UNDERGRADUATE PROGRAM

(Issued together with Decision No. /QĐ-ĐHNCT dated / /2025 of The Rector of Nam Can Tho University)

Name of program:PharmacyLevel:Bachelor's degree

Major: Pharmacy Code: 7720201

Type of education: full-time

1. Program description

1.1. Introduction to the program

The Pharmacy training program at Nam Can Tho University is one of the academic programs designed with a modern, practice-oriented curriculum, aiming to comprehensively develop both professional knowledge and practical skills in two key areas: Community Pharmacy and Pharmaceutical Sciences.

Community Pharmacy is a specialized field that focuses on the role of pharmacists in public healthcare by providing consultation and guidance on the rational, safe, and effective use of medications.

Pharmaceutical Sciences is a field that focuses on the research and development of medicinal materials, as well as the production, testing, and quality assurance of pharmaceutical products.

Name of program in English	Pharmacy
Program code	7720201
Degree-granting institution	Nam Can Tho University
Degree	Bachelor's degree
Level	Undergraduate
The number of required credits	166
Type of education	full-time
Program duration	5 year

1.2. General information about the program

Eligible candidates for admission	High school graduate
Grading scale	4
Graduation requirements	 Accumulated the required number of courses and completed 166 credits as specified in the training program; Achieved a cumulative GPA of 2.0 or higher for the entire course; Met the graduation requirements for English proficiency and computer skills as regulated by the university;
	 Met the graduation requirements for soft skills and professional skills;
	- Possesses a certificate in National Defense and Security Education and has completed all prerequisite courses.
Job opportunities	After graduating from the Pharmacy program, students can take on various roles as pharmacists in different fields, including: - In the production sector, pharmacists play a vital role in pharmaceutical manufacturing and trading companies, participating in the production, distribution, and management processes to ensure that the pharmaceuticals produced meet the registered quality standards. - In the quality control sector, pharmacists work as specialists responsible for inspecting and testing the quality of pharmaceuticals and cosmetics at provincial or city pharmaceutical-cosmetic testing centers. - In pharmaceutical research and development, pharmacists conduct research, develop, and improve new drug formulations or new raw materials, and participate in projects related to public health protection. - In hospitals, pharmacists manage and supply pharmaceuticals, engage in clinical pharmacy practice, and collaborate with doctors during patient treatment, guiding the proper use of

	 medications to achieve the best ouElective courseomes for patients Additionally, in the business sector, pharmacists work as marketing staff to introduce new pharmaceuticals to pharmaceutical companies, manage and distribute pharmaceuticals for distribution companies, or they may operate their own businesses through private pharmaceis.
Postgraduate study options	Graduates also have the option to pursue another undergraduate degree or continue their studies at the postgraduate level, such as specialized training, master's, or doctoral programs at universities as per the regulations of the Ministry of Education and Training.
Reference program	- The training programs and learning ouElective courseomes of the Pharmacy departments at Can Tho University of Medicine and Pharmacy, Ho Chi Minh City University of Medicine and Pharmacy, Hanoi University of Medicine and Pharmacy, and Thai Nguyen University of Medicine and Pharmacy, Mahidol University (Thailand), Temple University (USA).
Update time	2025

1.3. Program goals

1.3.1. General goals

- Training pharmacists at the undergraduate level ensures that graduates have good health, solid knowledge, and professional competencies that meet societal demands and the needs of learners, in line with the country's industrialization and modernization process

- Possesses ethical qualities, the ability for self-learning and self-research to achieve the program ouElective courseomes regarding knowledge, skills, and the ability to be autonomous and responsible

- Training human resources with sufficient capacity to work at agencies, factories, companies, and enterprises related to the pharmaceutical field

1.3.2. Specific goals

PO1: Students have a comprehensive knowledge of Pharmacy, as well as knowledge of political science, social science, and legal aspects related to their specialized field of activity

