

# COURSE SYLLABUS

## SPECIAL TOPICS IN LINUX

**Course code: 220034**

### 1. General information

<i>Course type</i>	<i>Number of credits</i>	<i>Number of learning periods</i>
General <input type="checkbox"/>	Theory: 02 Exercise: Practice: 01	Theory: 30 Exercise: Practice: 30
Basic <input type="checkbox"/>		
Specialized <input checked="" type="checkbox"/>		
Required <input checked="" type="checkbox"/>		
Elective <input type="checkbox"/>		

#### **Learners:**

Level	Bachelor
Discipline	Information Technology

#### **Course requirements:**

Prerequisites	Operating Systems
Parallels	None
Other requirements	None

### 2. Learning resources:

Books	[1] Nguyễn Bá Nhiệm (2014). <i>Làì liệù giảng dạy Chuyêñ đề Linux (internal use only)</i> . Tra Vinh University [2] Raggi, E., Thomas, K., & Van Vugt, S. (2011). <i>Beginning Ubuntu Linux</i> . Apress.
References	[3] Jang, M., & Orsaria, A. (2016). <i>RHCSA/RHCE Red Hat Linux Certification Study Guide (Exams EX200 &amp; EX300)</i> . McGraw-Hill Education Group.

Other learning materials	[4] Websites: 1. <a href="https://ubuntu.com/tutorials">https://ubuntu.com/tutorials</a>
--------------------------	---

### 3. Course description

The course provides students basic knowledge of the GNU General Public License, open-source operating system, and Linux. The students will be aware of the benefits of using open-source software in developing applications. The course also aims to provide opportunities to practice professional skills including installing Linux and using Linux operating systems as well as other open-source software e.g., Firefox, Openoffice. Additionally, the course develops students' appropriate awareness and attitudes on the roles and responsibilities of IT engineers.

### 4. Course learning outcomes (CLOs)

After finishing the course, students will be able to:

		Satisfy LOs of the program	Satisfy LOs of the ABET
<b>❖ Topic 1: Disciplinary Knowledge and Reasoning</b>			
<b>L1.</b>	Explain the GNU General Public License	1.2.3, 1.2.7	<b>B.1.1</b>
<b>L2.</b>	Explain the principles of Ubuntu Linux		<b>B.1.2</b>
<b>L3.</b>	Use Ubuntu Linux efficiently		<b>B.1.3</b>
<b>L4.</b>	Setup and Operate Ubuntu Linux	1.2.5, 1.2.7	<b>B.1.4</b> <b>B.1.5</b> <b>B.1.6</b>
<b>❖ Topic 2: Personal and Professional Skills and Attributes</b>			
<b>L5.</b>	Recognize open-source operating systems, Linux distributions	2.2.1	
<b>L6.</b>	Creative Thinking	2.4.3	
<b>L7.</b>	Self-Awareness, Metacognition and Knowledge Integration	2.4.5	
<b>L8.</b>	Lifelong Learning and Educating	2.4.6	
<b>❖ Topic 3: Interpersonal Skills: Teamwork and Communication</b>			
<b>L9.</b>	Team Operation	3.1.5	
<b>L10</b>	Written Communication	3.2.3	

<b>L11.</b>	Using English for Computer Science	3.3.1	
<b>❖ Topic 4: Conceiving, Designing, Implementing and Operating Systems in The Enterprise, Societal and Environmental Context – The Innovation Process</b>			
<b>L12.</b>	Roles and Responsibility of IT Engineers	4.1.1	

## 5. Course content

<i>Course content</i>	<i>CLOs</i>	<i>Number of learning periods</i>		
		<i>Theor y</i>	<i>Practi ce</i>	<i>Other s</i>
<b>Chapter 1. An Overview of Linux Operating System</b>	<b>L1</b>	<b>04</b>		
1.1. Introducing Linux				
1.1.1. What is Linux?				
1.1.2. Interesting Facts about Linux				
1.1.3. Linux distributions				
1.2. GNU General Public License				
1.3. Ubuntu Operating System				
1.3.1. What is Ubuntu?				
1.3.2. Introducing Ubuntu				
1.3.3. Ubuntu hardware requirements				
1.4 Introducing Kernel				
<input checked="" type="checkbox"/> <b>Personal and Professional Skills and Attributes</b>	<b>L5(I) L6(I) L7(I) L8(I)</b>			
<input checked="" type="checkbox"/> <b>Interpersonal Skills: Teamwork and Communication</b>	<b>L9(U) L10(U)</b>			

