

## PROGRAM SPECIFICATION

**Title of program:** Engineering in Food Technology Program

**Training level:** University Degree

**Degree training:** Food Technology

**Program code:** 7.54.01.01

**Mode of Training:** Regular Full- time

**Training time:** 4 years

**Time for enrollment:** since 2021

**Build time/ update curriculum program:** since 4/2021

### 1. GENERAL INFORMATION OF THE PROGRAM

#### 1.1. Program educational objectives (PEOs)

After 3-5 years of graduation, graduates can:

PEO1: Researching, developing, and working professionally in the field of food technology.

PEO2: Undertaking production processes, quality control processes, and food quality assessment in factories and industrial production systems.

PEO3: Learning and studying lifelong

#### 1.2. Job titles of graduates

- Work at companies and food processing plants as a production executive; technical department staff; quality management department staff; production planning department staff; Research and product development department staff; in the business of equipment, chemicals, packaging, additives and food flavorings.

- Work at food quality measurement and inspection centers, food hygiene and safety departments, district and city preventive health centers.

- Able to teach and work at universities, colleges, vocational schools and research institutes.

#### 1.3. Length of program and mode of study

- Mode of Training: Regular Full- time

- Training time: 4 years

## **2. ADMISSION CRITERIA**

According to the current regular university admission regulations of LHU and the Ministry of Education and Training.

## **3. PROGRAM LEARNING OUTCOMES (PLOs)**

Upon completion of the programme, graduates able to:

**ELO 1:** Apply knowledge of mathematics, natural sciences, social sciences, and food science to solve problems in the field of food technology.

**ELO 2:** Analysis to solve problems in the field of food technology

**ELO 3:** Design food technology process.

**ELO 4:** Explain the impact of food technology solutions on the environment and society.

**ELO 5:** Apply techniques, skills, equipment and tools modern to solve problems in the field of food technology.

**ELO 6:** Communicate effectively in language, text, and images about activities in the field of food technology.

**ELO 7:** Ability to work effectively in groups.

**ELO 8:** Demonstrate professional conduct and ethics.

**ELO 9:** Ability long-term learning.

## **4. MAPPING OF COURSES AND RELATIONSHIPS WITH PROGRAM LEARNING OUTCOMES**

No.	Course Code	Course Name	ELOs									
			ELO1	ELO2	ELO3	ELO4	ELO5	ELO6	ELO7	ELO8	ELO9	
1	102008	General physics	<b>H</b>	None	None	None	None	None	None	None	None	<b>M</b>
2	102025	Advanced mathematics 1	<b>H</b>	None	None	None	None	None	None	None	None	<b>M</b>
3	102055	Foreign language 1	None	None	None	None	None	None	<b>M</b>	None	None	<b>H</b>
4	120054	General Chemistry	<b>H</b>	None	None	None	None	None	None	<b>L</b>	None	<b>L</b>
5	117009	Internship	None	None	<b>L</b>	<b>L</b>	None	None	<b>H</b>	None	<b>M</b>	None
6	117043	Basic marketing	<b>M</b>	None	None	None	None	None	<b>H</b>	<b>M</b>	<b>L</b>	<b>L</b>
7	117010	Labs Technology Skills	None	None	None	None	None	<b>H</b>	<b>M</b>	<b>M</b>	None	None
8	117001	Experiments In General Chemistry	<b>H</b>	None	None	None	None	<b>M</b>	<b>L</b>	<b>L</b>	None	None
9	102011	Experiments in general physics	<b>L</b>	None	None	None	None	<b>H</b>	None	<b>M</b>	None	None
10	102014	Office Information	<b>H</b>	None	None	None	None	None	None	None	None	<b>M</b>
11	102062	Advanced mathematics 2	<b>H</b>	None	None	None	None	None	None	None	None	<b>M</b>
12	102034	Probability Statistics	<b>H</b>	None	None	None	None	None	None	None	None	<b>M</b>
13	102056	Foreign language 2	None	None	None	None	None	None	<b>L</b>	None	None	<b>H</b>

