

**MINISTRY OF INDUSTRY AND TRADE
HO CHI MINH CITY UNIVERSITY OF INDUSTRY AND TRADE**



**ACADEMIC PROGRAM
FOOD TECHNOLOGY**

Program Name (Vietnamese): **CÔNG NGHỆ THỰC PHẨM**

Program Name (English): Food Technology

Level of Education: Master's Degree

Major Code: 8540101

Mode of Study: Full-time

Administering Faculty: Food Technology

HO CHI MINH CITY, NĂM 2024

ACADEMIC PROGRAM

(Issued under Decision No:2554 /QĐ-DCT dated 19/08/2024 by the Rector of Ho Chi Minh City University of Industry and Trade)

Program Name (Vietnamese): CÔNG NGHỆ THỰC PHẨM

Program Name (English): Food Technology

Level of Education: Master's Degree

Major: Food Technology

Major Code: 8540101

Discipline: Manufacturing and Processing

Mode of Study: Full-time

Program Accreditation:

The Master's Program in Food Technology has been accredited as meeting the educational quality standards issued by the Ministry of Education and Training (MOET) since 2020.

1. Educational Objectives

1.1. Educational Objectives (Research-Oriented Programme)

1.1.1. General Objectives

To educate graduates with a Master's degree in Food Technology who possess political qualities, scientific research knowledge and skills, and practical competencies to meet the demands of societal development in the process of industrialization and modernization, thereby making positive contributions to national development and protection.

1.1.2. Specific Objectives

The Master's Program in Food Technology is designed to achieve the following specific objectives:

a. Knowledge

- Integrate the principles of fundamental theories, advanced theories, and modern technologies to support innovative applications and technological improvements in the field of Food Technology.

- Master research methodologies, experimental design, and research data analysis to support scientific research.
- Master knowledge of management, quality assurance, food safety and hygiene, and food defense, and apply such knowledge in research activities.

b. Skills

- Demonstrate proficiency in organizing work, applying research methodologies, and utilizing modern technologies.
- Demonstrate proficiency in data analysis and information synthesis to support scientific research in the field of Food Technology.
- Demonstrate proficiency in communicating knowledge based on research, participating in academic discussions, and critically evaluating professional and scientific issues in the field of Food Technology.
- Achieve English language proficiency equivalent to Level 4 of the Vietnamese Six-level Foreign Language Proficiency Framework, with proficiency in reading specialized literature and writing research reports in English.
- Demonstrate independence and autonomy in conducting scientific research projects in the field of Food Technology, with creativity and the ability to develop significant innovations.
- Comply with professional ethical standards, maintain discipline, demonstrate integrity, and take responsibility for professional duties.
- Demonstrate the ability to formulate expert conclusions and defend personal viewpoints.
- Demonstrate proficiency in coordinating resources to achieve objectives and improve professional activities.

1.2. Educational Objectives (Application-oriented programme)

1.2.1. General Objectives

To educate Master's graduates in Food Technology with political integrity, advanced knowledge, scientific research competence, and practical skills to meet the needs of societal development in the process of industrialization and modernization, thereby contributing to national development and national defense.

1.2.2. Specific Objectives

The Master's Program in Food Technology is designed to achieve the following specific objectives:

a. Knowledge

- Integrate the principles of fundamental theories, advanced theories, and modern technologies to support innovative applications, technological improvements in the field of Food Technology, and the development of food products for domestic and export markets.

- Master research methodologies, experimental design, and research data analysis to support scientific research and projects in the field of Food Technology.
- Master knowledge of management, quality assurance, food safety and hygiene, and food defense, and apply such knowledge in research activities and business operations.

b. Skills

- Demonstrate proficiency in data analysis and information synthesis to support the improvement of production practices.
- Demonstrate proficiency in communicating knowledge based on research, participating in academic discussions, and critically evaluating professional and scientific issues in the field of Food Technology and/or Food Quality Assurance and Food Safety.
- Achieve English language proficiency equivalent to Level 4 of the Vietnamese Six-level Foreign Language Proficiency Framework, with proficiency in reading specialized literature and writing research reports in English.
- Demonstrate independence and autonomy in conducting scientific research projects in the field of Food Technology, with creativity and the ability to develop significant innovations.
- Comply with professional ethical standards, maintain discipline, demonstrate integrity, and take responsibility for professional responsibilities.
- Demonstrate the ability to formulate expert conclusions and defend personal viewpoints.
- Demonstrate proficiency in coordinating resources to achieve objectives and improve professional activities.

2. Program Learning Outcomes - PLOs

Upon completion of the program, learners will possess the following knowledge, skills, and professional competencies:

2.1. Program learning outcomes (Research-Oriented Programme)

Symbols	Program Learning Outcomes	Master's Proficiency levels
a	Knowledge	
PLO1	Relate professional knowledge	C4
PLO1.1	Identify knowledge of statistics, informatics in experimental design, data analysis	C4
PLO 1.2	Apply management knowledge of plant's activities and and/or project	C3

