ỦY BAN NHÂN DÂN TỈNH BÌNH DƯƠNG
TRƯỜNG ĐẠI HỌC THỦ DẦU MỘT

Biểu mẫu 18C
THÔNG BÁO
Công khai thông tin chất lượng đào tạo thực tế của Trường Đại học Thủ Dầu Một năm học 2021-2022

C. Công khai các môn học của từng khóa học, chuyên ngành
1.1. Chương trình CNTT, khóa học 2021-2026

STT	Tên môn học	Mục đích môn học	Số tín chỉ	Lịch trình giảng dạy	Phương pháp đánh giá sinh viên
1	Programming Fundamentals (3+0)	Equip students with an overview of programming and basic knowledge of programming languages: methods of representing algorithms, basic data types, math operations, expressions, control structures, function, and one-dimensional array. The module trains students in thinking skills: algorithms, analysis, reasoning, programming, logic to solve math problems through homework. Forming algorithmic thinking and programming thinking to solve specific problems. Know how to build algorithms and switch from algorithms to programming languages.	3(3+0)	2	Essay
2	Programming Fundamentals Labs (0+1)	After completing the module, students will be able to master the steps to solve a math problem through algorithms. Convert from algorithm to C++ programming language. Understand the general structure of a programming language. Skills: The subject trains analytical thinking skills, critical thinking, logical thinking, algorithmic thinking to solve problems through lab practice and homework.	1(0+1)	2	Labs

3	Web Design (2+0)	After completing this module, students will be able to: Understand the contents of the general knowledge of scientific research methods (15 periods): Present concepts: science, scientific research science, theory, research methods, research questions, research hypothesis, research ethics. Demonstrate the ability to find and use the appropriate material to solve research problems. Demonstrate the ability to read and write summaries of a book or scientific article. Understand and apply specialized research methods (30 periods) and register a research topic each year: Research design a research proposal of the major - explain a university-level scientific research topic for students. for students	2(2+0)	2	Project
4	Web Design Labs (0+1)	Knowledge: Students can clearly grasp the basic concepts, necessary knowledge about the Internet and how to build a website based on HTML, CSS, Javascript, Node.JS technologies. Skills: Use tools to build a complete Web site based on HTML, CSS, Javascript, Node.JS and publish the Web site to hosting. Professional competence: Design a complete website to solve real problems. Attitude: Respect professional ethics in matters of copyright and confidentiality.	1(0+1)	2	Labs
5	Toán cao cấp A1 (2+0)	The module equips students with the most basic knowledge of functional analysis (differential calculus, integrals of functions of one variable; series theory; differential calculus of functions of many variables). At the same time, the module also provides some applications of theoretical knowledge, creating conditions for students to study and research other subjects.	2(2+0)	2	Essay
6	Introduction to Information and Communication Technology (2+0)	The IT introductory course designed to help first-year students familiarize themselves with their new environment and successfully progress on their path to becoming an IT engineer at Thu Dau Mot University. The course content includes general introduction to basic knowledge of information technology, Internet; Information technology career; Information technology professional ethics; Introduction to information systems and software engineering; Steps to create a product.	2(2+0)	2	Project

7	Introduction to Information and Communication Technology Labs (0+1)	This module equips students with basic knowledge about IT and Internet; IT professional ethics; Introduction to the Information System industry; Steps to create a product; Career orientation and soft skills, personal skills.	1(0+1)	2	Labs
8	Phương pháp nghiên cứu khoa học (3+0)	After completing this module, students will be able to: Understand the contents of the general knowledge of scientific research methods (15 periods): Present concepts: science, scientific research science, theory, research methods, research questions, research hypothesis, research ethics. Demonstrate the ability to find and use the appropriate material to solve research problems. Demonstrate the ability to read and write summaries of a book or scientific article. Understand and apply specialized research methods (30 periods) and register a research topic each year: Research design a research proposal of the major - explain a university-level scientific research topic for students. for students	3(3+0)	2	Project
9	Database System (2+0)	Knowledge: Students can grasp the basic concepts, necessary knowledge about the Internet, and how to build a website based on HTML, CSS, Javascript, and Node.JS technologies. Professional competence: Design a complete website to solving real problems. Attitude: Respect professional ethics in matters of copyright and confidentiality.	2(2+0)	3	Essay
10	Database System Labs (0+1)	The course aims to equip students with basic practical knowledge about databases; review the concepts of relational data model; types of constraints on relations; command structures of SQL language and train students to write commands to answer queries in SQL, install integrity constraints on the database.	1(0+1)	3	Labs
11	Thực hành Vật lý đại cương A1 (0+1)	The course aims to train students with basic skills in general physics practice, understand the principles of measurements in physics, and determine some physical quantities through practical exercises.	1(0+1)	3	Labs
12	Vật lý đại cương A1 (2+0)	The course equips learners with the knowledge of particle kinetics, particle-solid dynamics, work and energy, basic content of kinetic molecular theory, first and second principles of thermodynamics, constant electric current,	2(2+0)	3	Essay

