COURSE SYLLABUS

Introduction to Information Technology

Course code: 220092

1. General information:

Course type		*Number of credits*	*Number of learning periods*
General	☑	Theory: 01 Exercise: Practice: 01	Theory: 15 Exercise: Practice: 30
Basic	☐		
Specialized	☐		
Required	☑		
Elective	☐		

***Learners*:**

Level	Bachelor
Discipline	Information Technology

Course requirements:

Prerequisites	None
Parallels	None
Other requirements	None

2. Learning resources:

Books	[1] Nguyễn Khắc Quốc (2019). *Teaching notes for introduction to Information Technology*. Tra Vinh University (for internal use only)
References	[2] Phạm Ngọc Tuấn (2010). *Nhập môn về kỹ thuật*. NXB Đại học Quốc gia TP HCM. [3] Lâm Nguyễn Hải Long (2018). *Tài liệu những điều cần biết về nghề Công nghệ Thông tin*. NXB Thông tin và Truyền thông.

	[4] Nguyễn Thanh Hải (2010). *Phương pháp học tập chủ động ở bậc đại học*. Trung tâm Nghiên Cứu Cải Tiến Phương Pháp Dạy và Học ĐH. [5] Law on Information technology (2006) [6] Law on Cybersecurity (2018)
Other learning materials	[7] MIT, *Scratch* [8]https://scratch.edutech.vn/giao-trinh-scratch/tu-hoc-lap-trinh-scratch.html

3. Course description:

The course provides students basic knowledge on information technology (IT) including application fields of information technology and required knowledge and skills for an employee in the IT field. The course also aims to provide opportunities to practice basic programming skills for novice students via drag-and-drop programming environments Alice and Scratch. Additionally, the course develops students' appropriate awareness and attitudes on IT major as well as required soft skills related to course content such as group working and report presentation.

4. Course learning outcomes (CLOs):

After finishing the course, students will be able to:

		Satisfy LOs of the program	***Satisfy LOs of the ABET***
❖ ***Topic 1: Disciplinary Knowledge and Reasoning***			***B.1.2***
L1.	Recognize the role and the position of IT in the contexts of Vietnam and worldwide.	*4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5*	***B.1.3***
L2.	Recognize the applications and the development of IT in the future		***B.1.4***
L3.	Clarify and effectively apply learning methods		***B.1.5***
L4.	Understand the process of conceive, design, implement and operate an IT product.		***B.1.6***
❖ ***Topic 2: Personal and Professional Skills and Attributes***			

L5.	Curiosity and lifelong learning	*2.4.6*	
L6.	Professional behavior, professional ethics, integrity, responsibility and accountability	*2.5.1* *2.5.2*	
❖ ***Topic 3: Interpersonal Skills: Teamwork and Communication***			
Lx.	Forming effective teams and team operation	*3.1.1* *3.1.2*	
❖ ***Topic 4: Conceiving, Designing, Implementing and Operating Systems in The Enterprise, Societal and Environmental Context – The Innovation Process***			
Lx.	Setting system goals and requirements, utilizing the design process, designing the implementation process, and designing and optimizing operations	*4.2.1* *4.3.1* *4.4.1* *4.5.1*	

5. Course content:

Course content	***CLOs***	***Number of learning periods***		
		Theory	***Practice***	***Others***
Chapter 1. The roles and the position of information technology in contexts of Vietnam and worldwide	*L1*	**3**	**2**	
1.1 Overview about IT				
1.1.1 Concepts in IT field				
1.1.2 IT and Communication				
1.1.3 Vietnam IT industry				
1.1.4 IT in context of Vietnam and worldwide				
1.1.5 Roles of IT in the society development				
1.1.6 Effects of ICT communication to the society				
1.2 Some issues related to the law in IT				

1.2.1 Law on Information technology				
1.2.2 Law on Cybersecurity				
1.2.3 Copyright				
1.2.4 Data protection				
1.3 Professional ethics				
1.3.1 Ethical standards for students				
1.3.2 Profession and Professional ethics				
1.4 Labor safety and environment protection in IT				
1.4.1 Labor safety				
1.4.2 Working environment in IT				
1.4.3 Access controlling and information security ensuring				
1.4.4 Malware				
1.4.5 Protection from malware and spyware				
☐ ***Personal and Professional Skills and Attributes***	L5(T);L6(T)			
☐ ***Interpersonal Skills: Teamwork and Communication***				
☐ ***CDIO in the enterprise, societal and environmental context***				
Chapter 2. Applications and development of IT in the future	*L2*	**3**	**2**	
2.1 Possible Job Descriptions				
2.1.1 Software Developer				
2.1.2 Software Design Engineer				
2.1.3 Software Architect				
2.1.4 Software Test Engineer				
2.2 Key development trends of IT in the future				