PLO 1.3	Categorize knowledge of system management for food enterprises	C4
PLO2	Synthesize practical knowledge and deep, extensive, innovative theory knowledge, understanding basic principles and theories in major's research fields	C5
PLO2.1	Summarize systematically basic principles and theories of science, food technology (biochemistry, physical chemistry, sensory evaluation, food's changes during processing,...)	C5
PLO2.2	Summarize current, innovative knowledge of technology and equipments in food processing	C5
PLO2.3	Analyzing practical knowledge of food technology and quality assurance, food safety in food chain	C4
b	Skills	
PLO3	Perform skills of problem definition, experimental design, and data analysis in research, propose solutions scientifically	P4
PLO3.1	Perform skills of experimental design, survey, analyze data to find practical problems in food chain	P4
PLO3.2	Combine skills of systems thinking and food major skills to solve practical problems in food chain	P4
PLO 4	Perform skills of searching, systematizing, and evaluating scientific information and evidence (theoretical overview)	P4
PLO 5	Internalize the values of research integrity, respect for intellectual property, and research ethics.	A5
PLO 6	Perform skills of presentation, knowledge impartation, discussion of scientific matters, research results in expertise field for diverse audiences	P4
PLO6.1	Perform skill of knowledge impartation in writing (writing reports of research projects, seminars, graduation thesis,...)	P4
PLO6.2	Perform skills of discussion, review major's matters and science in food technology and/or quality assurance, food safety	P4
PLO6.3	Demonstrate English proficiency in reading major documents and get proficiency equivalent to Level 4/6 of the Vietnam Foreign Language Competency Framework	P3
PLO 7	Integrate critical thinking, the creative use of technology, and scientific research to generate new	R4

	knowledge and develop innovative solutions to research problems and questions.	
PLO7.1	Integrate skills of adaptability, analysis of social context and new trends to orientate application of new technology and quality management in plants	R4
PLO7.2	Integrate skills of deployment, application of professional knowledge in improvement of current product properties	R4
PLO7.3	Integrate skills of deployment, application of professional knowledge in development, improvement of production process or quality management process as requirement	R4
PLO 8	Perform research management and coordination activities proficiently.	P3
PLO8.1	Perform skill of teamwork and team management, orientate, organize work, handle differences to achieve goal	P3
PLO8.2	Perform resource coordination and management to fulfill requirements and goals in activities of improvement, application or project in food chain	P3
PLO8.3	Perform application of evaluation and improvement tools of general management and new project management, improvement project in plant	P3

Note: Proficiency Levels (PL) in this table are measured according to the following scales: **Knowledge** (Bloom's Taxonomy - Cognitive domain); **Behavioral Skills** (Bloom's Taxonomy - Psychomotor domain); **Affective Skills & Attitudes** (Bloom's Taxonomy - Affective domain); and **Proficiency Rating Scale** (Crawley scale).

2.2. Matrix of Courses and Program Learning Outcomes (PLOs) for the Specialized Program (Research-Oriented Programme)

No.	Course Code	Internal Code	Course Title	Knowledge Block	Credits	Course Type	Semester	Program Learning Outcomes (PLO)														
								1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	4	5	6.1	6.2	6.3	7	8
COMPULSORY COURSES					19	Compulsory																
1	0311100408	11100012	Philosophy of Marxism and Leninism		3	Compulsory	1				C3					P3			P3			
2	0311102399	05100564	Scientific research method	Specialized Knowledge	2	Compulsory	1	C3			C3			P3		P3		P3				
3	0311101401	05100509	Advanced technologies in food processing	Specialized Knowledge	2	Compulsory	2					C4				P4						
4	0311100584	05100511	Advaced technologies in food analysis	Specialized Knowledge	2	Compulsory	1					C4						P3				
5	0311100585	05101512	Advaced technologies in food analysis laboratory practices	Specialized Knowledge	1	Compulsory	2							P4			A4					P3
6	0311100586	05100513	Enzyme and protein technology	Specialized Knowledge	2	Compulsory	1				C4	C4										
7	0311100587	05101514	Enzyme and protein technology laboratory practices	Specialized Knowledge	1	Compulsory	2							P4			A4					P3
8	0311102972	05100567	Modeling and optimization in food technology	Specialized Knowledge	2	Compulsory	2	C4						P4								
9	0311100589	05100518	Food marketing and consumer behavior	Specialized Knowledge	2	Compulsory	1	C3							P3							
10	0311101402	05100562	Management for Food Factory	Specialized Knowledge	2	Compulsory	2			C4												P3
ELECTIVE COURSES (Select at least five (05) courses from Group A and at least two (02) courses from Group B)					14	Elective																
Group A: Select at least 05 courses					10	Elective	1															
11	0311102400	05100565	Modern fermentation technology	Specialized Knowledge	2	Elective	1				C4	C5										
12	0311102971	05101566	Laboratory of modern fermentation technology	Specialized Knowledge	1	Elective	2							P4								P3
13	0311100588	05100515	Isolation and appliction of bioactive compounds	Specialized Knowledge	2	Elective	1					C4							P4			
14	0311100596	05100539	Microencapsulation and nano-technology in food technology	Specialized Knowledge	2	Elective	1				C4	C5			P3					P3		
15	0311101408	05100138	Food supply chain management and traceability	Specialized Knowledge	2	Elective	1			C4					P3							P3
16	0311102403	05107568	Special subject-Industrial cleaning	Specialized Knowledge	1	Elective	1					C4	C4					P4	P4		R4	
17	0311102973	05107569	Special subject-food shelf-life	Specialized Knowledge	1	Elective	1				C4	C4						P4	P4		R4	

