THAI NGUYEN UNIVERSITY
THAI NGUYEN UNIVERSITY OF INFORMATION AND COMMUNICATION TECHNOLOGY

SOCIALIST REPUBLIC OF VIETNAM
Independence - Freedom - Happiness

PROGRAMME LEARNING OUTCOMES (PLOs) OF SOFTWARE ENGINEERING 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: *Kỹ thuật phần mềm*
English name of the programme: Software Engineering
Academic level: Engineer's degree
Academic Schedule: 4.5 years

I. TRAINING OBJECTIVES

1.1. General objectives

To train software engineering engineers with solid political qualities, a sense of discipline and professional ethics; master the basic and intensive knowledge of Software Engineering, meet the social demand for research, development and application in the field of Software Engineering.

2.2. Detail objectives

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

- Have basic and intensive knowledge of Software Development Process; Knowledge and skills in using programming languages and techniques for software development; Knowledge and skills in software testing and quality assurance.
- Have good health, ensure the ability to work with high intensity;
- Have full knowledge of politics, security and defense, law as required by the Ministry of Education & Training;
- Have the ability to use foreign languages for work;
- Have the necessary soft skills for the job.

II. PROGRAM LEARNING OUTCOMES

Notation	PLOs of SE programme
L1	Apply knowledge of natural sciences in order to solve scientific and technical problems in Software Engineering and have the ability to study at high levels
L2	Understand general educational knowledge on Theory of Marxism-Leninism and Ho Chi Minh Thought, the revolutionary line of the Communist Party of Vietnam, the Party's policy and the State's laws, and national security.

Notation	PLOs of SE programme
L3	Approach foreign language ability (English), level 3/6 of Vietnam's Foreign Language Competency Framework; specialized English skills.
L4	Apply data structure models and programming techniques to build computer software
L5	Understand the fundamentals of computer operating systems, computer networks, and programming platforms for software development.
L6	Apply basic knowledge of databases and database management systems in software development
L7	Understand the knowledge related to systems design analysis methods and tools in the software development process.
L8	Apply application programming skills in developing software on windows, web applications, open source applications and mobile applications.
L9	Apply knowledge of software requirements specification, modern software architecture to provide solutions in software development.
L10	Apply knowledge of software testing and software quality assessment in system testing
L11	Apply software project management skills in the software development process
L12	Be aware of the context of businesses and organizations to deploy software applications that are suitable for practice
L13	Apply knowledge of software life cycle to predict problems arising during software operation.
L14	Apply communication skills in presenting ideas, giving presentations, giving criticism in software system implementation and deployment.

III. WORKING POSITION AFTER GRADUATION

Job positions:

- Application developer.
- Software system engineer.
- Software testing engineer.
- Software quality engineer.
- Software production process engineer.
- Software and IT project manager.
- Business Analyst.
- Information systems analyst and designer.
- Data analyst and designer.
- Administrator of database systems;

These positions are available at companies and businesses in the fields of:

- Software industry.
- Digital content industry.
- Consulting on system construction.
- Game Industry.

- Trading in software and IT products.
- Software and IT services.
- Information system.
- Software and IT application fields.

VICE RECTOR	HEAD OF IT FACULTY
	
Ph.D Vu Duc Thai	**Ph.D Nguyen Hai Minh**