2.3 Opportunities and challenges of the IT industry in the future				
2.4 Job positions related to the IT industry.				
2.4.1 Job descriptions related to the IT industry				
2.4.2 Potential job positions				
2.5 New technology fields				
2.5.1 SMAC				
2.5.2 AI				
2.5.3 Internet of things				
2.5.4 Blockchain				
2.5.5 Cloud Computing				
2.5.6 Big Data				
2.5.7 Information Security				
2.6 An Overview of the curriculum of the TVU's Information Technology Program				
2.6.1 Learning objectives of the program				
2.6.2 Learning outcomes of the program				
2.6.3 Career opportunities				
2.6.4 Program duration				
2.6.5 Program content				
☐ ***Personal and Professional Skills and Attributes***	L5(T);L6(T)			
☐ ***Interpersonal Skills: Teamwork and Communication***				
☐ ***CDIO in the enterprise, societal and environmental context***				
Chapter 3. Effective learning methods	*L3*	**3**	**2**	

3.1 The context and challenges for Vietnamese students				
3.2 Learning method for universities' students				
3.2.1 Differences between learning/teaching in high-school and university				
3.2.2 What do freshmen need to prepare?				
3.3 Effective learning methods				
3.3.1 POWER method				
3.3.2 A.S.P.I.R.E method				
3.4 Kỹ năng làm việc nhóm				
☐ ***Personal and Professional Skills and Attributes***	L5 (U); L6(U)			
☐ ***Interpersonal Skills: Teamwork and Communication***	L7(T)			
☐ ***CDIO in the enterprise, societal and environmental context***	L8 (T)			
Chapter 4. Simulated programming practice	*L4*	**6**	**24**	
4.1 Scratch software				
4.1.1 Scratch GUI				
4.1.2 Scratch components				
4.1.3 Practice 1				
4.1.4 Practice 2				
4.2 Alice software				
4.2.1 Alice GUI				
4.2.2 Practice 1				
4.2.3 Practice 2				
☐ ***Personal and Professional Skills and Attributes***				
☐ ***Interpersonal Skills: Teamwork and Communication***				

☐ ***CDIO in the enterprise, societal and environmental context***	L8 (T)
Summary of skills in course level	
☐ ***Personal and Professional Skills and Attributes***	L5 (U); L6(U)
☐ ***Interpersonal Skills: Teamwork and Communication***	L7(T)
☐ ***CDIO in the enterprise, societal and environmental context***	L8 (T)

6. Teaching and learning methods:

ID	Teaching method/technique		Description
M1.	Lecturing	☒	
M2.	Questions – Answers	☐	
M3.	Group-based Learning	☒	
M4.	Problem-based Learning	☐	
M5.	Project-based Learning	☐	
M6.	Case studies	☐	
M7.	Role play	☐	
M8.	Demo	☒	
M9.	Simulations	☐	
M10.	Debate	☐	
M11.	Game	☐	
M12.	Brainstorming	☐	
M13.	Think-Pair-Share	☐	

7. Course assessment:

ID	Assessment activity		Quantity	Weight	LOs assessed
T1.	Text-based midterm exam	☒	1	50%	*L1, L3,*
T2.	Text-based final exam	☐			
T3.	Practice midterm exam	☐			
T4.	Practice final exam	☒	1	50%	*L4, L5*
T5.	Report	☐			
T6.	In-class exercises	☐			
T7.	Homework assignments	☐			
T8.	Question – Answer	☐			
T9.	Term Project	☐			
T10.	Final Exam	☒	1	50%	*L4, L5, L6, L7, L8*
Formula for Overall score		**((T1 + T4)/2+T10/2)/2**			

8. Course requirements and expectations:

8.1. Requirements on attendance

- Students are responsible for attending 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 Khac Quoc

DEAN	**DEPARTMENT HEAD**	**LECTURER**
		Nguyen Khac Quoc