18	0311102974	05107570	Food technology's special subject	Specialized Knowledge	1	Elective	1					C4						P4	P4		R4	
19	0311100580	05100588	Project management	Specialized Knowledge	2	Elective	1			C3												P3
20	0311102401	02100030	Automation in food technology	Specialized Knowledge	2	Elective	1					C4			P3							
21	0311102402	05102571	Food quality assurance	Specialized Knowledge	2	Elective	1			C3			C4		P3							P3
22	0311102975	05100572	Quality and food safety control in food service	Specialized Knowledge	2	Elective	1		C3				C4								R4	
23	0311101404	05100553	Food defense and food fraud	Specialized Knowledge	2	Elective	1		C3				C4								R4	
24	0311102976	05100583	Water supplying and wastewater in aquatic processing	Specialized Knowledge	2	Elective	1					C3				P4						
25	0311102977	05100573	Modern techniques of seafood processing	Specialized Knowledge	2	Elective	1					C4				P4						
26	0311102978	05100574	Management and utilization of aquatic by-products	Specialized Knowledge	2	Elective	1		C3			C3										P3
Group B: Select at least 02 courses					4	Elective	2		Elective													
27	0311100579	05100547	Stucture and physical properties in food processing	Specialized Knowledge	2	Elective	2				C4										R2	P3
28	0311101406	05100543	Advanced thermal food processing	Specialized Knowledge	2	Elective	2					C5							P4		R2	
29	0311101403	05100508	Waste treatment in food industry	Specialized Knowledge	2	Elective	2			C3					P3							P3
30	0311100594	05100563	Research and analytical method for functional food	Specialized Knowledge	2	Elective	2					C4		P4								
31	0311103006	13200101	Corporate Management	Specialized Knowledge	2	Elective	2		C3							P3						P3
32	0311103007	13200008	Distribution Channel Management	Specialized Knowledge	2	Elective	2		C3							P3						P3
33	0311103008	13200017	Negotiation skills	Specialized Knowledge	2	Elective	2		C3		C3							P4				P3
34	0311102979	05100575	Implementing iso 17025:2017	Specialized Knowledge	2	Elective	2		C3			C4	C4									
35	0311101439	02100014	Efficient management and use of energy	Specialized Knowledge	2	Elective	2	C4							P3	P3					R3	
36	0311102980	05100576	Pre/probiotics and chemicals application in fisheries	Specialized Knowledge	2	Elective	2				C4					P4						
37	0311102981	05100577	Aquatic animal pathology	Specialized Knowledge	2	Elective	2					C4				P4						
38	0311101407	05101131	Computer Applications in Food Technology	Specialized Knowledge	2	Elective	2	C4						P4								
RESEARCH TOPIC, INTERSHIP					12	Compulsory																
39	0311103026	05107584	Research topic 1		3	Compulsory	2	C4	C3		C5	C5		P4	P4	P4	A4	P4	P4	P3	R4	P3
40	0311103027	05107585	Research topic 2		3	Compulsory	2	C4	C3		C5	C5		P4	P4	P4	A4	P4	P4	P3	R4	P3
41	0311103028	05107586	Research topic 3		3	Compulsory	3	C4	C3		C5	C5		P4	P4	P4	A4	P4	P4	P3	R4	P3
42	0311101414	05100557	Internship		3	Compulsory	3								P4		A5	P4				P3

GRADUATION THESIS					15	Compulsory																
43	0311103029	05106587	Graduation thesis		15	Compulsory	3	C4	C3		C5	C5		P4	P4	P4	A4	P4	P4	P3	R4	P3
			Total credits		60																	
			Courses aligned with program learning outcomes					9	11	4	14	20	6	11	12	14	7	11	10	5	12	18

Note: (*) indicates core courses, which belong to the group of compulsory courses (or major-specific electives) and must include Internship and Graduation Thesis/Project.

This matrix illustrates the contribution level of each course to the Program Learning Outcomes (PLOs) based on the following scales: **Knowledge** (Bloom's Taxonomy - Cognitive domain); **Behavioral Skills** (Bloom's Taxonomy - Psychomotor domain); **Affective Skills & Attitudes** (Bloom's Taxonomy - Affective domain); and **Proficiency Levels** (Crawley - Proficiency Rating scale)).

2.3. Program learning outcomes (Application-oriented programme)

Symbols	Program Learning Outcomes	Master's Proficiency levels
a	Knowledge	
PLO1	Relate professional knowledge	C4
PLO1.1	Identify knowledge of statistics, informatics in experimental design, data analysis	C4
PLO 1.2	Apply management knowledge of plant's activities and and/or project	C3
PLO 1.3	Categorize knowledge of system management for food enterprises	C4
PLO2	Synthesize practical knowledge and deep, extensive, innovative theory knowledge, understanding basic principles and theories in major's research fields	C5
PLO2.1	Summarize systematically basic principles and theories of science, food technology (biochemistry, physical chemistry, sensory evaluation, food's changes during processing,...)	C5
PLO2.2	Summarize current, innovative knowledge of technology and equipments in food processing	C5
PLO2.3	Analyzing practical knowledge of food technology and quality assurance, food safety in food chain	C4
b	Skills	
PLO3	Perform skills of problem definition, experimental design, and data analysis in research, propose solutions scientifically	P4
PLO3.1	Perform skills of experimental design, survey, analyze data to find practical problems in food chain	P4
PLO3.2	Combine skills of systems thinking and food major skills to solve practical problems in food chain	P4
PLO 4	Perform skills of searching, systematizing, and evaluating scientific information and evidence (theoretical overview)	P4
PLO 5	Demonstrate requirements of honesty, integrity, intellectual property's respectation, have sense of discipline and responsibility in work	A4

PLO 6	Perform skills of presentation, knowledge impartation, discussion of scientific matters, research results in expertise field for diverse audiences	P4
PLO6.1	Perform skill of knowledge impartation in writing (writing reports of research projects, seminars, graduation thesis,...)	P4
PLO6.2	Perform skills of discussion, review major's matters and science in food etchnology and/or quality assurance, food safety	P4
PLO6.3	Demonstrate English proficiency in reading major documents and get proficiency equivalent to Level 4/6 of the Vietnam Foreign Language Competency Framework	P3
PLO 7	Integrate systems thinking and doing practical research, utilize technology creatively in production and business to find solutions that meet enterprises and markets' requirements	R4
PLO7.1	Integrate skills of adaptibility, analysis of social context and new trends to orientate application of new technology and quality management in plants	R4
PLO7.2	Integrate skills of deployment, application of professional knowledge in improvement of current product properties	R4
PLO7.3	Integrate skills of deployment, application of professional knowledge in development, improvement of production process or quality management process as requirement	R4
PLO 8	Organize and manage project teams to implement assigned applied research tasks.	P4
PLO8.1	Organize skill of teamwork and team management, orientate, organize work, handl differences to achieve goal	P4
PLO8.2	Perform resource coordiation and management to fullfill requirements and goals in activities of improvement, application or projetc in food chain	P4
PLO8.3	Perform application of evaluation and improvement tools of general management and new project management, improvement projetc in plant	P4