		magnetic field, and thereby explaining physical phenomena in life and technology.			
13	Programming Techniques (2+0)	The course equips learners with the knowledge of particle kinetics, particle-solid dynamics, work and energy, basic content of kinetic molecular theory, first and second principles of thermodynamics, constant electric current, magnetic field, and thereby explaining physical phenomena in life and technology.	2(2+0)	3	Essay
14	Programming Techniques Labs (0+1)	The module equips learners with the next knowledge in the introductory programming program in C/C++ language including: two-dimensional array data types, pointer types, character strings, structure types, recursive functions and file manipulation. Train learners with skills such as teamwork skills, problem-solving thinking skills, giving solutions to overcome errors, analytical thinking and critical thinking.	1(0+1)	3	Labs
15	Database Management System (2+0)	Knowledge: After completing this section, students will be able to grasp and present the basic concepts and necessary knowledge about how to organize data storage in the program. Students can analyze and apply data types to build a reasonable program and optimize resources when executing the program. Skills: The subject trains analytical thinking, critical thinking, and systematic thinking skills to solve problems through lab practice and homework. Attitude: Recognizing social responsibility, manners, discipline, and professional ethics.	2(2+0)	4	Project
16	Database Management System Labs (0+1)	This module provides students with the database management system architecture, the functions of the Microsoft SQL Server database management system: creating, backing up, and restoring the database; programmatically managing data and trapping errors; automation and data synchronization; user management; database security. At the same time, the module has exercises that require students to use SQL Management tools and apply knowledge of the functions of the Microsoft SQL Server Database Management System to build and manage a database.	1(0+1)	4	Labs

17	Probability and statistics (3+0)	This course provides students with basic knowledge of probability and statistics. Help students apply the knowledge of the subject to solve problems in the document, thereby relating to applied problems in practice and solving those applied problems.	3(3+0)	4	Essay
18	Toán cao cấp A2 (2+0)	This course covers matrices, determinants, systems of linear equations, vector spaces, and linear mapping.	2(2+0)	4	Essay
19	Data Structures and Algorithms (3+0)	This module equips learners with the principles of DBMS; How to use the SQL programming language; Definitions and applications of internal procedures, error traps, how to use pointers in data processing; Demonstrates the principles of data storage and management; Describes access controls in the DBMS; Principles of transaction management, competitive access management, data recovery.	3(3+0)	4	Essay
20	Data Structures and Algorithms Labs (0+1)	Knowledge: After completing this section, students will be able to grasp and present the basic concepts and necessary knowledge about how to organize data storage in the program. Students can analyze and apply data types to build a reasonable program and optimize resources when executing the program. Skills: The subject trains analytical thinking, critical thinking, and systematic thinking skills to solve problems through lab practice and homework. Attitude: Recognizing social responsibility, manners, discipline, and professional ethics.	1(0+1)	4	Labs
21	Enterprise Management (2+0)	After completing the course, learners are equipped with the basic knowledge and principles of business administration such as marketing management, production management, and human resource management. In addition, the course also trains learners to apply management knowledge in practice.	2(2+0)	4	
22	Tư duy biện luận ứng dụng (2+0)	This course will give you the tools of thought to help you discern what is good and what is bad (fallacy or fallacy), language affects your judgment. how; Each lesson unit will have instructions on how to find, standardize, and evaluate each type of argument to help you form the necessary skills and attitudes in your study and work activities. In this module, you will learn how to think critically; you will know how to correctly analyze and evaluate the truth or falsity of the arguments made by others, as well as know-how to build your own arguments with certainty, which cannot be refuted.	2(2+0)	4	Essay

