Training program

Training program name (Vietnamese):ĐẢM BẢO CHẤT LƯỢNG VÀ AN TOÀN THỰC PHẨM

Training program name (English): Food Safety and Quality Assuranc

Education level: University

Training industry: food quality assurance and safet

Training code: 7540106

Field: Production and processing

Type of training: Full-time; part-time

Information on training program quality assessment

The University's undergraduate training program in Food Technology meets the MOET education quality standards of the Ministry of Education and Training, since 2018.

1. Training objectives

1.1 General objectives

Training engineers in the Food Safety and Quality Assurance industry (DBCL & Food Safety) have a high level of expertise, basic scientific knowledge and solid expertise, good practical skills and good professional ethical qualities to achieve professional success in the field of IDU & food safety (s), meeting the needs of society in the context of international integration.

1.2 Specific objectives

a. Knowledge

DBCL&ATTP industry engineers have a deep understanding of industry-based knowledge of food technology, specialized knowledge of DBCL&ATTP, knowledge of analyzing quality and food safety details as well as a knowledge base in microbiology & solid statistical probability. In addition, DBCL&ATTP engineers are also equipped with knowledge of information technology, knowledge of planning, organization, supervision, management, and administration to apply in professional activities in the field of DBCL&ATTP.

b. Skills

The DBCL&ATTP industry engineer is not only proficient in practical skills of processing, food production, testing skills, testing, statistics, analyzing to find causes and proposing solutions to solve problems, but also Proficient in skills such as teamwork skills and evaluating team work results communication skills, problem communication skills, such as critical skills and foreign language skills to be able to work independently or collaboratively in group work under different conditions .

c. Level of autonomy and responsibility

Engineers in the DBCL&ATTP industry have the autonomous capacity to work under different conditions, the ability to work independently, the ability to take responsibility, the ability to orient themselves, and maintain professional ethical

standards in the field of DBCL&ATTP. DBCL&ATTP industry engineers have the ability to search and systematize information to draw professional conclusions, the ability to plan, coordinate and manage resources and provide guidance, monitor others' implementation, improve Improve quality management tasks and ensure food safety and hygiene.

2. Training program output standards

After completing the course, students will have the knowledge, skills, level of autonomy and responsibility:

2.1 Learning Outcome

Code	**Standard first topic**	**Competency level (TDNL)**
a	**knowledge**	
PLO1	**Summary of basic industry and specialized knowledge about management food quality and safety**	**5**
PLO1.1	Summary of knowledge about natural science & food science (chemistry, biology, biochemistry, physical chemistry, microbiology, sensory..)	5
PLO1.2	Analyze knowledge of food engineering (machines & equipment, heat transfer processes)	4
PLO1.3	Synthesize knowledge about quality management and food hygiene and safety	5
PLO1.4	Summary of knowledge about food processing technology	5
PLO2	**Summary of social science, political and legal knowledge into the field of food quality and safety assurance**	**5**
PLO2.1	Apply knowledge about physical education and defense education	
PLO2.2	Synthesize knowledge of political theory and law	

PLO2.3	Apply knowledge of social sciences	
PLO3	**Select information technology knowledge that meets requirements in the field of food safety and quality management**	
PLO3.1	Choose office information technology software for study and work. Obtained Basic IT application certificate	
PLO3.2	Analyze information technology software in work related to LCL&ATTP (statistics-data analysis, data visualization, reference citation software for scientific research reports,..)	
PLO4	**Select and apply knowledge about planning, organizing and monitoring processes in the field of food safety (sampling plan, quality management plan, quality control plan, control plan risk control, monitoring plan for quality control points and food safety..)**	
PLO4.1	Analyze basic knowledge about planning and general organization	
PLO4.2	Apply knowledge of planning, organizing, and monitoring processes in the field of financial planning and supervision	
PLO5	**Analyze knowledge about managing and operating professional activities on ĐBCL&ATTP**	
PLO5.1	Analysis of knowledge of general management and administration	
PLO5.2	Apply knowledge about handling and operating professional activities in businesses, production organizations, food businesses, research, training, and evaluation in the field of LCL&ATTP management	
b	Skills	