Note: Proficiency Levels (PL) in this table are measured according to the following scales: **Knowledge** (Bloom's Taxonomy - Cognitive domain); **Behavioral Skills** (Bloom's Taxonomy - Psychomotor domain); **Affective Skills & Attitudes** (Bloom's Taxonomy - Affective domain); and **Proficiency Rating Scale** (Crawley scale).

2.4. Matrix of Courses and Program Learning Outcomes (PLOs) for the Specialized Program (Application-oriented programme)

No.	Course Code	Internal Code	Course Title	Knowledge Block	Credits	Course Type	Semester	Program Learning Outcomes (PLO)																											
								1.1	1.2	1.3	2.1	2.2	2.3	3.1	3.2	4	5	6.1	6.2	6.3	7.1	7.2	7.3	8.1	8.2	8.3									
COMPULSORY COURSES					32																														
1	0312100408	11100012	Philosophy of Marxism and Leninism		3	Compulsory	1				C3					P3		P3																	
2	0312102399	05100564	Scientific research method	Specialized Knowledge	2	Compulsory	1	C3			C3			P3		P3		P3																	
3	0312100584	05100511	Advanced technologies in food analysis	Specialized Knowledge	2	Compulsory	1					C4					P3																		
4	0312100585	05101512	Advanced technologies in food analysis laboratory practices	Specialized Knowledge	1	Compulsory	2							P4			A4							P4											
5	0312100586	05100513	Enzyme and protein technology	Specialized Knowledge	2	Compulsory	1				C4	C4																							
6	0312100587	05101514	Enzyme and protein technology laboratory practices	Specialized Knowledge	1	Compulsory	2							P4			A4							P4											
7	0312102400	05100565	Modern fermentation technology	Specialized Knowledge	2	Compulsory	1				C4	C5																							
8	0312102971	05101566	Laboratory of modern fermentation technology	Specialized Knowledge	1	Compulsory	2							P4										P3											
9	0312100588	05100515	Isolation and application of bioactive compounds	Specialized Knowledge	2	Compulsory	2					C4						P4																	
10	0312100589	05100518	Food marketing and consumer behavior	Specialized Knowledge	2	Compulsory	2	C3							P3																				
11	0312102972	05100567	Modeling and optimization in food technology	Specialized Knowledge	2	Compulsory	2	C4						P4																					
12	0310101408	05100138	Food supply chain management and traceability	Specialized Knowledge	2	Compulsory	2			C4					P3											P4									
13	0310101402	05100562	Management for Food Factory	Specialized Knowledge	2	Compulsory	2			C4															P4	P4									
14	0312100580	05100588	Project management	Specialized Knowledge	2	Compulsory	1			C3															P4										
15	0312102403	05107568	Special subject-Industrial cleaning	Specialized Knowledge	1	Compulsory	1					C4	C4				P4	P4		R4															

16	0312102973	05107569	Special subject- food shelf-life	Specialized Knowledge	1	Compul sory	2				C4	C4					P4	P4		R4					
17	0312102974	05107570	Food technology's special subject	Specialized Knowledge	1	Compul sory	3					C4					P4	P4		R4					
18	0312101405	05103554	Food processing project	Specialized Knowledge	3	Compul sory	3	C4			C5	C4		P4	P4	P4	A4	P4	P4	P3		R3			P4
ELECTIVE COURSES (Select at least three (03) courses from Group A and at least three (03) courses from Group B)					12																				
<i>Group A:</i> Select at least 03 courses					6	Elective	1																		
19	0312102401	02100030	Automation in food technology	Specialized Knowledge	2	Elective	1					C4			P3										
20	0312101401	05100509	Advanced technologies in food processing	Specialized Knowledge	2	Elective	1					C4				P4									
21	0312102402	05102571	Food quality assurance	Specialized Knowledge	2	Elective	1			C3			C4		P3							R4			P4
22	0312102975	05100572	Quality and food safety control in food service	Specialized Knowledge	2	Elective	1		C3				C4									R4			
23	0312101404	05100553	Food defense and food fraud	Specialized Knowledge	2	Elective	1		C3				C4									R4			
24	0312102976	05100583	Water supplying and wastewater in aquatic processing	Specialized Knowledge	2	Elective	1					C3				P4									
25	0312102977	05100573	Modern techniques of seafood processing	Specialized Knowledge	2	Elective	1					C4				P4									
26	0312102978	05100574	Management and utilization of aquatic by- products	Specialized Knowledge	2	Elective	1		C3			C3											P4		
<i>Group B:</i> Select at least 03 courses					6	Elective	2																		
27	0312100579	05100547	Structure and physical properties in food processing	Specialized Knowledge	2	Elective	2				C4		C4								R2		P4		
28	0312101406	05100543	Advanced thermal food processing	Specialized Knowledge	2	Elective	2					C5						P4			R2				
29	0312101403	05100508	Waste treatment in food industry	Specialized Knowledge	2	Elective	2				C3				P3								P3		
30	0312100594	05100563	Research and analytical method for functional food	Specialized Knowledge	2	Elective	2					C4		P4											
31	0312103006	13200101	Corporate Management	Specialized Knowledge	2	Elective	2		C3							P3							P3	P4	
32	0312103007	13200008	Distribution Channel Management	Specialized Knowledge	2	Elective	2		C3							P3							P3		
33	0312103008	13200017	Negotiation skills	Specialized Knowledge	2	Elective	2		C3								P4						P4		

