

**TRAINING PROGRAM OF PHARMACOLOGY AND CLINICAL PHARMACY**  
*(Issued together with Decision No .../QĐ-ĐHTĐ ..... by Rector of Tay Do University)*

**A. GENERAL INFORMATION**

1. Name of training program (English name):	Pharmacology and Clinical Pharmacy
2. Degree:	Master
3. Training codes:	8720205
4. Admission candidates:	Having a university pharmacist degree from all domestic and foreign training systems. University diplomas granted by foreign educational institutions must carry out recognition procedures according to current regulations. University diplomas granted by foreign educational institutions must carry out recognition procedures according to current regulations. University graduates are allowed to take the exam immediately after graduation, but must have a valid provisional certificate issued by the training institution and then must submit additional official diplomas.
5. Training time:	2 years
6. Training form:	Full time
7. Required credits:	60 credits
8. Scale	
9. Diploma:	Master of Pharmacology and Clinical Pharmacy
10. Working position:	Undertake pharmaceutical positions in practice, management agencies, treatment facilities such as hospitals, medical centers....., production, business, quality inspection and supervision establishments of pharmaceuticals, cosmetics and functional foods requiring the use of clinical pharmacists.

	Ability to teach and manage in professional training and research units Pharmacology and Clinical Pharmacy.
11. Possibility for further education:	Doctora

## **B. TRAINING OBJECTIVE AND LEARNING OUTCOMES**

### **I. Training Objectives**

#### **1. General objectives**

Training to improve the qualifications of teaching staff with postgraduate degrees at universities and colleges in the Mekong Delta region.

Master's level training to help students supplement, update, and improve their industry and specialized knowledge; strengthening interdisciplinary knowledge; having in-depth knowledge in a specialized scientific field or skills to apply that knowledge to professional practical activities; having the ability to work independently and think creatively; and having the ability to detect and solve problems in the trained industry or specialty.

#### **2. Specific objectives**

##### **a. Knowledge**

**G1.** Ability to practice in the field of health sciences, in which the master of pharmacology and clinical pharmacology performs the role of drug consultant to physicians, helping to optimize treatment regimens; at the same time, performs the role of providing information, advice, and guidance on safe, reasonable and effective use of drugs for medical workers and patients.

**G2.** Apply knowledge of pharmacology and clinical pharmacy to solving problems of drug use, prescription, and drug information in practice that innovation and integration are posing.

**G3.** Apply specialized research methods in pharmacology and clinical pharmacology to monitoring and managing compliance with safe, rational and effective drug use procedures.

##### **b. Skills**

**G4.** Effectively use theoretical knowledge and smoothly combine research methods to solve practical problems related to the field of pharmacology and clinical pharmacology research, or the relationship between clinical pharmacists and doctors.

**G5.** Research independently or lead, collaborate, exchange and share with research groups to implement scientific topics.

**G6.** Find, process, analyze and synthesize information from research results and effectively apply knowledge of pharmacology and clinical pharmacology in research.

**G7.** Properly implement skills in communication, counseling and medication instruction for patients in the community and in treatment facilities.

**G8.** Proficient in searching for drug information, exploiting clinical databases in surveys, assessing drug use in treatment.

### **3. Autonomy and responsibility**

**G9.** Learners participating in the program are able to develop professional plans, make management plans, coordinate, improve and develop professional activities in accordance with practice in the field of pharmacy.

**G10.** Work independently and in teams in changing working conditions, take personal responsibility and responsibility for the team, express personal views on problems to be solved

**G11.** Perform the work of guiding and supervising others to perform defined tasks in the field of health and pharmacy.

**G12.** Be aware of the need and have the ability to plan lifelong learning.

## **II. Learning outcomes:**

### **\* Knowledge**

**LO1.** Apply philosophical rationale in the implementation of strategies for scientific and technological development in the care and protection of people's health.