PO2: Students possess professional skills ranging from basic to advanced levels to

function effectively in their specialized field

PO3: Students have soft skills to build and implement plans and effectively practice pharmacy work in healthcare facilities, communities, and national health programs

PO4: Students have professional ethics and responsibility towards the community, possess self-learning and self-research abilities, self-experience, and soft skills for professional development, and are creative in solving practical problems in the field of pharmacy

1.4. Student learning ouElective courseomes

a. Knowledge

SO1: Explain knowledge about political science, social science, law, and national defense education to develop a sense of responsibility for defending the country

SO2: Analyze professional knowledge to plan, implement, and manage occupational activities in the field of pharmacy.

SO3: Apply procedures, management systems, equipment, and legal documents related to pharmaceuticals to conduct professional practice.

b. Skills

SO4: Outline directions, plans, and solutions to technical problems during the operation of production activities for manufacturing and distribution facilities.

SO5: Complete effective communication skills, technological knowledge, and new knowledge to improve and elevate professional expertise and work efficiency

SO6: Analyze the quality of individual and group project work to start a business, produce, trade, and distribute

SO7: Complete English proficiency and computer skills as stipulated by the Ministry of Education and Training; effectively and safely use digital technologies to present, share issues, and solutions in the workplace

c. Capacity for autonomy and responsibility

SO8: Propose professional conclusions; work independently or in a team in professional practice activities and take personal responsibility as well as accountability for the team.

SO9: Connect one's own work with others, assist others in performing tasks to improve the efficiency of activities in professional practice.

1.5 Teaching and learning methods/strategies and assessment methods

1.5.1. Teaching and learning methods/strategies

Methods and form of teaching	Purpose
Presentation	Provide students with a scientific and logical system of basic knowledge of the subject

The teaching methods are presented in the table below

Discussion	(Increase the ability to react flexibly and handle situations)
Assignment	Help learners cultivate carefulness, accuracy, meticulousness, and the ability to analyze theoretical issues
Self-study, reading of reference materials	Help learners enhance their teamwork skills and improve their communication skills

No.	Form	%	Assessment criteria	Maximu m score
1	Attendance	10	 Proactiveness and the level of active preparation for lessons and participation in in-class small assignments. Attendance in class sessions is mandatory, with absences not exceeding 20% of the total class hours. Depending on the number of missed sessions, the lecturer will decide the points awarded based on the absence ratio Individual Assignment or Individual Exercise 	10
2	Indididual assignment	15	The quality of the submitted deliverables.	10
3	Progress assessment	15	Based on the lecturer's provided answer key and scoring criteria	10
4	Final exam	60	 + Exam format: Multiple choice) + Exam grading criteria: Based on the answer key provided by the instructor 	10

1.5.2. Grading scale, form, assessment criteria, and weight of scores

2. Program duration: 5 years

3. Required total credits

Required total credits: 166 credits (excluding the Physical Education and Defense and security education courses), distributed as follows:

Knowledge	Obligatory knowledge	Elective knowledg e	Total
General knowledge	48	00	48

Knowledge	Obligatory knowledge	Elective knowledg e	Total
Professional knowledge	100	18	118
Fundamental knowledge	34	00	34
Specialized knowledge	60	12	72
Graduation internship	6	0	6
Graduation thesis/Alternative courses	00	6	6
Total	148	18	166

4. Eligible candidates for admission: High school graduate

5. Curriculum, graduation requirements

5.1. Curriculum

The implementation of the undergraduate and college training regulations under the full-time credit system and the current training regulations of Nam Can Tho University.

5.2. Graduation requirements

- Accumulated the required number of courses and completed 166 credits as specified in the training program;

- Achieved a cumulative GPA of 2.0 or higher for the entire course;

- Met the graduation requirements for English proficiency and computer skills as regulated by the university;

- Met the graduation requirements for soft skills and professional skills;

- Possesses a certificate in National Defense and Security Education and has completed all prerequisite courses.