PLO6	**Proficiently apply the skills needed to detect and solve complex problems in QLCL&ATTP**	
PLO6.1	Proficient in practical skills in food processing and production and identifying problems that need to be solved and improved	
PLO6.2	Proficient application of testing skills, statistical testing methods, analysis for the causes of problems	
PLO6.3	Masterful implementation of the proposal of solutions to handle problems	
PLO6.4	Masterfully evaluate results after implementing solutions	
PLO7	**Accurately perform leadership skills, start a business, create jobs for yourself and others in the field of food safety and hygiene**	
PLO7.1	Apply accurate information about market opportunities to form startup ideas	
PLO7.2	Master the skills to orient research activities to improve food quality and safety, improve production processes, control processes or quality management systems - food safety, create jobs for yourself and others	
PLO8	**Proficiently apply critical and critical skills and use alternative solutions to problems in food safety and management when environmental conditions are unknown or changing**	
PLO8.1	Proper implementation of risk assessment, context and practical conditions to serve as a basis for proposing flexible alternatives	
PLO8.2	Proficiently apply criticism and use alternative solutions to problems in food safety and quality management	
PLO9	**Proficiently apply skills to evaluate the quality of work after completion and the performance of team members**	

PLO9.1	Demonstrate proficiency in job quality assessment skills after completion	
PLO9. 2	Proficiently apply performance evaluation skills of team members	
PLO10	**Proficiently apply problem communication and communication skills**	
PLO10.1	Master basic communication skills	
PLO10.2	Proficiently apply skills in communicating technical issues in writing (reports, projects, thesis courses)	
PLO10.3	Master the skill of verbal communication of technical issues (presentation, guidance, criticism, personal opinion protection...)	
PLO11	**Properly demonstrate foreign language ability level 3/6 according to Vietnam's foreign language ability framework and master specialized English**	
PLO11.1	Properly demonstrate basic English skills, achieving 3/6 of Vietnam's Foreign Language Competency Framework	
PLO11.2	Demonstrate proficiency in English reading comprehension skills specialized in labor management and food safety	
c	**Level of autonomy and responsibility**	
PLO12	**Ability to work independently or effectively in groups under changing working conditions, with personal responsibility and responsibility for the group under different conditions**	
PLO12.1	Proficient performance of independent work, lifelong learning and training	

PLO12.2	Follow the rules and regulations of the place of study and work, ensuring labor safety for yourself and team members	
PLO12.3	Proficient in teamwork skills under changing working conditions to achieve set goals and take responsibility for the team	
PLO13	**Conduct guidance and supervision of others in quality management and ensuring food safety and hygiene**	
PLO13.1	Coordinate with stakeholders in quality management and food safety assurance	
PLO13.2	Conduct guidance and supervise others in quality management and ensuring food safety and hygiene	
PLO14	**Realize self-direction, draw professional conclusions, meet professional standards in the field of food safety and quality management and protect personal views**	
PLO14.1	Proficient in professional ethical standards and honesty in professional activities	
PLO14.2	Demonstrate proficiency in searching, systems, analyzing relevant information and accumulating knowledge	
PLO14.3	Coordinate knowledge and income information to guide and draw professional conclusions about quality management & food safety and be able to protect personal opinions	
PLO15	**Implement planning, coordination, management of resources, evaluation and effective improvement of quality assurance and food safety activities**	
PLO15.1	Apply learned knowledge and skills to analyze requirements and current status of activities to determine necessary resources and contents to be implemented	
PLO15.2	Deploy, coordinate, and manage resources to complete requirements, set goals, evaluate and improve assigned activities	

