Ministry of Education and Science of Ukraine
State higher education institution
«Ukrainian State University of Chemical Technology»

Rector SHEI USUCE
_____O. Pivovarov
« ____» _____2017 y.

EDUCATION PROFESSIONAL PROGRAM

Food technology
(Name of educational program)

Second (master's) level
(name of higher education level)

Mahistr
(name of degree awarded)

BRANCH OF KNOWLEDGE 18 Production and technology

(code and domain name)

SPECIALTY 181 Food technology
(code and specialty name)

Approved at the meeting
academic council SHEI USUCE
from 29.06.2017 y. protocol №7

The Dnieper
2017

Letter of approval
EDUCATIONAL PROFESSIONAL PROGRAM

Higher education level	Second (master's) level
Branch of knowledge	18 Production and technology
Specialty	181 Food technology
Specialization	Technology of fats and fat substitutes
"AGREED"	"DEVELOPERS"
First vice-rector, chairman of the scientific and methodological council SHEI USUCE _____ Goleus V. (signature) (surname and initials) „_____” _____2017 y.	Project team leader professor of the department of CTMC _____ Chervakov O. (signature) (surname and initials) „_____” _____2017 y.
Head of educational and scientific center _____ Smotraev R. (signature) (surname and initials) „_____” _____2017 y.	Member of the project team docent of the department of CTMC _____ Filinska T. (signature) (surname and initials) „_____” _____2017 y.
Scientific and methodical department _____ Fomenko G. (signature) (surname and initials) „_____” _____2017 y.	Member of the project team docent of the department of CTMC _____ Holub L. (signature) (surname and initials) „_____” _____2017 y.
Dean of the Faculty of Macromolecular Technology _____ Ovcharov V. (signature) (surname and initials) „_____” _____2017 y.	
Head of Department _____ Chervakov O. (signature) (surname and initials) „_____” _____2017 y.	The educational and professional program was enacted by order of the rector № 244 from « 27 » 11 2017 y.

Table 3. List of disciplines of the educational and professional training program for second-level (master's) students, educational time in ECTS credits by training cycles, and a list of competences and learning outcomes formed

Training cycles	Competency Codes	Codes of learning outcomes	List of disciplines	ECTS credits
1	2	3	4	5
1.1. General training cycle (generates general competencies)	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-10, SC-3, SC-7, SC-10, SC-13, SC-14, SC-17	OSF-3, OSF-5, OSF-7, OSF-8, OSF-14, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-6, OVMF-9, OVMF-10, OVMF-11	1.1.1 Management in production	4,0
			1.1.2 Physical education (outside credit)	
	GC-1, GC-2, GC-3, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-13, SC-14, SC-17	OSF-11, OVMF-2, OVMF-3, OVMF-7, OVMF-10, OVMF-11	1.1.3 Foreign language for professional purposes	4,0
	GC-3, GC-4, GC-5, GC-8, GC-10, GC-11, GC-13, GC-14, GC-15, SC-2, SC-4, SC-6, SC-7, SC-10, SC-11, SC-14, SC-17	OSF-1, OSF-3, OSF-4, OSF-6, OSF-7, OSF-9, OSF-10, OSF-12, OSF-15, OVMF-4, OVMF-5, OVMF-6, OVMF-7, OVMF-9, OVMF-10, OVMF-11, OPF-4	1.1.4 Occupational safety in industries	2,0
	GC-3, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-11, GC-12, GC-13, GC-14, SC-5, SC-7, SC-10, SC-14, SC-17	OSF-9, OSF-10, OSF-15, OVMF-2, OVMF-8, OVMF-10, OVMF-11, OPF-4	1.1.5 Civil protection	1,5