34	0312102979	05100575	Implementing iso 17025:2017	Specialized Knowledge	2	Elective	2		C3			C4	C4													
35	0312101439	02100014	Efficient management and use of energy	Specialized Knowledge	2	Elective	2	C4						P3	P3						R3					
36	0312102980	05100576	Pre/probiotics and chemicals application in fisheries	Specialized Knowledge	2	Elective	2			C4					P4											
37	0312102981	05100577	Aquatic animal pathology	Specialized Knowledge	2	Elective	2					C4			P4											
38	0312101407	05101131	Computer Applications in Food Technology	Specialized Knowledge	2	Elective	2	C4					P4													
39	0312100596	05100539	Microencapsulation and nano-technology in food technology	Specialized Knowledge	2	Elective	2			C4	C5			P3				P3								
INTERSHIP					8																					
40	0312102982	05104581	Internship		8	Compulsory	3							P4		A4	P4			R4			P4		P4	
GRADUATION THESIS					8																					
41	0312102983	05107582	Graduation thesis		8	Compulsory	3	C4			C5	C5	C4	P4		P4	A4	P4	P4	P3	R4	R4				
			Total credits		60																					
			Courses aligned with program learning outcomes					7	7	4	11	18	8	9	9	12	5	10	7	3	5	4	4	10	4	4

*This matrix illustrates the contribution level of each course to the Program Learning Outcomes (PLOs) based on the following scales: **Knowledge** (Bloom's Taxonomy - Cognitive domain); **Behavioral Skills** (Bloom's Taxonomy - Psychomotor domain); **Affective Skills & Attitudes** (Bloom's Taxonomy - Affective domain); and **Proficiency Levels** (Crawley - Proficiency Rating scale)).*

3. Academic Workload

3.1. Academic Workload (Research-Oriented Programme)

No.	Knowledge Block	Credits	Percentage (%)
1	Philosophy	03	5,0
2	Specialized Knowledge	30	50,0
3	Research topic, Internship	12	20,0
4	Graduation thesis	15	25,0
Total credits		60	

3.2. Academic Workload (Application-oriented programme)

No.	Knowledge Block	Credits	Percentage (%)
1	Philosophy	03	5,0
2	Specialized Courses, Course Project, and Seminar	41	63,4
3	Internship	8	13,3
4	Graduation thesis	8	13,3
Total credits		60	

4. Training Duration

Designated Duration: 1.5 years.

Maximum Duration: The maximum period to complete the program, including the designated duration and the allowed extension, is stipulated in the Regulations on Graduate Education under the Credit System (Issued under Decision No. 1279/QĐ-DCT dated April 26, 2024, by the Rector of Ho Chi Minh City University of Industry and Trade).

5. Degree Conferred

A Master's degree shall be awarded to students who have successfully completed the study program, earned the required number of credits, and met all requirements for graduation in accordance with the University's Graduate Education Regulations.

6. Admission Requirements

Applicants must hold a bachelor's degree or an equivalent qualification and satisfy the University's admission requirements.

Graduates holding a bachelor's degree in the same or an appropriate discipline are eligible to apply for admission immediately after graduation. Applicants holding a bachelor's degree in a related discipline are required to complete the prescribed

supplementary courses in accordance with the University's regulations before applying for admission.

7. Learning Assessment Methods

Assessment methods follow the Regulations on Graduate Education under the Credit System (Issued under Decision No. 1279/QĐ-DCT dated April 26, 2024, by the Rector of Ho Chi Minh City University of Industry and Trade) and the Regulations on Examinations, Testing, and Learning Assessment (Issued under Decision No. 2402/QĐ-DCT dated August 22, 2023, by the Rector of Ho Chi Minh City University of Industry and Trade).

8. Academic Regulations and Graduation Requirements

Graduation Recognition: Graduation consideration and recognition are conducted in accordance with the Regulations on Graduate Education under the Credit System (Issued under Decision No. 1279/QĐ-DCT dated April 26, 2024, by the Rector of Ho Chi Minh City University of Industry and Trade)

Foreign Language Standards: Compliance with the Regulations on Foreign Language Exit Standards (Issued under Decision No. 1281/QĐ-DCT dated April 26, 2024, by the Rector of Ho Chi Minh City University of Industry and Trade).

Information Technology (IT) Standards: Compliance with the Regulations on Information Technology Proficiency Standards (Issued under Decision No. 3297/QĐ-DCT dated November 07, 2023, by the Rector of Ho Chi Minh City University of Industry and Trade).

9. Career Opportunities

Upon graduation, master's students from this program can undertake the following professional roles:

Production managers, quality managers, or continuous improvement specialists in enterprises;

Managers or members of research teams responsible for new product development or the improvement of technologies, equipment, and production processes;

Researchers at research institutes, research centers, or technology transfer organizations;

University lecturers or training experts in the fields of Food Technology, Food Chemistry, Quality Management, Nutrition, and Food Safety.

10. Academic Progression and Post-Graduate Opportunities

Eligible to pursue doctoral studies in Food Technology or related disciplines.