**LO2.** Analysis of basic principles and theories in the field of research in the field of pharmacology – clinical pharmacology

**LO3.** Apply interdisciplinary knowledge of physiology and molecular biology to solve problems of drug use and drug information in clinical practice.

**LO4.** Applying specialized pharmacology and clinical pharmacy research methods to monitor and manage adherence to safe, rational and effective medication use protocols.

**LO5.** Combine analysis - synthesis - evaluation of data and information to come up with solutions to handle problems scientifically.

**LO6.** Ability to impart knowledge based on research, discuss professional and scientific issues with colleagues

**LO7.** Have skills in communicating, consulting, searching and providing safe and effective drug information to medical staff and patients' families.

**LO8.** Advanced skills in organizing, administering and managing professional activities. Ability to guide and supervise the use of drugs in hospitals.

**LO9.** Use technologies creatively in the field of academia and expertise in pharmacology – clinical pharmacy.

**LO10.** Have foreign language proficiency equivalent to level 4/6 of the Vietnamese Foreign Language Proficiency Framework.

**LO11.** Identify and solve problems in the trained industry and propose valuable initiatives in the field of pharmacology – clinical pharmacy expertise.

**LO12.** Update drug use information, information on new drugs, pharmacovigilance information to guide health workers and patients in drug adherence.

**LO13.** Manage, evaluate and improve pharmacological - clinical pharmacy professional activities at the workplace.

**LO14.** Ability to organize and work independently, work in teams, develop new solutions, new technologies in the training industry

**LO15.** Demonstrate the ability to self-learn for life, foster and accumulate knowledge, experience, improve professional capacity to be able to make expert conclusions in the field of pharmacology – clinical pharmacy.

### III. The content of studying program (name and credit for each subject): 60 credits

<b>Total credit</b>		<b>60</b>
<b>1</b>	<b>General knowledgeski</b>	<b>05</b>
<b>2</b>	<b>Professional knowledges</b>	
	- Industry Foundations	<b>12</b>
	- Compulsory Knowledge	<b>26</b>
	- Optional knowledge	<b>08</b>
<b>3</b>	<b>Graduation scheme</b>	<b>09</b>

#### 1. General knowledge: 05 credits

Number	Code	Subject	Credits	Note
1	1166	Philosophy	3	
2	1707	Foreign Language (Specialized English)	2	

#### 2. Industry Foundations: 12 credits

Number	Code	Subject	Credits	Note
1	1712	Scientific research methods	2	
2	1693	Clinical pharmacokinetics	3	
3	1694	Molecular Biology Pharmaceutical Foundations	4	
4	1695	Pathophysiology	3	

### 3. Compulsory Knowledge: 34 credits

Number	Code	Subject	Credits	Note
<b>1. Compulsory Knowledge</b>			<b>26</b>	
1	1696	Adherence to drug use	2	
2	1697	Drug information and pharmacovigilance	2	
3	1699	Use drugs in treatment	3	
4	1701	Clinical pharmacology-trial design	3	
5	1702	Drug interactions	3	
6	1704	Errors in the use of the drug	3	
7	1705	Clinical tests	4	
		<b>Choose one of the two</b>		
8	2712	Clinical Pharmacy Application Internship	6	
9	2713	Pharmacological Application Internship	6	
<b>2. Optional knowledge</b>			<b>08</b>	
1	1698	Pharmacy care	3	
2	1700	Clinical drug toxicity	3	
3	2711	Biopharmacology and bioequivalence	2	
4	2714	Pharmaceutical law and legislation	2	
5	2715	Nosocomial infections and prophylactic antibiotics during surgery	2	
6	2716	Cell and molecular pharmacology	2	
7	2717	Medicinal pharmacology	2	
8	2718	Clinical nutrition	2	
9	2719	Drug use reviews	2	

### 4. Graduation scheme: 09 credits

Number	Code	Subject	Credits	Note
1	2720	Graduation scheme	9	