	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-12, GC-13, GC-15, SC-1, SC-2, SC-8, SC-10, SC-11, SC-12, SC-14, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-7, OSF-11, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-5, OVMF-6	1.1.6 Psychology and teaching methods in higher education	2,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-13, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-9, SC-10, SC-11, SC-12, SC-14, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-5, OSF-6, OSF-7, OSF-8, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-5, OVMF-6, OVMF-7, OVMF-9, OVMF-10, OVMF-11	1.1.7 Intellectual Property	2,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-11, GC-12, GC-13, GC-15, SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, SC-9, SC-10, SC-11, SC-12, SC-14, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-5, OSF-6, OSF-7, OSF-8, OSF-9, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-5, OVMF-6, OVMF-7, OVMF-9, OVMF-10, OVMF-11, OPF-1, OPF-2, OPF-3, OPF-4	1.1.8. Methodology and organization of scientific research	4,0
			Total 1.1	**19,5**
1.2 The cycle of vocational training (forms special (professional) competences)	GC-1, GC-3, GC-4, GC-5, GC-6, GC-8, GC-11, GC-14, GC-15, SC-1, SC-2, SC-6, SC-9, SC-10, SC-14, SC-15, SC-16, SC-17	OSF-1, OSF-3, OSF-4, OSF-6, OSF-7, OSF-9, OSF-10, OSF-12, OSF-13, OSF-14, OSF-16, OVMF-2, OVMF-3, OVMF-6, OVMF-7, OVMF-9, OVMF-10, OVMF-11, OPF-3, OPF-4	1.2.1 Automated process control systems in the industry	4,0
	GC-1, GC-3, GC-5, GC-6, GC-11,	OSF-2, OSF-3, OSF-7, OSF-9,	1.2.2 Designing of	5,0

	GC-14, GC-15, SC-2, SC-10, SC-14, SC-15, SC-17	OSF-10, OSF-12, OSF-13, OVMF-2, OVMF-3, OVMF-5, OVMF-6, OVMF-7	plants for the extraction and processing of vegetable fats	
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-9, SC-10, SC-11, SC-12, SC-14, SC-15, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-5, OSF-6, OSF-7, OSF-8, OSF-9, OSF-13, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-5, OVMF-6, OVMF-7, OVMF-8, OVMF-9, OVMF-10, OVMF-11, OPF-1, OPF-2, OPF-3, OPF-4	1.2.3 Scientific research on the topic of master's work	5,0
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-9, GC-11, GC-13, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, SC-9, SC-10, SC-11, SC-12, SC-13, SC-14, SC-15, SC-16, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-5, OSF-6, OSF-7, OSF-8, OSF-9, OSF-10, OSF-12, OSF-13, OSF-14, OSF-15, OSF-16, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-5, OVMF-6, OVMF-7, OVMF-8, OVMF-9, OVMF-10, OVMF-11, OPF-1, OPF-2, OPF-3, OPF-4	1.2.4 Preparation of master's qualification work and state certification	28,0
	GC-1, GC-3, GC-5, GC-6, GC-11, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-9, SC-10, SC-11, SC-14, SC-15, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-7, OSF-13, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-5, OVMF-6, OVMF-7, OVMF-10, OVMF-11	2.1.1 Functional fat technology	3,0
	GC-1, GC-3, GC-5, GC-6, GC-11, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-9, SC-10, SC-11, SC-14, SC-15, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-7, OSF-13, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-5, OVMF-6, OVMF-7, OVMF-10, OVMF-11	2.1 2 Technology of food surfactants	4,0
	GC-1, GC-3, GC-5, GC-6, GC-7, GC-9, GC-10, GC-11, GC-13, GC-	OSF-1, OSF-2, OSF-3, OSF-4, OSF-7, OSF-8, OSF-13, OSF-15,	2.1.3 Innovative technologies of fats	6,0