11. Curriculum Content

11.1. Curriculum Content (Research-Oriented Programme)

No.	Course Code	Internal Code	Course Title	Credit (s)	Course Conditions (Pre-course (a); Prerequisite (b); Corequisite (c))
I. Compulsory courses				19	
1	0311100408	11100012	Philosophy of Marxism and Leninism	3 (3,0)	
2	0311102399	05100564	Scientific research method	2 (2,0)	
3	0311101401	05100509	Advanced technologies in food processing	2 (2,0)	
4	0311100584	05100511	Advanced technologies in food analysis	2 (2,0)	
5	0311100585	05101512	Advanced technologies in food analysis laboratory practices	1 (0,1)	
6	0311100586	05100513	Enzyme and protein technology	2 (2,0)	
7	0311100587	05101514	Enzyme and protein technology laboratory practices	1 (0,1)	
8	0311102972	05100567	Modeling and optimization in food technology	2 (2,0)	
9	0311100589	05100518	Food marketing and consumer behavior	2 (2,0)	
10	0311101402	05100562	Management for Food Factory	2 (2,0)	
II. ELECTIVE COURSES (Select at least five (05) courses from Group A and at least two (02) courses from Group B)				14	
<i>Group A:</i> Select at least 05 courses				10	
11	0311102400	05100565	Modern fermentation technology	2 (2,0)	

12	0311102971	05101566	Laboratory of modern fermentation technology	1 (0,1)	
13	0311100588	05100515	Isolation and application of bioactive compounds	2 (2,0)	
14	0311100596	05100539	Microencapsulation and nano-technology in food technology	2 (2,0)	
15	0311101408	05100138	Food supply chain management and traceability	2 (2,0)	
16	0311102403	05107568	Special subject-Industrial cleaning	1 (1,0)	
17	0311102973	05107569	Special subject-food shelf-life	1 (1,0)	
18	0311102974	05107570	Food technology's special subject	1 (1,0)	
19	0311100580	05100588	Project management	2 (2,0)	
20	0311102401	02100030	Automation in food technology	2 (2,0)	
21	0311102402	05102571	Food quality assurance	2 (1,1)	
22	0311102975	05100572	Quality and food safety control in food service	2 (2,0)	
23	0311101404	05100553	Food defense and food fraud	2 (2,0)	
24	0311102976	05100583	Water supplying and wastewater in aquatic processing	2 (2,0)	
25	0311102977	05100573	Modern techniques of seafood processing	2 (2,0)	
26	0311102978	05100574	Management and utilization of aquatic by-products	2 (2,0)	
Group B: Select at least 02 courses				4	
27	0311100579	05100547	Structure and physical properties in food processing	2 (2,0)	
28	0311101406	05100543	Advanced thermal food processing	2 (2,0)	

29	0311101403	05100508	Waste treatment in food industry	2 (2,0)	
30	0311100594	05100563	Research and analytical method for functional food	2 (2,0)	
31	0311103006	13200101	Corporate Management	2 (2,0)	
32	0311103007	13200008	Distribution Channel Management	2 (2,0)	
33	0311103008	13200017	Negotiation skills	2 (2,0)	
34	0311102979	05100575	Implementing iso 17025:2017	2 (2,0)	
35	0311101439	02100014	Efficient management and use of energy	2 (2,0)	
36	0311102980	05100576	Pre/probiotics and chemicals application in fisheries	2 (2,0)	
37	0311102981	05100577	Aquatic animal pathology	2 (2,0)	
38	0311101407	05101131	Computer Applications in Food Technology	2 (0,2)	
III. Research topic, internship				12	
39	0311103026	05107584	Research topic 1	3 (0,3)	
40	0311103027	05107585	Research topic 2	3 (0,3)	
41	0311103028	05107586	Research topic 2	3 (0,3)	
42	0311101414	05100557	Internship	3 (0,3)	
IV. Graduation thesis				15	
43	0311103029	05106587	Graduation thesis	15 (0,15)	
Total credits				60	

11.2. Curriculum Content (Application-oriented programme)

No.	Course Code	Internal Code	Course Title	Credit (s)	Course Conditions (Pre-course (a); Prerequisite (b); Corequisite (c))
I. Compulsory courses				32	

1	0312100408	11100012	Philosophy of Marxism and Leninism	3 (3,0)	
2	0312102399	05100564	Scientific research method	2 (2,0)	
3	0312100584	05100511	Advanced technologies in food analysis	2 (2,0)	
4	0312100585	05101512	Advanced technologies in food analysis laboratory practices	1 (0,1)	
5	0312100586	05100513	Enzyme and protein technology	2 (2,0)	
6	0312100587	05101514	Enzyme and protein technology laboratory practices	1 (0,1)	
7	0312102400	05100565	Modern fermentation technology	2 (2,0)	
8	0312102971	05101566	Laboratory of modern fermentation technology	1 (0,1)	
9	0312100588	05100515	Isolation and application of bioactive compounds	2 (2,0)	
10	0312100589	05100518	Food marketing and consumer behavior	2 (2,0)	
11	0312102972	05100567	Modeling and optimization in food technology	2 (2,0)	
12	0310101408	05100138	Food supply chain management and traceability	2 (2,0)	
13	0310101402	05100562	Management for Food Factory	2 (2,0)	
14	0312100580	05100588	Project management	2 (2,0)	
15	0312102403	05107568	Special subject-Industrial cleaning	1 (1,0)	
16	0312102973	05107569	Special subject-food shelf-life	1 (1,0)	
17	0312102974	05107570	Food technology's special subject	1 (1,0)	
18	0312101405	05103554	Food processing project	3 (0,3)	

