**PROGRAMME LEARNING OUTCOMES (PLOs)
OF ELECTRONICS AND TELECOMMUNICATIONS ENGINEERING TECHNOLOGY
EDUCATION PROGRAMME**
*Decision No 415/QD-ĐHCNTT&TT dated on June 30th, 2021 by the Rector
of TNU - University of Information and Communication Technology*

Vietnamese name of the programme: Công nghệ kỹ thuật điện tử viễn thông

English name of the programme: Electronics and Telecommunications Engineering Technology

Level of training: Undergraduate

Training period: 4-5 years

I. GENERAL INFORMATION

- Program name: Electronics – Telecommunications Engineering Technology

- Program code: 7510302.

- Program type: Full time.

- Name of diploma:

+ Bachelor's degree in Electronics and Telecommunications Engineering Technology. Training period of 4 years; Implement PLOs: L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14.
+ Engineer's degree in Electronics and Telecommunications Engineering Technology. Training period (4+1) years; Implement PLOs: L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15.

II. OBJECTIVE

2.1. General objectives

Training bachelors/engineers in Electronics and Telecommunications Engineering Technology with comprehensive professional knowledge; mastering the principles and laws of nature and society; having integrated mindset methods, basic practical skills, working independently and creatively, and solving problems in the field of electronics and telecommunications.

2.2. Detail objectives

By the end of the course, graduates have the knowledge, skills and qualities:
O1. Basic scientific knowledge, foundational and advanced knowledge in the field of electronics and telecommunications; Foreign language and computer skills that meet the requirements to work in an interdisciplinary, multicultural, multinational environment.

O2. Basic knowledge of electronic circuit theory, signals and systems, measurement sensors, and primary programming languages in engineering.

O3. Essential practical skills in electronic telecommunication equipment; Apply advanced technology solutions in the field of electronics and telecommunications.

O4. Skills to work independently and in teamwork; Effective communication skills through presentations, discussions, and modern tools.

O5. The ability to propose ideas, analyze and implement technical solutions in business and social contexts; ability to solve problems related to electronics and telecommunications.

O6.The ability to participate in the design and construction of technical systems/products/solutions in the field of electronics and telecommunications (target for engineers).

III. PROGRAM LEARNING OUTCOMES

Notation PLO		PLOs of ETET programme	Proficiency level
1		**Technical knowledge and reasoning**	
1.1	*L1*	*Apply general knowledge in social and natural science (such as political theory, mathematics, physics) to solve problems in specialization, career, and daily life.*	*3*
1.1.1		Apply knowledge of Marxism-Leninism, Ho Chi Minh's thought and the Party's viewpoints to perceive scientific, technical and technological issues; build political bravery and develop moral values, responsibility to self, family, and social community.	3
1.1.2		Apply basic knowledge of mathematics, physics, and logical thinking as the foundation for studying, researching, and solving professional and professional problems.	3
1.1.3		Apply knowledge of national defense and security and physical education to realize the responsibility for the cause of national defense and health training to ensure the assigned tasks.	3
1.2	*L2*	*Achieve a foreign language proficiency level of 3/6 (B1) with the six-level Foreign Language Proficiency Framework for Vietnam or other equivalent international foreign language certificates.*	*4*
1.2.1		Apply basic knowledge of vocabulary and grammar to meet the acquisition of specialized knowledge.	3
1.2.2		Synthesize learned knowledge and language skills to listen, speak, read and write on familiar topics in life and work.	4
1.3	*L3*	*Computer skills: Achieve one of the following certificates: IC3, MOS, ICDL, Certificate of Information Technology Application (according to Circular 03/2014/TT-BTTTT of the Ministry of Information and Communications)*	*3*
1.3.1		Have basic knowledge of information technology.	2
1.3.2		Have the ability to use a computer at a basic level.	3
1.3.3		Have the ability to use word processing software at a basic level.	3
1.3.4		Have the ability to use Excel software at a basic level.	3
1.3.5		Have the ability to use Powerpoint software at a basic level.	3
1.3.6		Have the ability to use the Internet at a basic level.	3

