

grade	ECTS grade	Definition of ECTS		grade	description
90-100	A	«excellent»	<p>to have a systematic, complete and deep knowledge of all sections of the science program, to be able to justify it with the necessary evidence;</p> <p>can use medical terminology (including scientific, foreign language) clearly and appropriately, can answer questions logically, clearly and succinctly;</p> <p>identify problematic questions, justify their views in scientific and practical language;</p> <p>to know the basic concepts of science and be able to effectively apply them in a short time to solve scientific and practical problems;</p> <p>able to demonstrate the ability to solve problems independently and creatively in non-standard situations;</p> <p>able to fully perform practical skills independently (in terms of quality and set quantity) and fully acquire competencies;</p> <p>short, grounded and rational solution of practical issues;</p> <p>demonstrate a very good knowledge of normative and legal documents in practical training, be able to apply this knowledge correctly (always rationally) in new situations, and be able to independently formalize the results of the work performed;</p> <p>full and deep mastering of the main and additional literature recommended in the science program;</p> <p>to understand the essence of theories, concepts and trends in science, give them a critical assessment and be able to apply the scientific achievements of other disciplines;</p> <p>should creatively and</p>	5	A'lo

			independently participate in theoretical and practical classes throughout the semester, be active in group discussions, have a high level of culture in performing tasks;		
85-89	B+	«very good»	<p>to have systematic, complete and deep knowledge of all sections of the science program, to be able to justify it with the necessary evidence;</p> <p>can use medical terminology (including scientific, foreign language) clearly and appropriately, can answer questions logically and clearly;</p> <p>to be able to independently eliminate the ambiguities that arise when proving one's opinion or describing other theoretical material;</p> <p>to know the basic concepts of science, to set scientific and professional tasks in a short period of time and use them effectively in solving them;</p> <p>able to independently solve problems in standard situations within the curriculum;</p> <p>able to fully perform practical skills independently (in terms of quality and set quantity) and fully acquire competencies;</p> <p>demonstrate good knowledge of normative and legal documents in practical training, be able to apply this knowledge correctly (but not always rationally) in new situations, be able to adequately formalize the results of the work performed;</p> <p>mastering the main literature recommended in the science program;</p> <p>be able to understand the essence of theories, concepts and trends in the studied science and critically evaluate them;</p> <p>must be creative and independent in theoretical and practical training</p>	4	very good

			throughout the semester, be active in group discussions, have a very good level of culture in performing tasks;		
71-84	B	«good»	<p>to have a systematic, complete and deep knowledge of all sections of the science program, to be able to justify it with the necessary evidence, but with some shortcomings;</p> <p>can use medical terminology (including scientific, foreign language) clearly and correctly, can answer questions logically;</p> <p>to be able to independently eliminate the ambiguities that arise when proving one's opinion or describing other theoretical material;</p> <p>to know the basic concepts of science, to set scientific and professional tasks in a short period of time and use them effectively in solving them;</p> <p>able to independently solve problems in standard situations within the curriculum;</p> <p>able to independently perform practical skills (in terms of quality and set quantity) and acquire competencies, but with some shortcomings;</p> <p>demonstrate good knowledge of normative and legal documents in practical training, be able to apply this knowledge correctly (but not always rationally) in new situations, unable to sufficiently independently formalize the results of the work performed;</p> <p>mastering the main literature recommended in the science program;</p> <p>to be able to understand the essence of theories, concepts and trends in the studied science;</p> <p>should participate creatively and independently in theoretical and practical classes throughout the</p>	3,5	

			semester, be active in group discussions, and have a good level of performance;		
60-70	C	"satisfactory" - poor result, with serious flaws	<p>to have sufficient knowledge within the scope of the science program;</p> <p>use medical terminology, correctly explain answers to questions, but make some mistakes;</p> <p>demonstrate a basic understanding of the subject when struggling to answer or demonstrate some specific skills;</p> <p>able to perform practical skills (in terms of quality and set quantity) independently but completely with mistakes;</p> <p>acquisition of competencies independently, but with errors;</p> <p>to have partial knowledge of the general concepts of science and be able to apply it in solving standard (model) situations;</p> <p>being able to solve standard situations with the help of a pedagogue;</p> <p>to understand the essence of the main theories, concepts and trends in the studied subject;</p> <p>it is necessary to participate in theoretical and practical training under the guidance of a pedagogue employee, to have a sufficient level of culture in performing tasks;</p>	3	satisfactory

0-59	F	«unsatisfied»	<p>if he has only some fragmentary knowledge within the scope of the science program;</p> <p>fails to use medical terms or makes serious and gross logical errors when answering questions or does not answer at all;</p> <p>if he passively participates in theoretical and practical training and has a low level of culture of performing tasks or does not perform them at all;</p> <p>if he does not have practical skills and competencies, if he cannot correct his mistakes even with the help of the recommendations of the pedagogical staff.</p>	2	unsatisfied
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Information about the science teacher

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This Syllabus of the TMA Educational and Methodical Council dated 23.07.2023. approved by the minutes of the meeting №01335.

This Syllabus was approved by the report of the meeting №1 dated 28.08.2024 of the “Children, adolescents and nutrition hygiene” department.

Dean of the faculty

F.I.Salomova

Head of the department

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