14	117007	Inorganic Chemistry	<b>H</b>	None	None	None	None	None	<b>L</b>	None	<b>L</b>
15	117002	Organic Chemistry	<b>H</b>	None	None	None	None	<b>L</b>	None	None	<b>L</b>
16	117057	Experiments in Inorganic chemistry	<b>L</b>	None	None	None	<b>M</b>	<b>L</b>	<b>H</b>	None	None
17	117055	Experiments in Organic chemistry	<b>L</b>	None	None	None	<b>M</b>	<b>L</b>	<b>H</b>	None	None
18	102057	Foreign language 3	None	None	None	None	None	<b>L</b>	None	None	<b>H</b>
19	120055	Microbiology and microbiological testing method	<b>M</b>	<b>H</b>	None	None	<b>L</b>	None	None	None	<b>M</b>
20	120056	Methods of Food analysis technology	<b>M</b>	<b>H</b>	None	None	<b>L</b>	None	<b>L</b>	None	None
21	120057	Process and Technology Equipment I	<b>M</b>	<b>H</b>	<b>L</b>	None	<b>M</b>	None	<b>L</b>	None	None
22	120058	Physical Chemistry	<b>H</b>	None	None	None	None	None	<b>L</b>	None	<b>L</b>
23	120024	Biochemistry	<b>M</b>	<b>H</b>	None	None	<b>L</b>	None	None	None	<b>M</b>
24	117045	Scientific research methodology	<b>M</b>	None	None	None	None	<b>H</b>	None	<b>M</b>	<b>M</b>
25	117056	Experiment of Physical Chemistry	<b>L</b>	None	None	None	<b>H</b>	None	<b>M</b>	None	None
26	120003	Biochemistry practice	None	<b>M</b>	None	None	<b>H</b>	None	<b>H</b>	None	None
27	102063	Marxist-Leninist philosophy	<b>H</b>	None	None	None	None	None	None	None	<b>M</b>
28	102064	Marxist-Leninist political economy	<b>H</b>	None	None	None	None	None	None	None	<b>M</b>

29	102065	Scientific socialism	<b>H</b>	None	None	None	None	None	None	None	None	<b>M</b>
30	102006	General Law	<b>M</b>	None	None	None	None	None	None	None	<b>H</b>	<b>M</b>
31	102058	Foreign language 4	None	None	None	None	None	<b>M</b>	None	None	None	<b>H</b>
32	120059	Process and Technology Equipment II	<b>M</b>	<b>H</b>	<b>L</b>	None	<b>M</b>	None	<b>L</b>	None	None	None
33	120060	Food processing technology	None	<b>L</b>	<b>H</b>	<b>M</b>	<b>L</b>	None	None	None	None	<b>M</b>
34	120004	Practical Of Microbiology	None	<b>M</b>	None	None	<b>H</b>	None	<b>H</b>	None	None	None
35	120061	Experiment of Food Analysis Technology	None	<b>M</b>	None	None	<b>H</b>	<b>L</b>	<b>H</b>	None	None	None
36	117031	Descriptive Geometry	<b>L</b>	None	<b>M</b>	None	None	<b>H</b>	None	None	None	None
37	122016	Labor safety	None	None	<b>L</b>	<b>H</b>	None	None	<b>M</b>	<b>H</b>	<b>M</b>	None
38	117069	Cleaner production technology	None	<b>M</b>	<b>L</b>	<b>H</b>	<b>L</b>	None	None	<b>H</b>	None	None
39	102059	Foreign language 5	None	None	None	None	None	<b>M</b>	None	None	None	<b>H</b>
40	120062	Chemical Equipment Design and Calculation	<b>M</b>	<b>L</b>	<b>H</b>	None	None	<b>L</b>	<b>M</b>	None	None	None
41	117029	English academic writing	None	None	None	None	None	<b>M</b>	None	None	None	<b>H</b>
42	117068	Quality Management	None	<b>M</b>	None	<b>H</b>	None	<b>L</b>	None	None	None	None
43	120013	Fermentation technology	None	<b>H</b>	<b>L</b>	<b>M</b>	<b>M</b>	None	None	None	None	None