2.2 Matrix table of modules and output standards

3. Learning load

TT	Knowledge	Volume of knowledge	Proportion %
1	General education, basic science	33 Credit	21.85%
2	Sector facility	37 Credit	24.50%
3	Industry(Phase 1- Bachelor's degree)	51 Credit	33.77%
4	Special, specialized major (Phase 2- Engineering degree)	30 Credit	19.87%
	Total	**151 Credit**	**100%**

Aerial learning volume includes Physical Education, Defense-Security Education

4. Training time

Duration of formal training programme design: 4 years

Time to design a work-study training program: 5 years

The maximum time to complete the training program includes the design time and allowed extension time specified in the Regulations on university training according to the credit system (Issued according to Decision No. 1846/QD-DCT dated September 1, 2021 of the Rector of Ho Chi Minh City University of Food Industry)

5. Graduation certificate

- Issue a Bachelor's degree when: Students accumulate enough credits from Phase 1 and meet the graduation conditions according to school regulations.
- Awarding Engineering Degree when:
  + Students have accumulated enough credits from Phase 1 and Phase 2 and meet the graduation conditions according to school regulations;

+ Students have a bachelor's degree in the same field, have accumulated enough credits in Phase 2 and meet the graduation conditions according to school regulations.

6. Input standards

Learners have a High School diploma or equivalent and meet the School's admission or entrance exam standards.

Learners with a college diploma in the same or close field: Consider recognizing learning results and the amount of knowledge and skills to exempt modules when studying this training program.

Learners studying other majors at the School satisfy the conditions in the University Training Regulations according to the School's credit system: Consider recognizing the modules accumulated in the first industry training program to consider exempting modules in the training program of this industry from studying in the second industry under this training program.

Learners with a first university diploma in another field: Consider recognizing academic results and the amount of knowledge and skills to exempt modules when studying a second university degree under this training program.

Learners with a Bachelor's degree in the same field: participate in phase 2 of this training program.

7. Methods of evaluating learning outcomes

According to the Regulations on university-level training according to the credit system (Issued together with Decision No. 1846/QD-DCT dated September 1, 2021 of the Rector of Ho Chi Minh City University of Food Industry).

8. Training regulations and graduation conditions

Training regulations: According to the Regulations on university-level training according to the credit system (Issued together with Decision No. 1846/QD-DCT dated September 1, 2021 of the Rector of Ho Chi Minh City University of Food Industry Minh).

Achieving foreign language skills standards: Having foreign language proficiency level 3/6 of Vietnam's Foreign Language Proficiency Framework (Issued together with

Decision No. 2212/QD-DCT dated October 19, 2021 of the Rector of Ho Chi Minh City University of Food Industry).

Achieve knowledge standards in information technology : Have a certificate of Advanced Information Technology Application (Issued together with Decision No. 1201/QD-DCTnngayf May 17, 2022 of the Rector of the University of Food Industry Ho Chi Minh City on promulgating Regulations on standards of skills in using Information Technology for studentsnon-it students of Ho Chi Minh City University of Food Industry).

9. Job position after graduation

- Responsible for food quality and safety management at food processing, production and business establishments.
- Inspectors and management experts in the food sector in the authorities.
- Food safety management specialist.
- Evaluate quality management and food safety systems.
- Researcher in the field of food technology and food safety.
- Can work as a teaching staff and research specialist in universities, colleges, and intermediate schools providing specialized training in food safety and quality management.

10. Ability to learn and improve after graduation

After graduating from university, students can continue to study at the graduate level in the fields of food technology, food safety or production management and administration.