6. Program structure

6.1. General knowledge

No.	Course code	Course name	Number of credits	Theory	Practice	Category
Α	Political theor	У				
1.	0102000889	Marxism- Leninism Philosophy	3	3	0	Compulsory
2.	0102000641	Political Economy	2	2	0	Compulsory
3.	0102000890	Scientific socialism	2	2	0	Compulsory
4.	0102000900	Ho Chi Minh's Thought	2	2	0	Compulsory
5.	0102000869	History of the Communist Party of Vietnam	2	2	0	Compulsory

No.	Course code	Course name	Number of credits	Theory	Practice	Category		
В	Social Science	Social Sciences and Humanities						
6.	0102000891	General Law	2	2	0	Compulsory		
7.	0102000460	Pharmacceutical Ethics	2	2	0	Compulsory		
8.	0101002166	Entrepreneurship and Innovation	2	2	0	Compulsory		
C	Foreign langu	ages						
9.	0102000422	English for Pharmacy	3	3	0	Compulsory		
D	Mathematics -	– Information Techno	logy – Natu	ral Sciences				
10.	0102001145	Probability and Statistics	3	3	0	Compulsory		
11.	0102000896	Basic Computer Science	3	2	1	Compulsory		
12.	0102000543	Applied Informatics (Pharmaceuticals)	3	2	1	Compulsory		
13.	0101002204	Digital Transformation	2	2	0	Compulsory		
14.	0101002688	Application of Generative Artificial Intelligence	2	2	0	Compulsory		
15.	0102000902	General Physics	2	2	0	Compulsory		
16.	0102000960	General Physics Laboratory	1	0	1	Compulsory		
17.	0102000275	General and Inorganic Chemistry	2	2	0	Compulsory		
18.	0102000277	General and Inorganic Chemistry Laboratory	1	0	1	Compulsory		
19.	0102000892	Gereral Biology	2	2	0	Compulsory		
20.	0102000957	Gereral Biology Laboratory	1	0	1	Compulsory		
21.	0102000262	Organic Chemistry 1	2	2	0	Compulsory		
22.	0102000953	Organic Chemistry 1 Laboratory	1	0	1	Compulsory		
23.	0102000264	Organic Chemistry 2	2	2	0	Compulsory		
24.	0102000954	Organic Chemistry 2 Laboratory	1	0	1	Compulsory		
E	Physical education	ation						

No.	Course code	Course name	Number of credits	Theory	Practice	Category		
25.	0102000872	Physical Education 1*	1	0	1	Compulsory		
26.	0102000873	Physical Education 2*	1	0	1	Compulsory		
27.	0102000874	Physical Education 3*	1	0	1	Compulsory		
F	F National Defense Education							
28.	0102000871	National Defense Education and Security*	8	5	3	Compulsory		

(*) Prerequisite courses, not included in the cumulative GPA calculation

6.2. Professional knowledge

No.	Course code	Course name	Number of credits	Theory	Practice	Category		
Fund	Fundamental knowledge							
29.	0102000434	Pathology	3	3	0	Compulsory		
30.	0102000471	Physical chemistry	2	2	0	Compulsory		
31.	0102000939	Physical chemistry Laboratory	1	0	1	Compulsory		
32.	0102000271	Analytical Chemistry 1	2	2	0	Compulsory		
33.	0102000950	Analytical Chemistry 1 Laboratory	1	0	1	Compulsory		
34.	0102000908	Analytical Chemistry 2	2	2	0	Compulsory		
35.	0102000951	Analytical Chemistry 2 Laboratory	1	0	1	Compulsory		
36.	0102000485	Biochemistry	2	2	0	Compulsory		
37.	0102000940	Biochemistry laboratory	1	0	1	Compulsory		
38.	0102000496	Parasitology	1	1	0	Compulsory		
39.	0102000955	Parasitology Laboratory	1	0	1	Compulsory		
40.	0102000524	Scientific Research methodology in Pharmacy	2	2	0	Compulsory		
41.	0102000535	Physiology	2	2	0	Compulsory		
42.	0102000956	Physiology Laboratory	1	0	1	Compulsory		
43.	0102000555	RecognitionofMedicinalPlantsLaboratory	1	0	1	Compulsory		
44.	0102000556	Pharmacetical Skills Laboratory	1	0	1	Compulsory		
45.	0102000564	Pharmaceutical Botany	2	2	0	Compulsory		
46.	0102000565	Pharmaceutical Botany Laboratory	1	0	1	Compulsory		
47.	0102000567	Microbiology	2	2	0	Compulsory		
48.	0102000942	Microbiology Laboratory	1	0	1	Compulsory		
49.	0102000467	Anatomy	2	2	0	Compulsory		
50.	0102000536	Pathophysiology and immunology	2	2	0	Compulsory		
Spec	ialized knowle	dge						
51.	0102000429	Pharmaceutics and biopharmaceutics 1	2	2	0	Compulsory		