	14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-9, SC-10, SC-11, SC-14, SC-15, SC-17	OVMF-1, OVMF-2, OVMF-3, OVMF-5, OVMF-6, OVMF-7, OVMF-10, OVMF-11		
	GC-1, GC-3, GC-5, GC-6, GC-11, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-9, SC-10, SC-11, SC-14, SC-15, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-7, OSF-13, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-5, OVMF-6, OVMF-7, OVMF-10, OVMF-11	2.1.4 Technology of natural essential oils and synthetic fragrant compounds	5,0
			2.1.5. One of the modules:	10,5
			Module 1	
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-11, GC-12, GC-13, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, SC-9, SC-10, SC-11, SC-12, SC-14, SC-15, SC-16, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-5, OSF-6, OSF-7, OSF-8, OSF-9, OSF-13, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-6, OVMF-7, OVMF-8, OVMF-10, OVMF-11, OPF-1, OPF-2, OPF-3, OPF-4	Research practice	
	GC-1, GC-2, GC-3, GC-6, GC-7, GC-8, GC-10, GC-11, GC-12, GC-13, SC-3, SC-8, SC-10, SC-12, SC-14, SC-17	OSF-3, OSF-7, OSF-11, OVMF-1, OVMF-2, OVMF-3, OVMF-5, OVMF-6, OVMF-7, OVMF-9, OVMF-10, OVMF-11, OPF-4	Assistant practice	

			Module 2	
	GC-1, GC-2, GC-3, GC-4, GC-5, GC-6, GC-7, GC-8, GC-9, GC-10, GC-11, GC-12, GC-13, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, SC-9, SC-10, SC-11,	OSF-1, OSF-2, OSF-3, OSF-4, OSF-5, OSF-6, OSF-7, OSF-8, OSF-9, OSF-13, OSF-15, OVMF-1, OVMF-2, OVMF-3, OVMF-4, OVMF-6, OVMF-7,	Scientific and research practice	
	SC-12, SC-14, SC-15, SC-16, SC-17	OVMF-8, OVMF-10, OVMF-11, OPF-1, OPF-2, OPF-3, OPF-4		
	GC-1, GC-3, GC-5, GC-6, GC-8, GC-9, GC-10, GC-11, GC-13, GC-14, GC-15, SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-9, SC-10, SC-11, SC-12, SC-13, SC-14, SC-15, SC-16, SC-17	OSF-1, OSF-2, OSF-3, OSF-4, OSF-6, OSF-7, OSF-8, OSF-9, OSF-10, OSF-12, OSF-13, OSF-15, OSF-16 OVMF-1, OVMF-2, OVMF-3, OVMF-5, OVMF-6, OVMF-7, OVMF-8, OVMF-9, OVMF-10, OVMF-11, OPF-1, OPF-2, OPF-3, OPF-4	Undergraduate manufacturing practice	
			Total 1.2	**70,5**
			TOTAL	**90,0**

Table 4. Matrix of correspondence of program competences to educational components

Code of discipline according to the curriculum	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8	1.2.1	1.2.2	1.2.3	1.2.4	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5 Module 1		2.1.5 Module 2	
																	Scientific and research practice	Assistant practice	Scientific and research practice	Undergraduate manufacturing practice
IHT	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-1	+		+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-2	+		+				+	+			+	+					+	+	+	
GC-3	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-4	+			+		+	+	+	+		+	+					+		+	
GC-5	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+	+
GC-6	+		+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC-7	+		+		+	+	+	+			+				+		+	+	+	
GC-8			+	+	+	+	+	+	+								+	+	+	+
GC-9			+		+	+	+	+			+	+			+		+		+	+
GC-10	+		+	+	+	+	+	+			+						+	+	+	+
GC-11				+	+			+	+	+	+	+	+	+	+	+	+	+	+	+
GC-12					+	+		+							+		+	+	+	