23	Object Oriented Programming Method (3+0)	Knowledge: After studying this part, students can grasp and present the basic concepts and necessary knowledge about how to build a program on the computer according to the method. object-oriented programming. Students can analyze and design problems according to object-oriented programming methods. Skills: The subject trains analytical thinking skills, critical thinking, sand ystematic thinking to solve problems and do homework. Attitude: Recognizing social responsibility, manners, discipline, professional ethics.	3(3+0)	5	Labs
24	Object Oriented Programming Method Labs (0+1)	Knowledge: After completing this section, students can analyze and build a program based on an object-oriented foundation. Skills: The subject trains analytical, critical, and systematic thinking skills to solve object-oriented problems through lab practice and homework. . Attitude: Recognizing social responsibility, manners, discipline, professional ethics	1(0+1)	5	Labs
25	Triết học Mác - Lênin (3+0)	After graduating, students can apply their knowledge of Marxist-Leninist philosophy to their professional fields. Applying a materialistic worldview and dialectical materialistic methodology to solve problems in diverse contexts of practice. Apply historical materialism knowledge of Marxist - Leninist philosophy to solve problems in political and social life. Expressing worldview, dialectical materialistic methodology in professional activities.	3(3+0)	5	Computer Quiz
26	Đổi mới, sáng tạo và khởi nghiệp (3+0)	This subject equips learners with the knowledge and skills so that after completing the course, they can know how to create business ideas, and fully prepare before operating a new business in any industry where the law is not regulated. permitted law. Learners also know how to run a newly created business effectively, evaluate the suitability of the startup plan in the face of changes in the volatile global competitive environment, and then have an adjustment plan. Knowledge: the subject provides knowledge that helps learners to: - Cultivate entrepreneurial qualities from which to determine the right start-up goals and mission - Apply methods to find startup ideas business, make a reasonable start-up plan, look for collaborators, partners to implement startup ideas - Applying management methods to run a new business effectively. conditions for learners to practice the following skills: - Creative thinking - Making plans to execute business ideas - Analyzing the	3(3+0)	5	Project

		markt and competitors - Finding financial sources and persuading investors - Building consensus team Attitudes: - Be proactive and creative within the framework of laws and regulations of central and local governments. - Honesty and fair competition to seek legitimate profits. - Support the government's green growth strategy for the economy.			
27	Discrete Mathematics (3+0)	Equip math knowledge for Informatics majors. Combinatorial structures, relations, basic knowledge of Logic math, Bool algebra to apply to analysis, design, and minimization of digital electronic circuits.	3(3+0)	6	Essay
28	Pháp luật (2+0)	The module equips learners with the most basic knowledge about the state and law; legal fields in the Vietnamese legal system; international law; legal training and legal profession in Vietnam. From there, it helps learners to improve their understanding of the role and importance of the State and the law in life, to have the right views on the lines and policies of the Party and the laws of the State of Vietnam. have a strict observance of state laws, be fully aware of a citizen's duties and obligations towards the country, and know how to apply the law in his working life, especially towards people. Studying social sciences requires both basic legal theory and specialized legal knowledge.	2(2+0)	6	Project
29	Window App Development (3+0)	Knowledge: After completing this section, students will be able to grasp how to build a software program on the .NET framework platform. Skills: The subject trains analytical thinking, critical thinking, and systematic thinking skills to solve problems through lab practice and homework. Attitude: Recognizing social responsibility, manners, discipline, and professional ethics.	3(3+0)	6	Project

