PROGRAMME LEARNING OUTCOMES (PLOs)
OF INFORMATION TECHNOLOGY EDUCATION PROGRAMME
Decision No 69/QD-ĐHCNTT&TT dated on February 10ᵗʰ, 2020 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:

   - Bachelor's degree (141 credits)

   - Engineer's degree (151 credits)

Academic Schedule: 4.5 years

I. TRAINING OBJECTIVES

1.1. General objectives

Training engineers so that students have comprehensive professional knowledge, master the principles and laws of nature-society, have basic practical skills, can work independently and creatively, and solve problems in the information technology industry.

2.2. Detail objectives

- Understand and apply knowledge of the Basic Principles of Marxism-Leninism, Ho Chi Minh Thought, Revolutionary Way of the Communist Party of Vietnam. Understand Vietnamese Law and National Security; Have the knowledge and ability to train themselves physically.

- Ability to apply basic mathematical and scientific knowledge to study and research in the field of information technology.

- Mastering techniques, languages, and programming tools, knowing how to analyze and design algorithms.

- Master the knowledge of computer networks, information safety, network security, and operation and maintenance of information systems.

- Master the knowledge of databases and database management systems.

- Master the information system analysis, design, database construction, system integration, and software development techniques.

- Master the knowledge of machine learning and big data to create intelligent software products.

- Attain foreign language level 3 in the 6-level foreign language competency framework prescribed by the Ministry of Education and Training, and have basic knowledge of foreign languages in information technology.

- Strong presentation, communication, and teamwork skills.

II. PROGRAM LEARNING OUTCOMES

The program learning outcomes of the Information Technology Training Program issued under Decision No. 690/QĐ-ĐHCNTT&TT expressed through the following contents (encoded: L1 ÷ L14):

Abbreviation PLO	Program learning outcomes standards (PLOs)	Capacity scale
L1	Applying knowledge of natural sciences to solve scientific and technical problems in the Information Technology industry and can study at high levels.	3
L2	Understand general educational knowledge of the Theory of Marxism-Leninism and Ho Chi Minh Thought, the revolutionary line of the Communist Party of Vietnam, the Party's policy and law of the State, national security room.	2
L3	Attain foreign language ability (English) level 3/6 Vietnam's Foreign Language Competency Framework; specialized English skills.	3
L4	Apply data structure models and programming techniques to build computer software.	3
L5	Understand the fundamentals of computer operating systems, computer networks, and programming platforms for software development.	2
L6	Apply basic knowledge of databases and database management systems in software development.	3
L7	Apply specialized knowledge to analyze, design and build management information systems, intelligent systems, data management and processing, multimedia data.	3
L8	Systematize application programming skills in software development platforms: Windows, web, mobile, and open-source applications.	4
L9	Applying knowledge of the operating principles of network devices, switching equipment, routing equipment, and communication media to design, configure, and manage network systems; Understanding knowledge of network security and authentication protocols to ensure network and system security.	3
L10	Applying learned knowledge to explore, research, and discover new knowledge in information technology.	3
L11	Applying machine learning and big data knowledge to create intelligent software products that meet market demands.	3
L12	Be aware of the context of businesses and organizations to deploy information technology applications in line with reality.	3
L13	Applying communication skills in presenting ideas, giving presentations, giving criticism, and working as a team in the implementation and deployment of information technology systems	3

Abbreviation PLO	Program learning outcomes standards (PLOs)	Capacity scale
L14	Apply machine learning fundamentals and pattern design principles in intelligent application development.	3

III. WORKING POSITION AFTER GRADUATION

Job positions:

- Programmers, design analysts, builders, and system integrators 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 and researchers at research institutes.

Job positions are available at:

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

VICE RECTOR	HEAD OF IT FACULTY
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