GC-13			+	+	+	+	+	+			+	+			+		+	+	+	+
GC-14				+	+		+		+	+	+	+	+	+	+	+	+		+	+
GC-15				+		+	+	+	+	+	+	+	+	+	+	+	+		+	+
SC-1						+	+	+	+		+	+	+	+	+	+	+		+	+
SC-2				+		+	+	+	+	+	+	+	+	+	+	+	+		+	+
SC-3	+						+	+			+	+	+	+	+	+	+	+	+	+
SC-4				+			+	+			+	+	+	+	+	+	+		+	+
SC-5					+		+	+			+	+					+		+	+
SC-6				+			+	+	+		+	+					+		+	+
SC-7	+			+	+			+				+					+		+	
SC-8			+			+												+		
SC-9							+	+	+		+	+	+	+	+	+	+		+	+
SC-10	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SC-11			+	+		+	+	+			+	+	+	+	+	+	+		+	+
SC-12			+			+	+	+			+	+					+	+	+	+
SC-13	+											+								+
SC-14	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SC-15									+	+	+	+	+	+	+	+	+		+	+
SC-16									+			+					+		+	+
SC-17	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Table 5. Software matrix for software learning outcomes with relevant components educational and professional program

Code of discipline according to the curriculum	1.1.1	1.1.2	1.1.3	1.1.4	1.1.5	1.1.6	1.1.7	1.1.8	1.2.1	1.2.2	1.2.3	1.2.4	2.1.1	2.1.2	2.1.3	2.1.4	2.1.5 Module 1		2.1.5 Module 2	
																	Scientific and research practice	Assistant practice	Scientific and research practice	Undergraduate manufacturing practice
OSF-1.				+		+	+	+	+		+	+	+	+	+	+	+		+	+
OSF-2.						+	+	+		+	+	+	+	+	+	+	+		+	+
OSF-3.	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
OSF-4.				+		+	+	+	+		+	+	+	+	+	+	+		+	+
OSF-5.	+						+	+			+	+					+		+	
OSF-6.				+			+	+	+		+	+					+		+	+
OSF-7.	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
OSF-8.	+						+	+			+	+			+		+		+	+
OSF-9.				+	+			+	+	+	+	+					+		+	+
OSF-10.				+	+				+	+		+								+
OSF-11.			+			+												+		
OSF-12.				+					+	+		+								+
OSF-13									+	+	+	+	+	+	+	+	+		+	+
OSF-14	+								+			+								
OSF-15.				+	+		+	+			+	+	+	+	+	+	+		+	+
OSF-16.									+			+								+
OVMF-1.	+					+	+	+			+	+	+	+	+	+	+	+	+	+

OVMF-2.	+		+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
OVMF-3.	+		+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
OVMF-4.	+			+		+	+	+			+	+					+		+	
OVMF-5.				+		+	+	+		+	+	+	+	+	+	+		+		+
OVMF-6.	+			+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
OVMF-7.			+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+
OVMF-8					+						+	+					+		+	+
OVMF-9	+			+			+	+	+		+	+						+		+
OVMF-10	+		+	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+
OVMF-11	+		+	+	+		+	+	+		+	+	+	+	+	+	+	+	+	+
OPF-1.								+			+	+					+		+	+
OPF-2.								+			+	+					+		+	+
OPF-3.								+	+		+	+					+		+	+
OPF-4.				+	+			+	+		+	+					+	+	+	+

III – FORMS OF CERTIFICATES FOR HIGHER EDUCATION

Forms of attestation of applicants for higher education	The mandatory form of state certification is the implementation and protection of qualification (diploma) works (projects). The system of competencies and learning outcomes specified in Chapters IV and V. are subject to state certification. The main means of objective control of the degree of achievement of the final goals of education and professional training of masters is the technology of implementation and protection of qualification (diploma) works (projects), which is defined in the following documents: Regulations on EC, Guidelines for the implementation of qualification (diploma) projects (works).
Requirements for final qualification work (in the presence)	Requirements for the final qualification work are set out in the Guidelines for the implementation of qualification (diploma) projects (works). The final qualification work is accompanied by the review of the scientific supervisor and the reviewer's review, which are responsible for checking the completeness of the tasks, the quality of the work as a whole and its testing for plagiarism.
Certification / Uniform Qualification Exam Requirements (exams) (in the presence)	
Requirements for public protection (demonstration) (in the presence)	Requirements for public protection are formulated in the Regulations on EC and guidelines for the implementation of qualification (diploma) projects (works).