30	Window App Development Labs (0+1)	Knowledge: After completing this section, students will be able to grasp how to build a software program on the .NET framework platform. Skills: The subject trains analytical thinking, critical thinking, and systematic thinking skills to solve problems through lab practice and homework. Attitude: Recognizing social responsibility, manners, discipline, and professional ethics.	1(0+1)	6	Labs
31	Quản trị Marketing (2+0)	Objectives of knowledge: Marketing management focuses on studying management issues such as planning, strategy, management of marketing mix tools, and brand management. In addition, the course helps learners to analyze marketing management activities and make marketing management plans for businesses. Skills Objectives: Thinking skills such as critical thinking, problem-solving and soft skills (communication, teamwork, presentation, leadership skills). Marketing planning skills, researching marketing strategies Attitude goals: Self-study spirit, active research. Comply with the law and professional ethics.	2(2+0)	6	Project
32	Kinh tế chính trị Mác - Lênin (2+0)	Students can state the basic and core knowledge of Marxist-Leninist political economy. Analyze the nature of economic relations in the socio-economic development of the country and the world. Having a sense of responsibility by the position of work and life on the stance and ideology of Marxism - Leninism.	2(2+0)	6	Check on Elearning system
33	Fundamental Project (0+1)	The industry foundation project module aims to perfect the ability to analyze requirements, create blueprints, and manage source code in project teams. Improve teamwork skills and a sense of seriously responsible research.	1(0+1)	6	Project

34	Những vấn đề kinh tế - xã hội Đông Nam bộ (2+0)	About knowledge: Help learners understand the process of formation and development of the Southeast, thereby assessing the role of this region in the general development of the South region and the whole country in general. About skills: The course helps learners with basic skills in identifying basic socio-economic problems in the Southeast region in the past and present, as a foundation for their application. learning and working process of learners after graduation. About attitude: Equip with the attitude of appreciating the achievements of the working people created in the Southeast region, as a motivation to strive for study and dedication to build the Southeast to become more and more beautiful. rich and strong, deserves to be one of the leading regions of the country in the cause of renovation and socialist construction.	2(2+0)	7	Essay
35	Object Oriented Analysis and Design (2+0)	Knowledge: After studying this part, students can grasp and clearly present the basic concepts and necessary knowledge about how to build a program on the computer according to the method. object-oriented programming. Students can analyze and design problems according to object-oriented programming methods. Skills: The subject trains analytical thinking, critical thinking, and systematic thinking skills to solve problems through lab practice and homework. Attitude: Recognizing social responsibility, manners, discipline, professional ethics	2(2+0)	7	Project
36	Object Oriented Analysis and Design Labs (0+1)	Knowledge: After studying this part, students can grasp and present the basic concepts and necessary knowledge about how to build a program on the computer according to the method. object-oriented programming. Students can analyze and design problems according to object-oriented programming methods. Skills: The subject trains analytical thinking, critical thinking, and systematic thinking skills to solve problems through lab practice and homework. Attitude: Recognizing social responsibility, manners, discipline, professional ethics.	1(0+1)	7	Labs
37	Computer Architecture (2+0)	Knowledge: After completing this module, students will understand and present the necessary concepts and knowledge about computer system architecture. Skills: The subject trains critical thinking skills, technical	2(2+0)	7	Project

		thinking, and systems thinking to solve specific cases posed through experiments and exercises			
38	Web App Development (2+0)	Knowledge: Students grasp the knowledge of Web programming on the ASP.NET platform. Professional competence: Build a complete website to solve real-life problems. Attitude: Respect professional ethics in matters of copyright and confidentiality.	2(2+0)	7	Project
39	Web App Development Labs (0+2)	Knowledge: Students grasp the knowledge of Web programming on the ASP.NET platform. Professional competence: Build a complete website to solve real-life problems. Attitude: Respect professional ethics in matters of copyright and confidentiality.	2(0+2)	7	Labs
40	Graph Theory (2+0)	Provide a complete and selective knowledge base on the basics of graph theory, equipping with the knowledge to support solving practical problems: finding optimal paths, urban planning, optimization problems on computer networks, coloring problems, problems on graphs Euler, Hamilton.	2(2+0)	7	Essay
41	Graph Theory Labs (0+1)	The course aims to equip students with the knowledge about the basic problems of graph theory, equipping them with the knowledge to support solving practical problems: finding the optimal path, urban planning, optimization problems on computer networks, coloring problems, problems on Euler and Hamilton graphs, ... and train students in thinking skills and problem-solving.	1(0+1)	7	Labs
42	Chủ nghĩa xã hội khoa học (2+0)	State the most basic and core knowledge about scientific socialism. Applying the above knowledge to consider and evaluate the problems of socialism and the way to socialism in our country and around the world. Having political consciousness, correct ideology about socialism, and the way to socialism in our country.	2(2+0)	8	Check on Elearning system
43	Computer Network (2+0)	Explain the concepts of computer networks, and the benefits of computer networks. Apply network equipment, OSI model and, TCP/IP protocol suite to actual needs.	2(2+0)	8	Quiz on computer
44	Computer Network Labs (0+1)	Deploy the appropriate network system. Use teamwork skills to implement and solve related problems. Recognize the importance of security in the network.	1(0+1)	8	Labs