No.	Course code	Course name	Number of credits	Theory	Practice	Category
52.	0102000948	Pharmaceutics and biopharmaceutics Laboratory 1	1	0	1	Compulsory
53.	0102000430	and biopharmaceutics 2 Laboratory	2	2	0	Compulsory
54.	0102000949	Pharmaceuticsandbiopharmaceutics2Laboratory	1	0	1	Compulsory
55.	0102000464	Toxicology	1	1	0	Compulsory
56.	0102000936	Toxicology Laboratory	1	0	1	Compulsory
57.	0102000446	Traditional Pharmacy	2	2	0	Compulsory
58.	0102000530	Traditional Pharmacy Laboratory	1	0	1	Compulsory
59.	0102000448	Clinical pharmacy 1	2	2	0	Compulsory
60.	0101002692	Clinical Pharmacy 1 Laboratory	1	0	1	Compulsory
61.	0102000449	Clinical pharmacy 2	2	2	0	Compulsory
62.	0102000932	Clinical Pharmacy 2 Laboratory	1	0	1	Compulsory
63.	0102000452	Pharmacognosy 1	2	2	0	Compulsory
64.	0102000933	Dược liệu 1-Thực hành Pharmacognosy 1 Laboratory	1	0	1	Compulsory
65.	0102000453	Pharmacognosy 2	3	3	0	Compulsory
66.	0102000934	Pharmacognosy 2 Laboratory	1	0	1	Compulsory
67.	0102000454	Pharmacology 1	2	2	0	Compulsory
68.	0102001163	Pharmacology 1 Laboratory	1	0	1	Compulsory
69.	0102000457	Pharmacology 2	3	3	0	Compulsory
70.	0102000935	Pharmacology 2 Laboratory	1	0	1	Compulsory
71.	0102000478	Pharmaceutical chemistry 1	2	2	0	Compulsory
72.	0102000937	PharmaceuticalChemistry1Laboratory	1	0	1	Compulsory
73.	0102000479	Pharmaceutical chemistry 2	3	3	0	Compulsory

No.	Course code	Course name	Number of credits	Theory	Practice	Category
74.	0102000938	Pharmaceutical chemistry 2 Laboratory	1	0	1	Compulsory
75.	0102000489	Drug Quality Control	2	2	0	Compulsory
76.	0102000943	Drug Quality Control 1 Laboratory	1	0	1	Compulsory
77.	0102000490	Drug Quality Control 2	2	2	0	Compulsory
78.	0102000944	Drug Quality Control 2 Laboratory	1	0	1	Compulsory
79.	0102000518	Pharmaceutical Legislation	3	3	0	Compulsory
80.	0102000529	Pharmaceutical Manufacturing 1	3	3	0	Compulsory
81.	0102001528	Pharmaceutical Manufacturing Laboratory 1	2	0	2	Compulsory
82.	0102000530	Pharmaceutical Manufacturing 2	2	2	0	Compulsory
83.	0102000522	Pharmacognosy Research methodology	2	2	0	Compulsory
84.	0102000946	Pharmacognosy Research methodology Laboratory	2	0	2	Compulsory
85.	0102000458	Sociology of Pharmacy	2	2	0	Compulsory
Elect Com	ive course of s munity pharm	pecialized knowledge 1 acy				
86.	0102000445	Pharmacokinetic	2	2	0	Elective
87.	0102001696	Drug supply management	2	2	0	Elective
88.	0102000492	Pharmacoeconomics	2	2	0	Elective
89.	0102000504	Pharmaceutical Marketing	2	2	0	Elective
90.	0102000516	Good Practice Standards System	2	2	0	Elective
91.	0102000447	Clinical Pharmacy 3	2	2	0	Elective