44	117060	Technical internship	None	None	<b>L</b>	<b>L</b>	None	<b>H</b>	None	<b>M</b>	None
45	120063	Experimental Design and Data Analysis	<b>L</b>	<b>H</b>	None	None	None	<b>M</b>	None	None	<b>L</b>
46	120053	Experiment of fermentation technology	None	<b>M</b>	<b>M</b>	None	<b>H</b>	None	<b>M</b>	None	None
47	120064	1st Specific Project	None	<b>L</b>	<b>M</b>	None	<b>M</b>	<b>L</b>	<b>H</b>	None	None
48	120029	Functional Food	<b>M</b>	None	None	<b>H</b>	None	None	None	<b>M</b>	<b>L</b>
49	122017	Human and Environment	<b>M</b>	None	None	<b>M</b>	None	None	None	<b>H</b>	<b>L</b>
50	122060	Water - waste water treatment engineering	None	None	None	<b>H</b>	None	<b>L</b>	<b>L</b>	<b>M</b>	None
51	102066	The History of the Vietnamese Communist Party	<b>H</b>	None	None	None	None	None	None	None	<b>M</b>
52	102033	Ho Chi Minh's ideology	<b>H</b>	None	None	None	None	None	None	None	<b>M</b>
53	102060	Foreign language 6	None	None	None	None	None	<b>M</b>	None	None	<b>H</b>
54	117030	English technical presentation	None	None	None	None	None	<b>M</b>	None	None	<b>H</b>
55	117062	Process and technology Internship	None	None	<b>L</b>	<b>L</b>	None	<b>H</b>	None	<b>M</b>	None
56	120018	Post-harvest technology	<b>L</b>	<b>H</b>	<b>M</b>	<b>L</b>	None	None	None	None	None
57	120020	Sensory Evaluation and Food Quality Management	<b>L</b>	<b>H</b>	None	None	None	<b>M</b>	None	None	None
58	120065	2nd Specific Project	None	<b>L</b>	<b>M</b>	None	<b>M</b>	<b>M</b>	<b>H</b>	None	None

59	120048	Practical Sensory Evaluation	None	<b>M</b>	None	None	<b>M</b>	<b>L</b>	<b>H</b>	None	None
60	121044	Natural products technology	None	<b>M</b>	None	<b>L</b>	<b>L</b>	<b>L</b>	None	None	None
61	120066	Product development	<b>L</b>	<b>L</b>	<b>M</b>	<b>L</b>	<b>M</b>	<b>L</b>	<b>H</b>	None	<b>L</b>
62	120026	Food packaging technology	None	None	None	<b>H</b>	None	<b>L</b>	None	<b>L</b>	None
63	120067	Business Administration for engineers	<b>M</b>	None	None	None	None	<b>H</b>	<b>M</b>	None	<b>L</b>
64	120068	Oil and grease production technology	<b>L</b>	<b>M</b>	<b>H</b>	<b>M</b>	<b>L</b>	None	None	<b>L</b>	None
65	120069	Meat and seafood processing and preservation	<b>L</b>	<b>M</b>	<b>H</b>	<b>M</b>	<b>L</b>	<b>L</b>	<b>L</b>	<b>L</b>	None
66	120070	Dairy and Bakery Processing Technology	<b>L</b>	<b>M</b>	<b>H</b>	<b>M</b>	<b>L</b>	<b>L</b>	<b>M</b>	<b>L</b>	None
67	120071	Tea, Coffee, Vegetables and Fruits Processing Technology	<b>L</b>	<b>M</b>	<b>H</b>	<b>M</b>	<b>L</b>	<b>M</b>	<b>L</b>	<b>L</b>	None
68	120072	Technology of soft drinks and fruit juices	<b>L</b>	<b>M</b>	<b>H</b>	<b>M</b>	<b>L</b>	<b>M</b>	<b>L</b>	<b>L</b>	None
69	120073	Food Additives	<b>L</b>	None	None	<b>M</b>	None	None	<b>L</b>	None	None
70	120074	Food Safety Laws	<b>L</b>	None	None	<b>M</b>	None	<b>L</b>	<b>L</b>	<b>H</b>	None
71	120075	Food culture	<b>L</b>	None	None	<b>H</b>	None	<b>L</b>	<b>L</b>	None	None
72	120076	Nutrition and Food Safety	<b>M</b>	None	None	<b>L</b>	None	None	None	<b>H</b>	None
73	120045	Practical oil and grease production technology	None	<b>L</b>	<b>M</b>	None	<b>H</b>	<b>M</b>	<b>M</b>	None	None