45	Mobile App Development (2+0)	The module also provides students with the process as well as how to use the Java programming language, how to build layouts in XML, and use Android programming libraries to build components of a mobile application. real movement. Train learners in skills such as: teamwork, presentation, analytical and critical thinking, problem-solving thinking, independent working skills, systems thinking.	2(2+0)	8	Project
46	Mobile App Development Labs (0+2)	The course aims to provide students with basic knowledge about programming applications on mobile devices with the Android operating system platform, understanding of the process, necessary knowledge, and skills to develop Android applications.	2(0+2)	8	Labs
47	Software Engineering (2+0)	Knowledge: The subject presents to students the theoretical part such as the background of the production process and software development; Analysis of software system development requirements; Evaluate software engineering process, software development life cycle including analysis, design, installation, and testing; Knowledge of building software.	2(2+0)	8	Project
48	Software Engineering Labs (0+1)	Besides theoretical knowledge, through classroom activities, students will practice soft skills: teamwork skills, coordination in working on large projects; Training thinking about problems posed in software engineering and professional working style. Students carry out a project to solve a real problem ordered by outside businesses. If there is no enterprise to order, the teacher asks students to actively think about ideas. The subject project must be fully implemented in practice and collect results from practical work. Attitude: Qualities of a professional working person with professional ethics.	1(0+1)	9	Labs
49	Software Quality and Software Validation (2+0)	Knowledge: Students can clearly grasp the knowledge of software quality and software testing. Professional competence: Implement software testing process. Attitude: Respect professional ethics in software defects and software quality.	2(2+0)	9	Project
50	Software Quality and Software Validation Labs (0+1)	How to build a software quality assurance system and the role of the members in the system. Several quality assurance standards. Software review and testing skills.	1(0+1)	9	Labs

51	Artificial Intelligent (2+0)	Knowledge: Students can grasp and represent the concepts and necessary knowledge about artificial intelligence. How to represent real problems in the form of artificial intelligence. Skills: The subject trains critical thinking skills, technical thinking, and systems thinking to solve specific cases set out through lab practice and homework. Use the knowledge of artificial intelligence to solve some real problems.	2(2+0)	9	Project
52	Artificial Intelligent Labs (0+1)	Knowledge: Students can grasp and represent the concepts and necessary knowledge about artificial intelligence. How to represent real problems in the form of artificial intelligence. Skills: The subject trains critical thinking skills, technical thinking, and systems thinking to solve specific cases set out through lab practice and homework. Use the knowledge of artificial intelligence to solve some real problems.	1(0+1)	9	Labs
53	Information Security (2+0)	Knowledge: The course aims to equip students with cryptographic techniques, malicious code access control, denial of service attacks, buffer overflow attacks, application security, operating system security, firewalls , SSL.	2(2+0)	9	Project
54	Information Security Labs (0+1)	Skills: The course trains students in information security design skills for applications and vulnerability research. Attitude: Have a good sense of learning	1(0+1)	9	Labs
55	Operating System (0+2)	Knowledge: After completing the module, students can grasp and clearly present the concepts and basic operating principles of operating systems. An apply those principles to optimize when building the system. Skills: An integrated course that trains analytical thinking, critical thinking, and systems thinking skills to solve problems through lab practice and homework. Attitude: Realize the importance of the course for Software Engineering and have a sense of lifelong learning.	2(0+2)	9	Project