IV - Requirements for having an internal quality assurance system for higher education

Determined in accordance with European Standards and Recommendations on Quality Assurance in Higher Education (ESG) and Article 16 of the Law of Ukraine "On Higher Education"

Components of the internal quality assurance system of higher education	Definitions, references and related documents
Principles and procedures for quality assurance in education	- Law of Ukraine "On Higher Education" of 01.07.2014, № 1556-VII; - Provisional Regulation on the Organization of the Educational Process at the State Educational Institution of the State Pedagogical University (Order of the Rector of the State Pedagogical University of the State Pedagogical University of Ukraine № 290 of 30.11.2015); - Regulations on diploma with honors of SHEI USUCT (Order of the rector of SHEI USUCT from 25.02.2016, No. 55); - Regulations on the procedure for setting up and organizing the work of the examination commission at the State Educational Institution of the State Pedagogical University (Order of the Rector No. 68 of 01.04.2015, No. 68); - Regulations on the development of approval and revision of work programs of educational disciplines (Order of the Rector of the State Pedagogical University of the State Pedagogical University of Ukraine dated 29.12.15 № 291)
Monitoring and periodic review of educational programs	Annual monitoring of requirements of industry and labor market, review of educational programs, work curricula, work programs of educational disciplines. On approval of the composition of the project teams for the development of educational programs (Order of the Rector of the State Pedagogical University of the State Pedagogical University of Ukraine, No. 74, dated March 10, 2016)

Annual evaluation of higher education applicants	Regulations on the organization of the rectorial control of the quality of training (Order of the Rector of March 17, 2014 # 8)
Annual evaluation of scientific-pedagogical and pedagogical staff of higher education institution	Regulations on the commission of the rectories control of pedagogical skills of scientific and pedagogical workers of the University (Order of the Rector of the State Pedagogical University of the State Pedagogical University of 04.04.2016, No. 85) with changes to the Order No. 147 of 09.06.2011), Procedure of application of the rating system of evaluation of the departments and faculties of the State Pedagogical University of the State Pedagogical University (Order of the Rector of June 20, 2010 No. 209). Regular publication of the results of such assessments on the official website of the institution of higher education, on information stands and in any other way
Improvement of qualification of scientific-pedagogical, pedagogical and scientific workers	Improvement of the qualification of scientific and pedagogical workers is carried out in accordance with the provision approved by the order of the Ministry of Education and Science of January 24, 2013 No. 48 and the Regulations on professional development and training of pedagogical and scientific and pedagogical workers of the State Pedagogical University of the State Pedagogical University of 05.05.2016.)
Availability of necessary resources to organize the educational process	Educational and methodological, logistical and personnel support of the license conditions (Resolution of the CM dated December 30, 2015 No. 1187) of educational activity. License Series AE No. 636496. Certificates in the areas of training and specialties.
Availability of information systems for effective management of the educational process	The Temporary Provision on the Organization of the Educational Process in the State Educational Institution of the State University of Education and Science (Order of the Rector of the State Educational Institution of the State University of Culture of Ukraine as of November 30, 2015, No. 290) is supported by the Information-analytical system of control of the educational process, which consists of subsystems: Applicant, Educational process.

Publicity of information on educational programs, degrees of higher education and qualification	Information about educational programs, degrees of higher education and qualification is public and fully posted on the official web-portal of the University http://udhtu.com.ua
Preventing and detecting academic plagiarism	Verification of completeness of tasks, quality of work as a whole and its check for plagiarism is carried out by the teacher – the leader of course or diploma work (project) in the established order using the appropriate software.