	<b>L11(U)</b>			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>	<b>L12(T)</b>			
<b>Chapter 2. Installing Ubuntu</b>	<b>L2</b>		<b>04</b>	
2.1. Introducing Ubuntu installation				
2.2. Choosing Ubuntu version				
2.3. Getting Ubuntu installation				
2.4. Instructions for installing Ubuntu				
2.4.1. Running from Ubuntu CD				
2.4.2. Installing Ubuntu on Windows				
2.4.3. Installing Ubuntu on disk partition				
2.5. Installing printer on Ubuntu				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	<b>L5(I)</b>			
<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	<b>L9(U)</b> <b>L10(U)</b> <b>L11(U)</b>			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>				
<b>Chapter 3. File and Directory Structures</b>	<b>L2</b>	<b>05</b>	<b>10</b>	
3.1. Linux file and directory structures				
3.2. User and permission				
3.3. Linux Desktop				
3.4. Terminal				
3.5. Nautilus File Browser				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	<b>L5(I)</b> <b>L6(I)</b> <b>L7(I)</b> <b>L8(I)</b>			

<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	L9(U) L10(U) L11(U)			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>				
<b>Chapter 4. Linux Commands</b>	<b>L2, L3</b>	<b>05</b>	<b>05</b>	
4.1. Introducing Shell				
4.1.1. Starting Shell				
4.1.2. Shell Script				
4.2. Command Line Interface				
4.3. Basic Linux commands				
4.3.1. File and directory management				
4.3.2. System management				
4.4. Managing Files and directories using command line				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	L5(I) L6(I) L7(I) L8(I)			
<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	L9(U) L10(U) L11(U)			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>				
<b>Chapter 5. Application programs in Linux</b>	<b>L3</b>	<b>05</b>	<b>05</b>	
5.1. Introducing Ubuntu applications				
5.2. Video and music applications				
5.2.1. Rhythmbox Music Player				
5.2.2. Totem Movie Player				

5.2.3. Brasero Disc Burning				
5.2.4. Audia CD Extractor				
5.3. Office applications				
5.4. Graphic softwares				
5.5. Network tools				
5.5.1. Firefox				
5.5.2. Thunderbird				
5.5.3. Evolution				
5.5.4. Pidgin				
5.5.5. Terminal Server Client				
5.5.6. Transmission Bittorrent Client				
5.5.7. Ekiga Softphone				
5.6. Game applications				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	<b>L5(I)</b> <b>L6(I)</b> <b>L7(I)</b> <b>L8(I)</b>			
<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	<b>L9(U)</b> <b>L10(U)</b> <b>L11(U)</b>			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>				
<b>Chapter 6. Application Management in Ubuntu</b>	<b>L3, L4</b>	<b>03</b>	<b>03</b>	
6.1. Removing and Installing Applications				
6.2. Installing font and Vietnamese keyboard				
6.2.1. Installing Unicode fonts				
6.2.2. Typing Vietnamese in Ubuntu				

6.2.3. Introducing Scim				
6.2.4. Activating scim				
6.2.5. Installing Scim-unikey				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	L5(I) L6(I) L7(I) L8(I)			
<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	L9(U) L10(U) L11(U)			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>				
<b>Chapter 7. User and Group Management</b>	<b>L3, L4</b>	<b>04</b>	<b>04</b>	
7.1. Creating and managing users				
7.1.1. Users				
7.1.2. User's password				
7.1.3. Commands				
7.2. Creating Groups				
7.2.1. Group information				
7.2.2. addgroup command				
7.3. User and group permissions on Files and Directories				
7.4. Sharing resources in Linux				
7.4.1. Accessing resources				
7.4.2. Sharing resources				
7.5. Sharing resources with Windows				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	L5(I)			
<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	L9(U)			