56	Tư tưởng Hồ Chí Minh (2+0)	About knowledge: Students understand the basic knowledge about the concept, origin, the process of formation and development of Ho Chi Minh's thought; the basic contents of Ho Chi Minh's thought; the application of the Communist Party of Vietnam in the revolution in the people's democratic national revolution and the socialist revolution. About skills: Forming for students skills of independent thinking, analysis, evaluation ,and creative application of Ho Chi Minh's thought to solve problems in real life, study and work. Attitudes: Students can improve their political will, patriotism, loyalty to the goal, the ideal of national independence associated with socialism; aware of the role and value of Ho Chi Minh's thought for the Vietnamese Party and nation; realize their responsibility in studying and training to contribute to the construction and defense of the Fatherland.	2(2+0)	10	Check on Elearning system
57	Machine Learning (2+0)	The course equips learners with knowledge of Machine Learning including conceptual learning, decision trees, neural networks, hypothesis evaluation, Bayesian learning, case-based learning, genetic algorithms, and vector machines support.	2(2+0)	10	Project
58	Machine Learning Labs (0+1)	Train learners in skills such as teamwork skills, problem-solving thinking skills, analytical thinking, and critical thinking.	1(0+1)	10	Labs
59	Human Computer Interaction (2+0)	After completing the module, students can apply the value of HCI principles to optimal user interface design. Apply concepts and principles of interface design by human characteristics. Recognizing the need and possibility of lifelong learning for relevant knowledge.	2(2+0)	10	Project
60	Human Computer Interaction Labs (0+1)	The module will focus on equipping students with knowledge skills related to interface design and interaction between users and computer systems. Helping students to apply HCI principles and tools to quickly create software prototypes and develop user-centered user interfaces most optimally. Through projects, students develop skills in applying principles and guidelines in user-oriented design and user interface evaluation techniques. Provides the basics of HCI and user interface, user interface designs, evaluation, and technologies.	1(0+1)	10	Labs

61	Open Source Software Development (0+1)	Knowledge: The module provides students with knowledge: Intellectual property rights, open-source code, closed source code, analysis, design, construction, and administration of websites using the PHP programming language connected. MySQL.	2(0+1)	10	Project
62	Open Source Software Development Labs (2+0)	Skills: students are proficient in using PHP web programming language and MySQL database to build a dynamic website. Practice skills such as presentation skills, teamwork skills, information-seeking skills, adaptive skills, basic communication skills .... Attitude: students must comply with all regulations, the school's regulations; Actively discuss and speak out when participating in classroom learning, self-studying at home, and self-studying; Have a spirit of effective teamwork; Goodwill when resolving conflicts; Have good morals, have a high sense of discipline	1(2+0)	10	Labs
63	Mobile Game Development (2+0)	Knowledge: This module equips students with knowledge about components of mobile games and basic techniques used in in-game programming on mobile (Android platform). This module also introduces students to the AndEngine Game Framework. Skills: Students install the game framework and use the game framework to build mobile games. Attitude: Respect intellectual property rights.	2(2+0)	10	Project
64	Mobile Game Development Labs (0+1)	Knowledge: This module equips students with knowledge about components of mobile games and basic techniques used in in-game programming on mobile (Android platform). This module also introduces students to the AndEngine Game Framework. Skills: Students install the game framework and use the game framework to build mobile games. Attitude: Respect intellectual property rights.	1(0+1)	10	Labs
65	Service Oriented Software Development (2+0)	This course introduces students to the fundamentals of XML, the service-oriented architecture model, the principles of service-oriented architecture, and how to develop a service-oriented application.	2(2+0)	10	Project
66	Service Oriented Software Development Labs (0+1)	This course shows students how to develop an application in a service-oriented architecture.	1(0+1)	10	Labs

67	Cloud Computing (2+0)	The Cloud Computing module is an industry foundation module, providing students with basic knowledge about the concept, structure, and composition, how to exploit and deploy services on the cloud compu ting platform. . Includes content such as Overview of Cloud Computing; Advantages and disadvantages of Cloud Computing; The importance of Cloud Computing for businesses; Comparison between Traditional Data Center and Cloud Computing data center; Planning for a Cloud Computing environment; Store and process data in Cloud Computing; Models of Cloud Computing;Using PaaS, PaaS and IaaS services in Cloud Computing; Safety and Security Issues in Cloud Computing; Virtualization Technology; Market-oriented cloud architecture and simulation tools Cloud computing are necessary and important knowledge as a foundation for learners to continue researching professional issues.	2(2+0)	10	Project
68	Cloud Computing Labs (0+1)	Knowledge: After completing this module, students will be able to grasp and present the basic concepts, necessary knowledge, and the process of deploying cloud-based applications. cloud by the service provider. Skills: Implementing and deploying applications on cloud computing platforms. Attitude: Sense of social responsibility, manners, discipline, professional ethics.	1(0+1)	10	Labs
69	Network Programming (2+0)	Knowledge: Equip students with knowledge on methods of developing network applications, Application techniques of Helper classes, and packet loss prevention in data transmission applications.	2(2+0)	10	Project
70	Network Programming Labs (0+1)	Skills: Students have the ability to program data transfer applications using UDP, using ICMP, RMI. Attitude: Serious in learning and researching. Forming skills in finding errors and handling errors in the process of developing applications that transmit data over the network	1(0+1)	10	Labs
71	Cross Platform Mobile App Development (2+0)	Knowledge: The course aims to equip students with knowledge of React Native fundamentals, project structure, Styles and Layouts, data display and storage, map positioning, images, and application deployment.	2(2+0)	10	Project