I. PROFILE OF THE MASTER'S EDUCATION PROFESSIONAL PROGRAM majoring in Food Technology

Program Profile (General Information)	
Full name of the qualification in the original language	Higher Education Degree – Master, Specialty – Food Technology
The official name of the educational program	Master's Degree Program in Food Technology Master's Degree in 181 Food Technology
Type of diploma and scope of educational program	Master's Degree in Food Technology, single (double, joint with relevant contracts, training programs); 90 ECTS credits
Full name of higher education institution awarding the qualification	State Higher Educational Institution "Ukrainian State University of Chemical Technology"
Accrediting organization	Accreditation Commission of Ukraine (State Educational and Training Center for Educational Quality). SETCEQ.
Accreditation period	Certificate validity after initial accreditation - 5 years, after repeated – 10 years.
Cycle / level	NQF of Ukraine - Level 7, FQ-EHEA – Second Cycle, EQF-LLL – Level 7
Prerequisites	The first (bachelor) level
Language (s) of teaching	Ukrainian language
A	**The purpose of the educational program**
The purpose of the educational program	Provide students with knowledge, skills and understanding in the field of food technology that will enable them to perform original scientific research or work independently in the industry.
B	**Characteristics of the educational program**
Subject area (field of knowledge, specialty)	Knowledge Area *18 - Manufacturing and Technology:* specialty *181 - Food technology* specialization - *Technology of fats and fat substitutes*
The main focus of the program and specialization	General higher education in the field of food technology.
Orientation of the program	The research set is scientifically oriented, the teaching and application set are practically oriented.
Features and differences	The program is scientifically or practically oriented, which determines the type of practice (module 1 or module 2 in the cycle of vocational training is selected).

C	**Ability to find employment and further education**
Employment ability	Jobs in high-tech food companies, oil and fat extraction and processing enterprises and related industries; teachers of educational establishments of different levels of education, scientists in research organizations, scientific centers, laboratories.
Further training	Third-level education in doctoral programs in food technology.
D	**Teaching style and teaching methodology**
Approaches to teaching and learning	Combination of lectures and practicals, experimental research in laboratories, writing of course projects or works, self-study, preparation of qualification work.
Assessment methods	Written and oral examinations, tests, presentations, defense of master's qualification work.
E	**Software competencies**
Integrated Competence (INC)	Master's Degree (Level 7): The ability to solve complex problems and problems in a particular area of professional activity or in a learning process that involves research and / or innovation and is characterized by uncertain conditions and requirements
General Competencies (GC)	*GC-1.* Ability to think abstractly, analyze and synthesize. *GC-2.* Ability to speak a second language. *GC-3.* Use of information and communication technologies. *GC-4.* Ability to conduct research at the appropriate level. *GC-5.* Ability to learn and be modernly trained. *GC-6.* Ability to search process and analyze information from various sources. *GC-7.* The ability to be critical and self-critical. *GC-8.* The ability to adapt and act in a new situation. The ability to work as a team. *GC-10.* Interpersonal skills. *GC-11.* Commitment to security. *GC-12.* Ability to act on the basis of ethical considerations (motives). *GC-13.* Definition and perseverance about tasks and responsibilities. *GC-14.* The desire to preserve the environment. *GC-15.* Ability to apply basic knowledge of fundamental sciences to the extent necessary for the theoretical development of vocational-oriented disciplines and the solution of practical problems in food technology, incl. production and processing of oil and fat products.
Special	*SC-1.* Ability to possess methods of observing, describing,