TT	Part code	Autonomos code	Course name	Credit number	Conditios (study first (a); resolute (b); parallel (c))
1	0101100651	11200001	Marxist-Leninist philosophy	3 (3,0)	
2	0101002298	11200002	Marxist-Leninist political economy	2 (2,0)	(a)0101100651
3	0101000476	11200003	Scientific Socialism	2 (2,0)	(a)0101100651

4	0101006322	11200005	Ho Chi Minh Thought		
5	0101001625	11200004	History of the Communist Party of Vietnam		
6	0101100822	14200201	English 1		
7	0101100823	14200202	English 2		
8	0101100824	14200203	English 3		
9	0101101934	08200109	General microbiology (CNTP)		
10	0101101933	08201101	General Microbiology Experiment (CNTP)		
11	0101101930	15200028	Calculus (CNTP)		
12	0101101922	01202010	Skills for applying information technology		
13	0101001703 0101001704 0101001705 0101001706 0101001707 0101001697	16201001	Physical education 1		
14	0101001709 0101001710 0101001711 0101001712 0101001713 0101001698	16201002	Physical education 2		
TT	**Part code**	**Autonomos code**	**Course name**	**Credit number**	**Conditios (study first (a); resolute (b); parallel (c))**
15	0101001714 0101001715 0101001716 0101001717 0101001699 0101001700	16201003	Physical education 3		

16	0101001657	17200004	Defence-security education 1		
17	0101001662	17300004	Defence-security education 2		
18	0101001669	17301005	Defence-security education 3		
19	0101001677	17221002	Defence-security education 4		

Elective general educational knowledge select a minimum of 1 module per group		
Group A (Choose a minimum of 1 module)		

1	0101101927	05202190	Presentation skills		
2	0101102003	05202191	Writing skills		

Group B (Choose a minimum of 1 module)		

1	0101003671	11200006	General legislation		
2	0101003015	15200022	Logic		
3	0101100941	13200041	General economics		

II. Industry base knowledge		
Compulsory industry background knowledge		

TT	Part code	Autonomos code	Course name	Credit number	Conditios (study first (a); resolute (b); parallel (c))
1	0101002691	05201118	Laboratory Engineering		
2	0101001935	04200012	Analytical chemistry		
3	0101004419	04201013	Analytical chemistry experiments		
4	0101001968	05200002	Food biochemistry		
5	0101004395	05201163	Food chemistry and biochemistry experiments		
6	0101001863	05200001	Food chemistry		
7	0101102017	05200176	Food microbiology		
8	0101004520	05201164	Food microbiology experiments		
9	0101003652	05200073	Food microbiology analysis		
10	0101101089	05201157	Experimental analysis of food microbiology 1		
11	0101101090	05201158	Experimental analysis of food microbiology 2		
12	0101102020	05200212	Food physicochemical analysis 1 (CNTP)		
13	0101101091	05201159	Food physicochemical analysis experiment 1		
14	0101006535	05200121	Food hygiene and safety		
15	0101007906	05201115	Introduction to Food Technology		
16	0101006494	03200001	Technical Drawing		
17	0101102135	05200238	Food engineering 1 (Mechanical		

			transformation and physical separation)		
18	0101102018	05200177	Food Engineering 2 (Heat Transfer in CNTP)		
19	0101005224	05201012	Food engineering practice		
20	0101101931	15200032	Statistical probability in production, technology, engineering (CNTP)		

Elective base industry knowledge (select a minimum of 1 module)		

1	0101102026	07200104	Human nutrition		
2	0101100872	05200122	English majoring in food technology		
3	0101005641	05200015	Functional foods		
4	0101102136	05200239	Food engineering 3 (Mass infusion in CNTP)		
5	0101002497	02200032	Electrical Engineering		

III. Industry knowledge (Phase 1 - Bachelor's degree level)		
Required industry knowledge		

TT	Part code	Autonomos code	Course name	Credit number	Conditios (study first (a); resolute (b); parallel (c))
1	0101001087	05200018	Post-harvest technology		
2	0101102019	05200179	Processes in Food Processing Technology		
3	0101102005	05201180	Practicing processes in Food Processing Technology		
4	0101000687	05200022	Food packaging and packaging technology		
5	0101001598	05200123	Food toxinology		
6	0101102088	05202214	Food law		
7	0101003709	05200014	Food additives		
8	0101003683	05200023	Product development		
9	0101001197	05200125	Food sensory evaluation		
10	0101005005	05201126	Practice in evaluating food sensory perception		
11	0101102028	05202188	Food quality management 1		
12	0101102027	05202187	Food quality management 2		
13	0101102021	05202183	Hazard Analysis System and Critical Control Point (HACCP)		
14	0101102022	05202181	Technological design and production line layout		
15	0101100058	05202209	Experimental design and data processing		
16	0101102006	05202182	Quality control by statistical methods (CNTP)		