74	120046	Practical Meat and seafood processing and preservation	None	<b>L</b>	<b>M</b>	None	<b>H</b>	<b>M</b>	<b>M</b>	None	None
75	120047	Practical Dairy and Bakery Processing Technology	None	<b>L</b>	<b>L</b>	None	<b>H</b>	<b>L</b>	<b>M</b>	None	None
76	120049	Practical Tea, Coffee, Vegetables and Fruits Processing Technology	None	<b>L</b>	<b>L</b>	None	<b>H</b>	<b>M</b>	<b>L</b>	None	None
77	120077	Experiment of soft drinks and fruit juices processing	None	<b>L</b>	<b>M</b>	None	<b>H</b>	<b>M</b>	<b>M</b>	None	None
78	66666	Thesis	None	None	<b>H</b>	None	None	<b>H</b>	None	None	<b>H</b>



## 5. KNOWLEDGE BLOCKS

Knowledge Block		Total Credits	Total numbers of courses
General Knowledge Block	Political Theory	11	5 courses
	Language	12	6 courses
	Social Sciences	2	1 courses
	Mathematics, Computer Science, Natural Sciences, Technology	13	6 courses
Specialized Knowledge Block	Specialized Foundation	57	29 courses
	Specialization	45	21 courses
Graduation	Business Internship (if any), Project (if any))	10	1 course
	Thesis or Graduation Project		
Minimum Cumulative Credits for the Entire Program		<b>150</b>	

## 6. CURRICULUM PROGRAM

Course Code	Course Name	Credits				No. of Periods
		Total credits	Theory	Practice	Assignment	
	Defense Education	0	0	0	0	165
102002	Physical Education 1	0	0	0	0	30
102008	General physics	3	3	0	0	45
102025	Advanced mathematics 1	2	1	0	1	45
102081	Foreign language 1	2	2	0	0	30
120054	General Chemistry	3	3	0	0	45
117009	Internship	1	0	1	0	45
117043	Basic marketing	2	2	0	0	30
117010	Labs Technology Skills	1	0	1	0	45

117001	Experiments In General Chemistry	1	0	1	0	45
<b>Total Semester 1</b>		<b>15</b>	<b>11</b>	<b>3</b>	<b>1</b>	<b>330</b>
102003	Physical Education 2	0	0	0	0	30
102011	Experiments in general physics	1	0	1	0	45
102014	Office Information	3	2	1	0	75
102062	Advanced mathematics 2	2	1	0	1	45
102034	Probability Statistics	2	1	0	1	45
102082	Foreign language 2	2	1	0	1	45
117007	Inorganic Chemistry	3	3	0	0	45
117002	Organic Chemistry	3	3	0	0	45
117057	Experiments in Inorganic chemistry	1	0	1	0	45
117055	Experiments in Organic chemistry	1	0	1	0	45
<b>Total Semester 2</b>		<b>18</b>	<b>11</b>	<b>4</b>	<b>3</b>	<b>435</b>
102004	Physical Education 3	0	0	0	0	30
102083	Foreign language 3	2	1	0	1	45
120055	Microbiology and microbiological testing method	3	3	0	0	45
120056	Methods of Food analysis technology	3	3	0	0	45
120057	Process and Technology Equipment I	3	3	0	0	45
120058	Physical Chemistry	3	3	0	0	45
120024	Biochemistry	3	3	0	0	45
117045	Scientific research methodology	2	2	0	0	30
117056	Experiment of Physical Chemistry	1	0	1	0	45