(professional) competencies (SC)	identifying and classifying food technology objects and products. *SC-2.* Ability to use knowledge, skills and competences in the disciplines of the general cycle of preparation for the theoretical development of the disciplines of professional direction and solving practical problems in food technology, incl. production and processing of oil and fat products. *SC-3.* Basic ideas about the basic laws of development and modern achievements in food technology, understanding of the role of energy saving in modern technology. *SC-4.* Basic ideas about signs, parameters, characteristics, structure, properties of food systems. *SC-5.* Ability to apply basic physicochemical methods for research, analysis and evaluation of technological systems. *SC-6.* Ability to apply modern experimental methods of working with technological objects in industrial and laboratory conditions, skills of work with modern measuring equipment. *SC-7.* Ability to organize the work of the production unit in accordance with the requirements of life safety, labor protection and civil protection. *SC-8.* Ability to organize and conduct training sessions in vocationally oriented disciplines. *SC-9.* Ability to use mathematical apparatus for the development of theoretical foundations and practical use of methods of physical and chemical research for the development of new types of food and technical products based on oil and fat raw materials. *SC-10.* The skills to work with the most common computer software packages and use them to solve professional work challenges. *SC-11.* Ability to use professionally profiled knowledge and practical skills in vocational training disciplines to analyze the relationship between chemical composition and the properties of food and technical products. *SC-12.* Competence in planning, designing and executing research work, from the stage of problem recognition to the evaluation of results and formulation of conclusions; this includes the ability to select appropriate methods and procedures. *SC-13.* Ability to use professionally profiled knowledge and practical skills in the fundamentals of management and food technology to create, organize and effectively manage production units. *SC-14.* Information retrieval skills for primary and secondary sources of information, including on information retrieval systems through online search. *SC-15.* Ability to use professionally profiled knowledge, skills and competences in the cycle of vocational training disciplines to

	analyze, evaluate and design technological processes and equipment. *SC-16.* Ability to use automated process control systems in the industry. *SC-17.* The skills of presenting scientific materials and arguments in writing and orally to a competent audience.
F	**Program learning outcomes**
Learning outcomes in the cognitive (cognitive) field	*OCF-1.* Apply methods of observation, description, identification and classification of food technology objects and products. *OCF-2.* To apply a systematic approach, integrating knowledge from other disciplines and taking into account non-technical aspects, while solving the theoretical and applied problems of food technology, including production and processing of oil and fat products. *OCF-3.* To evaluate the state of the art of modern food production technologies and their development trends. *OCF-4.* To analyze the processes and phenomena observed in food technology. *OCF-5*. Make sound choices about the object and methods of the research, formulate the purpose and objectives of the research, and determine ways to solve them. *OCF-6.* Investigate the physicochemical properties of the object of study, as well as the influence of technological parameters on the course of the process and the composition of the final product, using advanced methods of experimental research and modern measuring equipment. *OCF-7.* Apply modern information and communication technologies for search, calculation, creation of graphic and text documents, for mathematical analysis and statistical processing in experimental research and design. *OCF-8.* Make general conclusions about the research results of the properties of the object of study or design. *OCF-9.* Explain the causes of the risks associated with the use of chemicals and laboratory procedures. *OCF-10.* To develop safety measures at the production with their further implementation. *OCF-11*. Organize training sessions, as well as check the results of student learning. *OCF-12.* To draw design drawings of structural elements, sections or food production shops, incl. extraction and processing of vegetable and animal fats, their modifications. *OCF-13.* To develop technological and equipment schemes of production of products on the basis of oil and fat raw materials of food and technical purpose, to choose the appropriate technological equipment.

	OCF-14. Organize systematic management of production units. *OCF-15.* Find engineering solutions for low-waste resource-saving technologies. *OCF-16.* Develop schematic diagrams of control and automatic control of basic parameters of technological process.
Outcomes of training in the value-motivational field	*OVMF-1.* Meet the requirements of professional ethics in the workplace. *OVMF-2.* Desire to work independently. *OVMF-3.* Ask questions in discussions with colleagues, teachers. *OVMF-4.* Organize research at the appropriate level. *OVMF-5.* Apply knowledge of fundamental sciences to develop professional disciplines. *OVMF-6.* Participate in the discussion of the results of various types of work (pilot, search, project, etc.). *OVMF-7.* Demonstrate acquired professional skills in creating scientific and project documentation. *OVMF-8.* Organize conservation activities. *OVMF-9.* Collaborate with colleagues in related fields to achieve research or project objectives. *OVMF-10.* To present the results of different types of work (pilot, search, project, etc.) in your native and one of the main European languages. *OVMF-11.* Understand scientific and technical texts in your native and one of the major European languages.
Learning outcomes in the psychomotor field	*OPF-1.* Work out the experiment technique. *OPF-2.* Repeatly reproduce the results of the experiments to obtain reliable values and calculate the error of the experiment. *OPF-3.* Combine different research methods to determine the values of the parameters under study. *OPF-4.* Comply with workplace safety.

