

**PROGRAMME LEARNING OUTCOMES (PLOs)
OF INFORMATION TECHNOLOGY EDUCATION PROGRAMME**
*Decision No 690/QĐ-ĐHCNTT&TT dated on June 30th, 2017 by the Rector
of TNU - University of Information and Communication Technology*

Vietnamese name of the programme: *Công nghệ thông tin*

English name of the programme: Information Technology

Academic level: Engineer's degree

Academic Schedule: 4.5 years

I. TRAINING OBJECTIVES

1.1. General objectives

Training engineers to provide students with comprehensive specialized knowledge, a firm grasp of natural and social principles and laws, fundamental practical skills, the ability to work independently, be creative, and solve problems within the field of Information Technology.

2.2. Detail objectives

By the end of the course, graduates have the knowledge, skills and qualities:

- Understand and apply the fundamental principles of Marxism-Leninism, the thoughts of Ho Chi Minh, and the revolutionary path of the Communist Party of Vietnam, as well as having knowledge of Vietnamese Law; Understand National Security and Defense; Have knowledge and the ability to self-train on physical fitness.
- Be able to apply basic mathematics and science knowledge to study and research in the field of Information Technology..
- Master the techniques, programming languages, tools, and know how to analyze and design algorithms.
- Master knowledge of computer networks, information security and network security, operation, and maintenance of information systems
- Master knowledge of database fundamentals and database management systems.
- Master techniques for analyzing and designing information systems, designing and building databases, integrating systems, and developing software.
- Master knowledge of machine learning and big data to create intelligent software products.
- Achieve level 3 proficiency in a foreign language according to the 6-level language proficiency framework as regulated by the Ministry of Education and Training, and have basic knowledge of foreign languages in the field of Information Technology.

- Have presentation skills, communication skills, and the ability to work in teams.

II. PROGRAM LEARNING OUTCOMES

The learning outcomes standard for the Information Technology program issued under Decision No. 690/QĐ-ĐHCNTT&TT expressed through the following content (encoded as L1 to L13):

Abbreviation PLO	Program learning outcomes standards (PLOs)	Capacity scale
<i>L1</i>	Apply natural science knowledge to solve scientific and technical problems in the field of information technology and have the ability to learn at higher levels.	3
<i>L2</i>	Understand the general education knowledge of Marxism-Leninism and Ho Chi Minh's ideology, the revolutionary line of the Communist Party of Vietnam, the Party's policies and state laws, and national defense and security.	2
<i>L3</i>	Achieve level 3/6 of English proficiency according to the Vietnamese Framework of Reference for Languages; possess specialized English language skills.	3
<i>L4</i>	Applying data structure models and programming techniques to build computer software.	3
<i>L5</i>	Understand the fundamental principles of computer operating systems, computer networks, and programming platforms to develop software.	2
<i>L6</i>	Apply fundamental knowledge of databases and database management systems in software development.	3
<i>L7</i>	Apply specialized knowledge to analyze, design, and build management information systems, intelligent systems, data management and processing systems, multimedia data.	3
<i>L8</i>	Systematize programming skills for application development on various platforms: Windows, Web, Mobile; open source applications.	4
<i>L9</i>	Be able to apply knowledge of the operating principles of network devices, switches, routers, and communication media to design, configure, and manage network systems; Understand knowledge of network security and authentication protocols to ensure network and system security.	3
<i>L10</i>	Apply the knowledge learned to explore, research and discover new knowledge in the field of information technology.	3
<i>L11</i>	Apply the knowledge of machine learning and big data to create intelligent software products that meet the needs of the market.	3
<i>L12</i>	Awareness of the context of businesses and organizations to deploy appropriate information technology applications that fit with practical needs.	3

Abbreviation PLO	Program learning outcomes standards (PLOs)	Capacity scale
L13	Apply communication skills in presenting ideas, giving presentations, arguments, and working collaboratively to implement and deploy information technology systems.	3

III. WORKING POSITION AFTER GRADUATION

Job positions:

- Programmer, analysis, design, construction, system integrator at software companies.
- Consultants in building information systems, managing information systems or administering networks at agencies and enterprises.
- Participating in teaching at Information Technology training schools, researchers at research institutes.

Job positions are available at:

- Software development companies and corporations
- Companies that provide integrated solutions.
- Companies providing solutions for network and network security.
- Management department, information technology department at companies, including companies operating in technology and other fields such as banking, healthcare, education, entertainment, etc.

VICE RECTOR



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