No.	Course code	Course name	Number of credits	Theory	Practice	Category
Elect Phar	ive course of s maceutical scie	pecialized knowledge 2 ences				
92.	0102001688	Cosmetics and Functional Foods	2	2	0	Elective
93.	0102001692	Pharmaceutical packaging	2	2	0	Elective
94.	0102001691	Research and Develoment methods in new drugs	2	2	0	Elective
95.	0102001700	Herbal extraction techniques	2	2	0	Elective
96.	0102000441	Advanced Treatment Systems	2	2	0	Elective
97.	0102001689	Nanotechnology applications in pharmaceutical production	2	2	0	Elective
Grad	uation interns	hip				
98.	0102000527	Graduation Internship 1: Pharmaceutical Management and Supply Chain	2	0	2	Compulsory
99.	0102000532	Graduation Internship 2 – Drug Manufacturing	2	0	2	Compulsory
100.	0102001527	Graduation Internship 3: Drug Quality Control	2	0	2	Compulsory
Grad	uation thesis/A	Alternative courses				
101.	0102000497	Final Year Project (Pharmacy)	6	6	0	Elective
Alter	native courses munity pharm	9CV				
102.	0102001460	Pharmaceutical Care	2	2	0	Elective
103.	0101000444	Community Pharmacy	2	2	0	Elective
104.	0102001699	Some Diseases Caused by Drugs	2	2	0	Elective
Alter Phar	native courses	ancos				
105.	0102000463	Drug Stability	2	2	0	Elective
106.	0102000533	Pharmaceutical Production from Medicinal Plants	2	2	0	Elective
107.	0102001690	Some Instrumental Analytical Methods	2	2	0	Elective

No.	Course code	Course name	Number of credits	Theory	Practice	Category
		Applied in Drug Quality Control				

7. Tentative teaching plan

7.1. Semester 1

		Number	Total	Class periods		
No.	Course name	of credits	periods	Theor y	Practice	Category
1	General Chemistry	2	30	30	0	Compulsory
2	General Chemistry Laboratory	1	30	0	30	Compulsory
3	Basic Computer Science	3	60	30	30	Compulsory
4	National Defense Education and Security (*)	8	165	75	90	Compulsory
5	Physical Education 1 (*)	1	30	0	30	Compulsory
	Total	6	120	60	60	

7.2. Semester 2

		Number	Total	Class	periods	
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Digital Transformation	2	30	30	0	Compulsory
2	Gereral Biology	2	30	30	0	Compulsory
3	Gereral Biology Laboratory	1	30	0	30	Compulsory
4	Physical Education 2	1	30	0	30	Compulsory
5	General Physics	2	30	30	0	Compulsory
6	General Physics Laboratory	1	30	0	30	Compulsory
7	Anatomy	2	30	30	0	Compulsory
	Total	10	180	120	60	

7.3. Semester 3

		Number	Total	Class	periods	
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Organic Chemistry 1	2	30	30	0	Compulsory
2	Physical Education 3	1	30	0	30	Compulsory
3	Marxism- Leninism Philosophy	3	45	45	0	Compulsory
4	Application of Generative Artificial Intelligence	2	30	30	0	Compulsory
5	Organic Chemistry 1 Laboratory	1	30	0	30	Compulsory
6	Probability and Statistics	3	45	45	0	Compulsory
	Total	11	180	150	30	