17	0101006865	05202170	Ant practice		
18	0101101011	05204167	Graduate internship		

Elective industry knowledge select a minimum of 9TC in group A (6LT+3TH respectively) and 01 orientation in group B		
Group A (choose 3 theoretical modules and 3 practical modules respectively)		

TT	Part code	Autonomos code	Course name	Credit number	Conditios (study first (a); resolute (b); parallel (c))
1	0101006856	05200076	Production technology and quality control of wine, beer, and soft drinks		
2	0101004824	05201100	Practice production technology and quality control of wine, beer, and soft drinks		
3	0101006855	05200075	Milk processing and quality control technology		
4	0101004816	05201101	Practice milk processing and quality control technology		
5	0101006862	05200081	Processing technology and quality control of fruit production		
6	0101102031	05201190	Vegetable oil processing and quality control practices		
7	0101006860	05200079	Vegetable oil production and quality control technology		
8	0101004822	05201191	Practice of vegetable oil production and quality control technology		
9	0101006858	05200077	Technology for producing and controlling the quality of sugar, cakes, and candy		
10	0101004823	05201099	Practice technology to produce and control the quality of sugar, cakes, and candy		
11	0101006864	05200082	Processing technology and quality control of		

			meat, eggs, and seafood		
12	0101102033	05201192	Practice processing technology and quality control of meat, eggs and seafood		
13	0101006859	05200078	Processing technology and quality control of tea, coffee, cocoa		
14	0101004809	05201193	Practice processing technology and control the quality of tea, coffee, and cocoa		
15	0101006861	05200080	Food processing and quality control technology		
16	0101004814	05201194	Practicing food processing and quality control technology		
17	0101100223	05200103	Technology for production and quality control of dipping sauces and condiments		
18	0101102032	05201195	Practice of processing technology and quality control of dipping sauces and condiments		

Group B (choose at least 1 orientation)		
Orientation 1: Quality management system		
Mandatory module		

1	0101102041	05202189	Food safety management system		
2	0101102036	05203200	Technology design project and production line layout		
3	0101102039	05203198	Food quality management project		

Elective module **(Students choose at least 2 credits in HP later)**		

1	0101100881	05200137	Quality control and food safety in the service industry		
2	0101101094	05200135	Food defense and food fraud		

Orientation 2 : Product improvement and development		
Mandatory module		

1	0101006851	05200129	Food physicochemical analysis 2		
2	0101101092	05201201	Food physicochemical analysis experiment 2		
3	0101100216	05203114	Food product development project		
4	0101102038	05203218	Food analysis project		

Students choose their own **(Students choose at least 2 credits in the following HPs)**		

1	0101102042	05200196	Build and evaluate laboratories according to IOS 17025		
2	0101101095	05200161	Food marketing and consumer research		
3	0101100218	05201111	Organizational practices and sensory council training		
4	0101100220	05201113	Practice product packaging design and inspection		

IV. Specific in-depth industry knowledge (business semester)(Phase 2-Engineering degree)	**30 (8,22)**	
In-depth industry knowledge, mandatory characteristics		

1	0101006365	05201131	Application of informatics in food technology		
2	0101100876	05200149	Food factory management		
3	0101101093	05200138	Supply chain management and food traceability		
4	0101102096	05204234	Engineer internship 1		(a) 0101101011 (c) 0101102097
5	0101102097	05204235	Engineer internship 2		a) 0101101011 (c) 0101102096
6	0101101800	05206165	Graduation thesis course		(a) 0101102039 (a) 0101102036 hoặc (a) 0101100216 (a) 0101100882