II. Elective courses (Select at least three (03) courses from Group A and at least three (03) courses from Group B)				12	
<i>Group A:</i> Select at least 03 courses				6	
19	0312102401	02100030	Automation in food technology	2 (2,0)	
20	0312101401	05100509	Advanced technologies in food processing	2 (2,0)	
21	0312102402	05102571	Food quality assurance	2 (2,0)	
22	0312102975	05100572	Quality and food safety control in food service	2 (2,0)	
23	0312101404	05100553	Food defense and food fraud	2 (2,0)	
24	0312102976	05100583	Water supplying and wastewater in aquatic processing	2 (2,0)	
25	0312102977	05100573	Modern techniques of seafood processing	2 (2,0)	
26	0312102978	05100574	Management and utilization of aquatic by-products	2 (2,0)	
<i>Group B:</i> Select at least 03 courses				6	
27	0312100579	05100547	Structure and physical properties in food processing	2 (2,0)	
28	0312101406	05100543	Advanced thermal food processing	2 (2,0)	
29	0312101403	05100508	Waste treatment in food industry	2 (2,0)	
30	0312100594	05100563	Research and analytical method for functional food	2 (2,0)	
31	0312103006	13200101	Corporate Management	2 (2,0)	
32	0312103007	13200008	Distribution Channel Management	2 (2,0)	
33	0312103008	13200017	Negotiation skills	2 (2,0)	
34	0312102979	05100575	Implementing iso 17025:2017	2 (2,0)	

35	0312101439	02100014	Efficient management and use of energy	2 (2,0)	
36	0312102980	05100576	Pre/probiotics and chemicals application in fisheries	2 (2,0)	
37	0312102981	05100577	Aquatic animal pathology	2 (2,0)	
38	0312101407	05101131	Computer Applications in Food Technology	2 (0,2)	
39	0312100596	05100539	Microencapsulation and nano-technology in food technology	2 (2,0)	
III. Internship				8	
40	0312102982	05104581	Internship	8 (0,8)	
III. Graduation thesis				8	
41	0312102983	05107582	Graduation thesis	8 (0,8)	
			Total credits	60	

12. Training Curriculum

12.1. Training Curriculum (Research-Oriented Programme)

No.	Course Code	Internal Code	Course Title	Credits	Note
Semester 1:				21	
Compulsory Courses				11	
1	0311100408	11100012	Philosophy of Marxism and Leninism	3 (3,0)	
2	0311102399	05100564	Scientific research method	2 (2,0)	
3	0311101401	05100509	Advanced technologies in food processing	2 (2,0)	
4	0311100586	05100513	Enzyme and protein technology	2 (2,0)	
5	0311100589	05100518	Food marketing and consumer behavior	2 (2,0)	
Elective courses (Select at least 05 courses)				10	
6	0311102400	05100565	Modern fermentation technology	2 (2,0)	

7	0311100588	05100515	Isolation and application of bioactive compounds	2 (2,0)	
8	0311100596	05100539	Công nghệ vi nang và nano trong thực phẩm	2 (2,0)	
9	0311101408	05100138	Quản lý chuỗi cung ứng và truy xuất nguồn gốc thực phẩm	2 (2,0)	
10	0311102403	05107568	Special subject-Industrial cleaning	1 (1,0)	
11	0311102973	05107569	Special subject-food shelf-life	1 (1,0)	
12	0311102974	05107570	Food technology's special subject	1 (1,0)	
13	0311100580	05100588	Project management	2 (2,0)	
14	0311102401	02100030	Automation in food technology	2 (2,0)	
15	0311102402	05102571	Food quality assurance	2 (1,1)	
16	0311102975	05100572	Quality and food safety control in food service	2 (2,0)	
17	0311101404	05100553	Food defense and food fraud	2 (2,0)	
18	0311102976	05100583	Water supplying and wastewater in aquatic processing	2 (2,0)	
19	0311102977	05100573	Modern techniques of seafood processing	2 (2,0)	
20	0311102978	05100574	Management and utilization of aquatic by-products	2 (2,0)	
Semester 2:				18	
Compulsory Courses				14	
21	0311101401	05100509	Advanced technologies in food processing	2 (2,0)	
22	0311100585	05101512	Advanced technologies in food analysis laboratory practices	1 (0,1)	
23	0311100587	05101514	Enzyme and protein technology laboratory practices	1 (0,1)	
24	0311102972	05100567	Modeling and optimization in food technology	2 (2,0)	
25	0311101402	05100562	Management for Food Factory	2 (2,0)	

26	0311103026	05107584	Research topic 1	3 (0,3)	
27	0311103027	05107585	Research topic 2	3 (0,3)	
Elective courses (Select at least 02 courses)				4	
28	0311100579	05100547	Structure and physical properties in food processing	2 (2,0)	
29	0311101406	05100543	Advanced thermal food processing	2 (2,0)	
30	0311101403	05100508	Waste treatment in food industry	2 (2,0)	
31	0311100594	05100563	Research and analytical method for functional food	2 (2,0)	
32	0311103006	13200101	Quản trị doanh nghiệp	2 (2,0)	
33	0311103007	13200008	Corporate Management	2 (2,0)	
34	0311103008	13200017	Distribution Channel Management	2 (2,0)	
35	0311102979	05100575	Negotiation skills	2 (2,0)	
36	0311101439	02100014	Implementing iso 17025:2017	2 (2,0)	
37	0311102980	05100576	Pre/probiotics and chemicals application in fisheries	2 (2,0)	
38	0311102981	05100577	Aquatic animal pathology	2 (2,0)	
39	0311101407	05101131	Computer Applications in Food Technology	2 (0,2)	
40	0311102971	05101566	Laboratory of modern fermentation technology	1 (1,0)	
Semester 3:				21	
Compulsory Courses				21	
41	0311103028	05107586	Research topic 3	3 (0,3)	
42	0311101414	05100557	Internship	3 (0,3)	
43	0311103029	05106587	Graduation thesis	15 (0,15)	

12.2. Training Curriculum (Application-oriented programme)

No.	Course Code	Internal Code	Course Title	Credits	Note
Semester 1:				20	
Compulsory Courses				14	