7.4. Semester 4

		Number	Total	Class	periods	
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Organic Chemistry 2	2	30	30	0	Compulsory
2	Physiology	2	30	30	0	Compulsory
3	Political Economy	2	30	30	0	Compulsory
4	Organic Chemistry 2 Laboratory	1	30	0	30	Compulsory
5	Physiology Laboratory	1	30	0	30	Compulsory
6	General Law	2	30	30	0	Compulsory
	Total	10	180	120	60	

7.5. Semester 5

		Number	Total	Class periods		
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Biochemistry	2	30	30	0	Compulsory
2	Microbiology	2	30	30	0	Compulsory
3	Scientific socialism	2	30	30	0	Compulsory
4	Pathophysiology and immunology	2	30	30	0	Compulsory
5	Biochemistry laboratory	1	30	0	30	Compulsory
6	Microbiology Laboratory	1	30	0	30	Compulsory
7	Pharmacetical Skills Laboratory	1	30	0	30	Compulsory
	Total	11	210	120	90	

7.6. Semester 6

		Number	Total	Class periods		
No.	Course name	of credits	period s	Theor y	Practice	Category
1	English for Pharmacy	3	45	45	0	Compulsory
2	Pharmaceutical Botany	2	30	30	0	Compulsory
3	Pharmaceutical Botany Laboratory	1	30	0	30	Compulsory
4	Ho Chi Minh's Thought	2	30	30	0	Compulsory
5	Parasitology	1	15	15	0	Compulsory
6	Parasitology Laboratory	1	30	0	30	Compulsory
7	Entrepreneurship and Innovation	2	30	30	0	Compulsory
	Total	12	210	150	60	

7.7. Semester 7

		Number	Total	Class periods		
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Analytical Chemistry 1	2	30	30	0	Compulsory
2	Pharmaceutical Legislation	3	45	45	0	Compulsory
3	Physical chemistry	2	30	30	0	Compulsory
4	History of the Communist Party of Vietnam	2	30	30	0	Compulsory
5	Physical chemistry Laboratory	1	30	0	30	Compulsory
6	Analytical Chemistry 1 laboratory	1	30	0	30	Compulsory
	Total	11	195	135	60	

7.8. Semester 8

		Number	Total	Class	periods	
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Pharmacognosy 1	2	30	30	0	Compulsory
2	Pharmaceutical chemistry 1	2	30	30	0	Compulsory
3	Recognition of Medicinal Plants Laboratory	1	30	0	30	Compulsory
4	Analytical Chemistry 2	2	30	30	0	Compulsory
5	Pharmacognosy 1 Laboratory	1	30	0	30	Compulsory
6	Pharmaceutical Chemistry 1 Laboratory	1	30	0	30	Compulsory
7	Analytical Chemistry 2 laboratory	1	30	0	30	Compulsory
	Total	10	210	90	120	

7.9. Semester 9

		Number	Total	Class periods		
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Pharmaceutics and biopharmaceutics 1	2	30	30	0	Compulsory
2	Pharmacology 1	2	30	30	0	Compulsory
3	Sociology of Pharmacy	2	30	30	0	Compulsory
4	Pharmaceutical chemistry 2	3	45	45	0	Compulsory
5	Pharmaceutical chemistry 2 Laboratory	1	30	0	30	Compulsory
6	Pharmaceutics and biopharmaceutics Laboratory 1	1	30	0	30	Compulsory
7	Pharmacology Laboratory 1	1	30	0	30	Compulsory
	Total	12	225	135	90	