II. DEFINITIONS OF EDUCATIONAL DISCIPLINES / MODULES, ensuring the achievement of the planned learning outcomes and forms of certification of higher education applicants in accordance with the higher education standard

Table 1. Distribution of the content of educational and professional program by cycles of preparation and form of final control

N	Subjects	Credits	Hours	Semester	Tetramester	Final control
1. COMPULSORY DISCIPLINES						
1.1 General training cycle (generates competencies)						
1.1.1	Management in production	*4*	120	1	1	exam
1.1.2	Physical education (non-credit discipline)					
1.1.3	Foreign language for professional purposes	*4*	120	2	3, 4	dif. test
1.1.4	Occupational Health in branch	*2*	60	1	1	exam
1.1.5	Civil Protection	*1,5*	45	1	2	test
1.1.6	Psychology and teaching methods in higher education	*2*	60	2	3	test
1.1.7	Intellectual Property	*2*	60	2	4	test
1.1.8	Methodology and organization of scientific research	*4*	120	1, 2	2, 3, 4	dif. test
	TOGETHER ON CYCLE 1.1	***19,5***	***585***			
1.2 Training cycle (forms special (professional) competences)						
1.2.1	Automated process control systems for the industry	*4*	120	1	1, 2	dif. test
1.2.2	Designing of enterprises for extraction and processing of vegetable fats	*5*	150	1	1, 2	exam
1.2.3	Scientific research on the topic of master's work	*5*	150	2	3, 4	test
1.2.4	Preparation of master's qualification work and state certification	*19,5*	585	3	5, 6	SC
	TOGETHER ON CYCLE 1.2	***33,5***	***1005***			

	COMPULSORY TUTORIALS TOGETHER	***53,0***	***1590***			
2. SELECTIVE DISCIPLINES						
2.1. Training cycle (forms special (professional) competences)						
2.1.1	Functional fat technology	*3*	90	1, 2	2, 3	test
2.1.2	Technology of food surfactants	*4*	120	2	3, 4	exam
2.1.3	Innovative technologies of fats	*6*	180	1, 2	1, 2, 3, 4	test
2.1.4	Technology of natural essential oils and synthetic fragrant compounds	*5*	150	1	1, 2	exam
2.1.5	One of the modules:	*10,5*	315			
	Module 1					
	Research practice	*6*	180	3	5	dif. test
	Assistant practice	*4,5*	135	3	5	dif. test
	Module 2					
	Research practice	*6*	180	3	5	dif. test
	Undergraduate manufacturing practice	*4,5*	135	3	5	dif. test
1.2.4	Preparation of master's qualification work and state certification	*8,5*	255	2	3, 4	SC
	TOGETHER ON CYCLE 2.2	***37,0***	***855***			
	SAMPLE PART TOGETHER	***37,0***	***855***			
	THE TOTAL AMOUN	***90,0***	***2700***			

Table 2. Generalized content distribution of educational and professional program by component groups (disciplines) and training cycles

N	Preparation cycle	Higher education student load (credits / %)		
		Compulsory components of a professional education program	Selective components of a professional education program	Total for the whole term of study
1.	General training cycle (generates competencies)	19,5 / 21,7	-	19,5 / 21,7
2.	Training cycle (forms special (professional) competences)	33,5 / 37,2	37,0 / 41,1	70,5 / 78,3
Total for the whole term of study		53,0 / 58,9	37,5 / 41,1	90 / 100