1	0312100408	11100012	Philosophy	3 (3,0)	
2	0312102399	05100564	Scientific research method	2 (2,0)	
3	0312100584	05100511	Advanced technologies in food analysis	2 (2,0)	
4	0312100586	05100513	Enzyme and protein technology	2 (2,0)	
5	0312102400	05100565	Modern fermentation technology	2 (2,0)	
6	0312100580	05100588	Project management	2 (2,0)	
7	0312102403	05107568	Special subject - industrial cleaning	1 (1,0)	
Elective courses (Select at least 03 courses)				6	
8	0312102401	02100030	Automation in food technology	2 (2,0)	
9	0312101401	05100509	Advanced technologies in food processing	2 (2,0)	
10	0312102402	05102571	Food quality assurance	2 (1,1)	
11	0312102975	05100572	Quality and food safety control in food service	2 (2,0)	
12	0312101404	05100553	Food defense and food fraud	2 (2,0)	
13	0312102976	05100583	Nước cấp, nước thải trong chế biến thủy sản	2 (2,0)	
14	0312102977	05100573	Water supplying and wastewater in aquatic processing	2 (2,0)	
15	0312102978	05100574	Management and utilization of aquatic by-products	2 (2,0)	
Semester 2:				20	
Compulsory Courses				14	
16	0312100585	05101512	Advanced technologies in food analysis laboratory practices	1 (0,1)	
17	0312100587	05101514	Enzyme and protein technology laboratory practices	1 (0,1)	
18	0312102971	05101566	Laboratory of modern fermentation technology	1 (0,1)	
19	0312100588	05100515	Isolation and application of bioactive compounds	2 (2,0)	

20	0312100589	05100518	Food marketing and consumer behavior	2 (2,0)	
21	0312102972	05100567	Modeling and optimization in food technology	2 (2,0)	
22	0312101408	05100138	Food supply chain management and traceability	2 (2,0)	
23	0312101402	05100562	Management for food factory	2 (2,0)	
24	0312102973	05107569	Special subject-food shelf-life	1 (1,0)	
Elective courses (Select at least 03 courses)				6	
25	0312100579	05100547	Structure and physical properties in food processing	2 (2,0)	
26	0312101406	05100543	Advanced thermal food processing	2 (2,0)	
27	0312101403	05100508	Waste treatment in food industry	2 (2,0)	
28	0312100594	05100563	Research and analytical method for functional food	2 (2,0)	
29	0312103006	13200101	Corporate Management	2 (2,0)	
30	0312103007	13200008	Distribution Channel Management	2 (2,0)	
31	0312103008	13200017	Negotiation skills	2 (2,0)	
32	0312102979	05100575	Implementing iso 17025:2017	2 (2,0)	
33	0312101439	02100014	Efficient management and use of energy	2 (2,0)	
34	0312102980	05100576	Pre/probiotics and chemicals application in fisheries	2 (2,0)	
35	0312102981	05100577	Aquatic animal pathology	2 (2,0)	
36	0312101407	05101131	Informatics application in food technology	2 (0,2)	
37	0312100596	05100539	Microencapsulation and nano-technology in food technology	2 (2,0)	
Semester 3:				20	
Compulsory Courses				20	
38	0312102974	05107570	Food technology's special subject	1 (1,0)	

39	0312101405	05103554	Food processing project	3 (0,3)	
40	0312102982	05104581	Internship	8 (0,8)	
41	0312102983	05107582	Graduation thesis	8 (0,8)	

13. Quality Control and Educational Quality Assurance

Relevant units are responsible for developing and implementing the Quality Control and Educational Quality Assurance Plan in accordance with the approved Training Program and current teaching regulations

14. Implementation Guidelines

14.1. For Faculties and Departments

- Responsible for organizing the implementation of the program content as required, and providing academic advising and guidance for students in course registration.
- Assigning lecturers to specific courses and providing them with Course Syllabi to execute the teaching plan.
- Preparing sufficient textbooks, reference materials, and facilities to ensure the effective delivery of the program.
- Ensuring the logical progression of knowledge delivery and acquisition; defining prerequisites and pre-courses; and preparing faculty members to meet the requirements for teaching elective courses.
- Monitoring and supervising the teaching activities of lecturers in accordance with current teaching regulations, ensuring the implementation of innovative teaching methods and assessment techniques

14.2. For Lecturers

- Course Syllabus Review: Lecturers must thoroughly study the course syllabi to prepare lectures, teaching methods, and appropriate instructional tools.
- Material Preparation: Lecturers are required to prepare comprehensive textbooks and learning materials, providing them to students to ensure preparation before class.
- Teaching Philosophy: Employ diverse teaching and learning methods aligned with the educational philosophy: "Active Learning, Creative Work"; strictly adhere to the assessment and evaluation methods specified in the course syllabus.
- Professional Development: Reflect on personal teaching activities and actively participate in innovative teaching initiatives in accordance with current teaching regulations.

14.3. For graduate

- Academic Advising: Students must consult with academic advisors or class teachers to select courses that align with their career goals and learning capabilities.
- Attendance: Ensure full attendance for lectures and practical sessions as regulated.
- Active Engagement: Promote autonomy, self-study, and independent research; actively participate in group work, discussions, seminars, and practical activities.
- Resource Utilization: Proactively utilize online resources and university library facilities to support self-study, research, and graduation thesis completion.
- Academic Integrity: Strictly comply with the Regulations on Examinations, Testing, and Learning Assessment.

15. Program Approval

HCMC, [Date] [Month] 2024
DEAN OF THE FACULTY

HCMC, [Date] [Month] 2024
**HEAD OF THE GRADUATE
PROGRAM**

HCMC, [Date] [Month] 2024
**CHAIRMAN OF THE SCIENTIFIC &
TRAINING COUNCIL**

HCMC, [Date] [Month] 2024
RECTOR

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