7.10. Semester 10

		Number	Total	Class periods		
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Pharmaceutics and biopharmaceutics 2 Laboratory	2	30	30	0	Compulsory
2	Pharmacognosy 2	3	45	45	0	Compulsory
3	Toxicology	1	15	15	0	Compulsory
4	Pharmacceutical Ethics	2	30	30	0	Compulsory
5	Pharmacognosy 2 Laboratory	1	30	0	30	Compulsory
6	Toxicology laboratory	1	30	0	30	Compulsory
7	Pharmaceutics and biopharmaceutics 2 Laboratory	1	30	0	30	Compulsory
	Total	11	210	120	90	

7.11. Semester 11

		Number	Total	Class	periods	
No.	Course name	of credits	period s	Theor y	Practice	Category
1	Pathology	3	45	45	0	Compulsory
2	Pharmacology 2	3	45	45	0	Compulsory
3	Pharmaceutical Manufacturing 1	3	45	45	0	Compulsory
4	Pharmacology Laboratory 2	1	30	0	30	Compulsory
5	Pharmaceutical Manufacturing Laboratory 1	2	60	0	60	Compulsory
	Total	12	225	135	90	

7.12. Semester 12

		Number	Total	Class	periods		
No.	Course name	of credits	period s	Theor y	Practice	Category	
1	Clinical pharmacy 1	2	30	30	0	Compulsory	
2	Dược lâm sàng 1-Thực hành Clinical Pharmacy Laboratory 1	1	30	0	30	Compulsory	
3	Drug Quality Control 1	2	30	30	0	Compulsory	
4	Pharmaceutical Manufacturing 2	2	30	30	0	Compulsory	
5	Applied Informatics (Pharmaceuticals)	3	60	30	30	Compulsory	
6	Drug Quality Control laboratory 1	1	30	0	30	Compulsory	
Community pharmacy							
7	Pharmacokinetic*	2	30	30	0	Elective	

		Number	Total Class p	Number Total Class periods				
No.	Course name	of credits	period s	Theor y	Practice	Category		
	Pharmaceutical sciences							
8	Cosmetics and Functional Foods*	2	30	30	0	Elective		
	Total	13	240	150	90			

Select 1 course from those marked with an asterisk (*)

7.13. Semester 13

	Course name	Number	Total	Class periods			
No.		of credits	period s	Theor y	Practice	Category	
1	Traditional Pharmacy	2	30	30	0	Compulsory	
2	Clinical pharmacy 2	2	30	30	0	Compulsory	
3	Drug Quality Control 2	2	30	30	0	Compulsory	
4	Traditional Pharmacy Laboratory	1	30	0	30	Compulsory	
5	Clinical Pharmacy Laboratory 2	1	30	0	30	Compulsory	
6	Drug Quality Control laboratory 2	1	30	0	30	Compulsory	
	Со	mmunity ph	armacy	_			
7	Pharmacoeconomics*	2	30	30	0	Compulsory	
8	Good Practice Standards System*	2	30	30	0	Elective	
Pharmaceutical sciences							
9	Pharmaceutical packaging*	2	30	30	0	Elective	
10	Research and Develoment methods in new drugs*	2	30	30	0	Elective	
	Total	13	240	150	90		

Select 2 courses from those marked with an asterisk (*)

7.14. Semester 14

		Number	Total	Class	periods		
No.	Course name	of credits	period s	Theor y	Practice	Category	
1	Pharmacognosy Research methodology	2	30	30	0	Compulsory	
2	Scientific Research methodology in Pharmacy	2	30	30	0	Compulsory	
3	Pharmacognosy Research methodology	2	60	0	60	Compulsory	
Community pharmacy							
4	Pharmaceutical Marketing*	2	30	30	0	Elective	
5	Clinical Pharmacy 3*	2	30	30	0	Elective	

		Number	Total	Class	periods			
No.	Course name	of credits	period s	Theor y	Practice	Category		
6	Drug supply management*	2	30	30	0	Elective		
	Pharmaceutical sciences							
7	Advanced Treatment Systems*	2	30	30	0	Elective		
8	Herbal extraction techniques*	2	30	30	0	Elective		
9	Nanotechnology applications in pharmaceutical production*	2	30	30	0	Elective		
	Total	12	210	150	60			