	<b>L10(U)</b> <b>L11(U)</b>			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>				
<b>Chapter 8. Essential Linux Applications</b>	<b>L3, L4</b>	<b>04</b>	<b>04</b>	
8.1. StarDict				
8.1.1. Installing StarDict				
8.1.2. Adding dictionary to StarDict				
8.1.3. Using StarDict				
8.2. Antivirus Applications				
8.3. Running Windows applications on Ubuntu				
8.3.1. Introducing Wine				
8.3.2. Installing Wine on Ubuntu				
8.3.3. Using Wine				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	<b>L5(I)</b> <b>L6(I)</b> <b>L7(I)</b> <b>L8(I)</b>			
<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	<b>L9(U)</b> <b>L10(U)</b> <b>L11(U)</b>			
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>				
<b>Summary of skills in course level</b>				
<input checked="" type="checkbox"/> <i>Personal and Professional Skills and Attributes</i>	<b>L5(I)</b> <b>L6(I)</b> <b>L7(I)</b> <b>L8(I)</b>			
<input checked="" type="checkbox"/> <i>Interpersonal Skills: Teamwork and Communication</i>	<b>L9(U)</b>			



	<b>L10(U)</b> <b>L11(U)</b>
<input checked="" type="checkbox"/> <i>CDIO in the enterprise, societal and environmental context</i>	<b>L12(U)</b>

## 6. Teaching and learning methods:

ID	Teaching method/technique		Description
<b>M1.</b>	Lecturing	<input checked="" type="checkbox"/>	
<b>M2.</b>	Questions – Answers	<input checked="" type="checkbox"/>	
<b>M3.</b>	Group-based Learning	<input checked="" type="checkbox"/>	
<b>M4.</b>	Problem-based Learning	<input type="checkbox"/>	
<b>M5.</b>	Project-based Learning	<input checked="" type="checkbox"/>	
<b>M6.</b>	Case studies	<input type="checkbox"/>	
<b>M7.</b>	Roleplay	<input type="checkbox"/>	
<b>M8.</b>	Demo	<input checked="" type="checkbox"/>	
<b>M9.</b>	Simulations	<input type="checkbox"/>	
<b>M10.</b>	Debate	<input type="checkbox"/>	
<b>M11.</b>	Game	<input type="checkbox"/>	
<b>M12.</b>	Brainstorming	<input type="checkbox"/>	
<b>M13.</b>	Think-Pair-Share	<input type="checkbox"/>	

## 7. Course assessment

ID	Assessment activity		Quantity	Weight	LOs assessed
<b>T1.</b>	Text-based midterm exam	<input type="checkbox"/>			
<b>T2.</b>	Text-based final exam	<input checked="" type="checkbox"/>	01	50%	<i>L1, L2, L3, L4</i>
<b>T3.</b>	Practice midterm exam	<input checked="" type="checkbox"/>	01	25%	<i>L1, L2</i>

ID	Assessment activity		Quantity	Weight	LOs assessed
T4.	Practice final exam	<input checked="" type="checkbox"/>	01	25%	L1, L2, L3, L4
T5.	Report	<input type="checkbox"/>			
T6.	In-class exercises	<input type="checkbox"/>			
T7.	Homework assignments	<input type="checkbox"/>			
T8.	Question – Answer	<input type="checkbox"/>			
T9.	Term Project	<input type="checkbox"/>			
T10.	Final Exam	<input type="checkbox"/>			
<b>Formula for Overall score</b>		<b><math>T2*0.5+T3*0.25+T4*0.25</math></b>			

## 8. Course requirements and expectations

### 8.1. Requirements on attendance

- Students are responsible for attending in all classes. In case of absence due to force majeure circumstances, there must be sufficient and reasonable evidence.
- Students who do not attend more than 20% of the class sections, whether for reason or not, are deemed not to have completed the course and must re-enroll in the following semester.

### 8.2. Requirements and expectations on student behaviors

- Students must show their respects for teachers and other learners.
- Students must be on time. Students who are late more than five minutes will not be allowed to attend the class.
- Students should not make noise and interfere with others in the learning process.
- Students should not eat, chew gum, and use devices such as cell phones, music players during class hours.
- Laptops and tablets can only be used in class for the purpose of learning.
- Students who violate the above principles will be asked to leave the class and considered absent from the class.

### 8.3. Requirements on learning issues

Issues related to applying for score reservation, scoring complaints, scoring, exam disciplines are done according to the Learning Regulation of Tra Vinh University.

**9. Tentative course instructor**

Nguyen Ba Nhiem

**DEAN**

**DEPARTMENT HEAD**

**LECTURER**

**Nguyen Ba Nhiem**