Notation PLO		PLOs of ETET programme	Proficiency level
1.4	*L4*	*Apply basic knowledge of electronic circuits, signal processing, computers, and programming languages*	*3*
1.4.1		Apply basic knowledge of electronic circuits and signal processing.	3
1.4.2		Apply basic knowledge of computers and programming languages.	3
1.5	*L5*	*Apply professional knowledge in the analysis and design of electronics and telecommunications systems*	*3*
1.5.1		Apply professional knowledge in the analysis and design of applied electronic products.	3
1.5.2		Apply professional knowledge in the analysis and design of telecommunications systems.	3
2		**Skills, personal and professional qualities**	
2.1	*L6*	*Apply critical thinking to detect and solve problems in the field of electronics and telecommunications*	*4*
2.1.1		Analysis of problems in the field of electronics and telecommunications.	4
2.1.2		Synthesize professional knowledge and skills to solve problems in the field of electronics and telecommunications.	4
2.2	*L7*	*Professional skills*	*3*
2.2.1		Operate electronic and telecommunications equipment effectively.	3
2.2.2		Apply technology solutions to solve problems in the field of Electronics and telecommunications.	2
2.3	*L8*	*Have the ability to filter and discover knowledge*	*3*
2.3.1		Filter information through collected documents.	3
2.3.2		Apply knowledge in practice.	3
2.4	*L9*	*Have the ability to work in enterprise and social contexts, well-perform social responsibility and professional ethics*	*3*
2.4.1		Understand enterprise culture and professional ethics.	2
2.4.2		Solve problems in business and social contexts.	3
2.5	*L10*	*Understand contemporary issues and a sense of lifelong learning*	2
2.5.1		Self-awareness and contemporary issues.	2
2.5.2		Have a lifelong learning mindset.	2
3		**Communication and teamwork skills**	
3.1	*L11*	*Skills to work independently and in teamwork*	*3*

Notation PLO		PLOs of ETET programme	Proficiency level
3.1.1		Make individual plans and group plans to carry out tasks.	3
3.1.2		Implement individual plans and group plans	3
3.2	*L12*	*Have communication skills through writing, presentation, discussion, and effective use of modern tools*	*3*
3.2.1		Communicate effectively in written form.	3
3.2.2		Communicate effectively in electronic, graphical, and presentation forms.	3
4		**The ability to form ideas, implement and operate in business and social contexts**	
4.1	*L13*	*Forming ideas, establishing requirements, determining the content of tasks to be performed to solve technical problems in the field of electronics and telecommunications*	*4*
4.1.1		Analyze ideas related to problems to be solved in the field of Electronics and telecommunications.	4
4.1.2		Analyze technical solutions to solve problems related to the field of electronics and telecommunications	4
4.2	*L14*	*Deploy technical solutions in the field of Electronics and Telecommunications*	*4*
4.2.1		Compare technical solutions in electronics and telecommunications systems.	4
4.2.2		Synthesize technical solutions to deploy electronic and telecommunications systems.	4
4.3	*L15*	*Ability to participate in designing and building technical systems/products/solutions in the field of Electronics and telecommunications to solve practical problems (for engineers)*	*5*
4.3.1		Design systems, products, and technical solutions in the field of electronics and telecommunications.	5
4.3.2		Complete systems, products, and technical solutions in the field of electronics and telecommunications.	5

IV. WORKING POSITION AFTER GRADUATION

Job Positions:

- **Job position for bachelor's degree in electronics and telecommunications engineering technology program**:

+ Technicians in deploying next-generation telecommunications networks in enterprises operating in the field of Electronics and Telecommunications.

+ Embedded system programmer on smart mobile devices.

+ Technical managers at enterprises in the field of electronics and telecommunications.

+ Continue studying to the level of engineer or master related to the field of electronics and telecommunications.

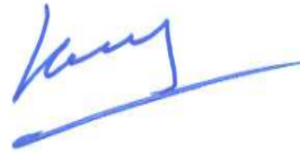- **Job position for Engineer's degree in electronics and telecommunications engineering technology program:**

+ Engineers in designing electronic circuits and telecommunications equipment in electronics and telecommunications businesses.

+ Lecturers, researchers working at universities and research institutes in the field of Electronics and telecommunications.

+ Technical managers at enterprises in the field of electronics and telecommunications.

+ Studying to higher levels such as masters and doctorates.

VICE RECTOR	**HEAD OF ECT FACULTY**
Ph.D Vu Duc Thai	**Ph.D Vu Chien Thang**