Select 3 courses from those marked with an asterisk (*)

7.15. Semester 15

	Course name	Number	Total	Class periods		
No.		of credits	period s	Theor y	Practice	Category
1	Graduation Internship 1: Pharmaceutical Management and Supply Chain	2	60	0	60	Compulsory
2	Graduation Internship 2 – Drug Manufacturing	2	60	0	60	Compulsory
3	Graduation Internship 3: Quality Control	2	60	0	60	Compulsory
4	Graduation thesis/Alternative courses	6	180	0	180	Elective
	Со	mmunity ph	armacy			
5	Pharmaceutical Care*	2	30	30	0	Elective
6	Community Pharmacy*	2	30	30	0	Elective
7	Some Diseases Caused by Drugs*	2	30	30	0	Elective
	Pha	rmaceutical	sciences			
8	Drug Stability*	2	30	30	0	Elective
9	Pharmaceutical Production from Medicinal Plants*	2	30	30	0	Elective
10	Some Instrumental Analytical Methods Applied in Drug Quality Control*	2	30	30	0	Elective
	Total	12				

(*) If students do not meet the requirements to complete their graduation thesis, they will take alternative courses). Select 3 courses from those marked with an asterisk (*)

8. Guidelines for Program Implementation

8.1 Faculties and departments

- The Department of Professional Management is responsible for reviewing and leading the development of detailed syllabi for the foundational sector, major, and

specialized courses in accordance with the credit workload of this program. It will provide a list of textbooks, lecture notes, and reference materials for all courses to the University Library and keep a copy at the Department Office. At the beginning of each semester, it will coordinate with the units within the University to implement the training plan according to the schedule.

- Assign faculty members with master's degrees or higher (in the relevant field or related specialty) to teach theoretical courses, and provide detailed syllabi for the courses to ensure alignment with the University's overall teaching plan.

- The academic advising team must thoroughly understand the entire training program according to the credit system to guide students in registering for courses.

8.2 Lecturers

- When faculty members are assigned to teach one or more courses, they need to carefully review the content of the detailed course syllabus to prepare lectures and appropriate teaching aids.

- Faculty must fully prepare lectures, sources of textbooks, and learning materials and provide them to students for preparation before class.

- Organize seminars, focusing on group study sessions and guiding students in writing essays and projects. Faculty should identify teaching methods; deliver lectures in class, facilitate discussions, address issues in class, in practice rooms, and laboratories, and guide students in writing reports

- Focus on developing students' self-learning and self-research abilities throughout the teaching process and during practical guidance

- Attention should be paid to the logical flow of delivering and acquiring knowledge blocks, regulating the prerequisite courses for mandatory subjects, and preparing faculty to meet the requirements for teaching elective courses

8.3 Students

- Students must consult their academic advisors to select courses that align with their schedule. They should self-study the lessons before class to better absorb the material. They must ensure they allocate enough time for lectures to receive guidance from faculty. It is essential to be proactive in self-learning and self-research while actively participating in group studies and attending all seminars.

- Be proactive and actively utilize online resources and the university library to assist with self-learning, self-research, and completing graduation projects. Adhere strictly to regulations regarding examinations, assessments, and evaluations.

- Regularly participate in extracurricular activities related to culture, sports, and the arts to develop communication skills and understanding of society and people.

8.4 Facilities and equipment for teaching, practice, and internships

- The system of lecture classrooms is equipped with traditional facilities, along with additional teaching support tools (projectors)

- The computer lab is equipped with software for basic computer training

- The lab for fundamental courses in physics, general chemistry, organic chemistry, and analytical chemistry is equipped with facilities for hands-on training

- The pharmaceutical practice lab is equipped with appropriate machines, equipment, and tools.

RECTOR

DEPARTMENT OF ACADEMIC AFFAIRS

FACULTY