120003	Biochemistry practice	1	0	1	0	45
<b>Total Semester 3</b>		<b>21</b>	<b>18</b>	<b>2</b>	<b>1</b>	<b>390</b>
102063	Marxist-Leninist philosophy	3	3	0	0	45
102064	Marxist-Leninist political economy	2	2	0	0	30
102065	Scientific socialism	2	2	0	0	30
102006	General Law	2	2	0	0	30
102084	Foreign language 4	2	1	0	1	45
120059	Process and Technology Equipment II	3	3	0	0	45
120060	Food processing technology	3	3	0	0	45
120004	Practical Of Microbiology	1	0	1	0	45
120061	Experiment of Food Analysis Technology	1	0	1	0	45
<b>Elective courses (choose 2 out of 3)</b>						
117031	Descriptive Geometry	2	2	0	0	30
122016	Labor safety	2	2	0	0	30
117069	Cleaner production technology	2	2	0	0	30
<b>Total Semester 4</b>		<b>23</b>	<b>20</b>	<b>2</b>	<b>1</b>	<b>420</b>
102085	Foreign language 5	2	1	0	1	45
120062	Chemical Equipment Design and Calculation	3	3	0	0	45
117029	English academic writing	2	2	0	0	30
117068	Quality Management	2	2	0	0	30
120013	Fermentation technology	2	2	0	0	30
117060	Technical internship	1	0	1	0	45

120063	Experimental Design and Data Analysis	3	3	0	0	45
120053	Experiment of fermentation technology	1	0	1	0	45
120064	1st Specific Project	2	1	0	1	45
<b>Elective courses (choose 1 out of 3)</b>						
120029	Functional Food	2	2	0	0	30
122017	Human and Environment	2	2	0	0	30
122060	Water - waste water treatment engineering	2	2	0	0	30
<b>Total Semester 5</b>		<b>20</b>	<b>16</b>	<b>2</b>	<b>2</b>	<b>390</b>
102066	The History of the Vietnamese Communist Party	2	2	0	0	30
102033	Ho Chi Minh's ideology	2	2	0	0	30
102086	Foreign language 6	2	1	0	1	45
117030	English technical presentation	2	2	0	0	30
117062	Process and technology Internship	1	0	1	0	45
120018	Post-harvest technology	2	2	0	0	30
120020	Sensory Evaluation and Food Quality Management	2	2	0	0	30
120065	2nd Specific Project	2	1	0	1	45
120048	Practical Sensory Evaluation	1	0	0	1	30
<b>Elective courses (choose 3 out of 4)</b>						
121044	Natural products technology	2	2	0	0	30
120066	Product development	2	2	0	0	30

120026	Food packaging technology	2	2	0	0	30
120067	Business Administration for engineers	2	2	0	0	30
<b>Total Semester 6</b>		<b>22</b>	<b>18</b>	<b>1</b>	<b>3</b>	<b>405</b>
<b>Elective courses 7.1 (choose 6 out of 9)</b>						
120068	Oil and grease production technology	3	3	0	0	45
120069	Meat and seafood processing and preservation	3	3	0	0	45
120070	Dairy and Bakery Processing Technology	3	3	0	0	45
120071	Tea, Coffee, Vegetables and Fruits Processing Technology	3	3	0	0	45
120072	Technology of soft drinks and fruit juices	3	3	0	0	45
120073	Food Additives	3	3	0	0	45
120074	Food Safety Laws	3	3	0	0	45
120075	Food culture	3	3	0	0	45
120076	Nutrition and Food Safety	3	3	0	0	45
<b>Elective courses 7.2 (choose 3 out of 5)</b>						
120045	Practical oil and grease production technology	1	0	0	1	30
120046	Practical Meat and seafood processing and preservation	1	0	0	1	30
120047	Practical Dairy and Bakery Processing	1	0	0	1	30

	Technology					
120049	Practical Tea, Coffee, Vegetables and Fruits Processing Technology	1	0	0	1	30
120077	Experiment of soft drinks and fruit juices processing	1	0	0	1	30
<b>Total Semester 7</b>		<b>21</b>	<b>18</b>	<b>0</b>	<b>3</b>	<b>360</b>
66666	Thesis	10	10	0	0	150
<b>Total Semester 8</b>		<b>10</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>150</b>
<b>Total</b>		<b>150</b>	<b>122</b>	<b>14</b>	<b>14</b>	<b>2880</b>

## 7. GRADUATION REQUIREMENTS

Students accumulate enough courses and 150 credits of the program.

Students must meet the criteria according to the regulations on regular university and college training for the cohort 2021-2025, issued under Decision No. 583/QĐ-ĐHLH dated September 14, 2020 by the Rector of Lac Hong University.