In-depth industry knowledge, optional features select a minimum of 2 modules	**4 (4,0)**	

TT	Part code	Autonomos code	Course name	Credit number	Conditios (study first (a); resolute (b); parallel (c))
1	0101102029	05200202	Quality control and safety of food packaging	2 (2,0)	(a) 0101000687
2	0101102013	05200213	Control of processes in the food industry	2 (2,0)	(a) 0101102019
3	0101003909	13200008	Corporate governance	2 (2,0)	
4	0101004042	05200203	Code of good agricultural production practice (GAP)	2 (2,0)	
5	0101006387	07200239	Corporate culture	2 (2,0)	
6	0101100936	17200001	Innovation and Entrepreneurship	2 (2,0)	
7	0101003868	02200080	Energy efficiency management and use	2 (2,0)	

Total number of theoretical credits (excluding GDTC,GDQP-AN modules)	**96**	
Total number of practical and internship credits (excluding GDTC, GDQP-AN modules)	**55**	
Total full course credits (excluding GDTC,GDQP-AN modules)	**151**	

12. Training plan

12.1.Formal training plan

TT	Part code	Autonomos code	Course name	Credit number	Notes

Semester 1: 16 cumulative credits +3 non-cumulative credits

Mandatory module	16 (9,7)	

1	0101100651	11200001	Marxist-Leninist philosophy	3 (3,0)	
2	0101101934	08200109	General microbiology (CNTP)	2 (2,0)	
3	0101101930	15200028	Calculus (CNTP)	3 (3,0)	
4	0101007557	01201010	Skills for applying information technology	3 (0,3)	
5	0101001657	17200004	Defence-security education 1	3 (0,3)	No accumulation
6	0101002691	05201118	Laboratory Engineering	1 (0,1)	
7	0101001935	04200012	Analytical chemistry	2 (2,0)	
8	0101001863	05200001	Food chemistry	2 (2,0)	

13. Control and ensure training quality

Units are responsible for properly and adequately implementing the approved Training Quality Control and Assurance Plan in accordance with current Teaching Regulations.

14. Implementation instructions

14.1. For training faculties and departments

- The training program must be researched so that the organization can comply with the program's content requirements.

- Assign trainers to each module and provide a curriculum for the lecturer to implement the teaching plan.

- Prepare a team of academic advisors carefully, requiring the academic advisor to thoroughly understand the entire credit training program to guide learners in registering for modules.

- Prepare adequate textbooks, reference materials, facilities, to ensure good implementation of the program.

-Note should be paid to the logic of imparting and absorbing areas of knowledge, prescribing prerequisite modules of mandatory modules and preparing instructors to meet the teaching requirements of elective modules.

- Examine and supervise the teaching of trainers in accordance with the current teaching regulations and ensure activities to innovate teaching methods and check and evaluate.

14.2.For lecturers

-When instructors are assigned to teach one or more module units, it is necessary to carefully study the outline content of the module to prepare appropriate lectures, teaching methods and teaching aids.

-Instructors must fully prepare textbooks and study materials and provide them to learners to prepare before class.

- Use a variety of teaching and learning methods according to the educational philosophy 'Proactive learning, creative work', properly implement the testing and evaluation methods specified in the module outline.

- Learn from your own teaching activities and actively participate in innovating teaching methods according to current teaching regulations.

14.3. For learners

- The advice of the academic adviser/head teacher must be consulted in order to select the module to suit progress.

- Must research the curriculum, curriculum and reference materials before going to class to best absorb the lecture.

-Must ensure adequate class time to listen to instructors' instructions or lectures.

- Promote self-control, self-study, self-research, and actively participate in group learning, fully participating in discussion, seminar, and practice activities.

-Actively exploit resources online and in the school library to serve self-study, self-study and graduate thesis.

- Strictly implement the Regulations on exams, tests and assessments.