72	Cross Platform Mobile App Development Labs (0+1)	Occupational Competency: Install development environment; design, install, test; application deployment; Use source code version control. Attitude: Consciously create clean source code.	1(0+1)	10	Labs
73	Lịch sử Đảng Cộng sản Việt Nam (2+0)	Provide systematic and basic knowledge about the birth of the Communist Party of Vietnam (1920 - 1930), and the leadership of the Party for the Vietnamese revolution during the period of struggle for power (1930 - 1925 – 19:30). 1945), during the two resistance wars against the French colonialists and the invading US imperialists (1945-1975), in the cause of national construction and defense during the period of the whole country's transition to socialism, carried out the doi moi (1975 - 2018). Equip with scientific thinking methods on history, skills in choosing research materials, studying subjects, and the ability to apply historical awareness to practical work, and criticize wrong views on the history of students. Party. Through historical events and experiences on Party leadership to build a sense of respect for objective truth, raise pride, and build students' confidence in the Party's leadership, according to the Party's goals and ideals.	2(2+0)	11	Check on Elearning system
74	Specialized Project (0+2)	Fully analyze the requirements of a specific problem about Big Data/Management Information System (IMS) Create a design based on analysis of actual requirements. Apply problem-solving skills while developing applications Proficiently use tools in design, database construction, algorithms, and programming to build software. Apply skills in working and relating to others such as teamwork, team management, and proficient multimedia communication / guidance. Sense of learning, studying seriously and responsibly.	2(0+2)	11	Project
75	ICT Project Management (3+0)	After completing the course, students have knowledge related to project management, especially information technology projects. It is possible to do an estimation followed by the development of a software project plan. Implement the project according to the plan, and monitor and manage changes in the project.	3(3+0)	11	Project

76	Enterprise Resource Planning System Development (2+0)	Knowledge: After studying this part, students can grasp and present basic concepts: what is ERP, software modules in an enterprise as well as issues related to ERP. regarding the costs of implementing the system; issues related to production processes, management, infrastructure deployment, and information security in enterprises.	2(2+0)	11	Project
77	Enterprise Resource Planning System Development Labs (0+1)	The subject trains analytical thinking skills, simulation thinking to solve class assignments, lab practice, and homework assignments.	1(0+1)	11	Labs
78	Game Engine(2+0)	Knowledge: Understanding how to organize game projects. Skills: Fluently uses basic features of Game Engine Unity to manage and use resources in-game projects as well as understand the architecture of game projects. Attitude: Positive and proactive in learning, respecting copyright and copyleft.	2(2+0)	11	Project
79	Game Engine Labs (0+1)	Knowledge: Understanding how to organize game projects. Skills: Fluently uses basic features of Game Engine Unity to manage and use resourcesin-gamee projects as well as understand the architecture of game projects. Attitude: Positive and proactive in learning, respecting copyright and copyleft.	1(0+1)	11	Labs
80	Java Technology (2+0)	Knowledge: The course equips learners with basic knowledge of the Java language: Basic java programs, classes, data types, variables, class methods, operators,and command commands. control; Object-oriented in java: Objects, classes, constructors and object destruction ,mechanisms, encapsulation, inheritance, polymorphism, interfaces; Programming interfaces with Swing; Instructions for using JDBC to connect and manage databases; Exception handling and garbage collection in Java. Skills: Train learners in teamwork skills, problem-solving thinking skills, providing error-correcting solutions, analytical thinking and critical thinking. Attitude: Learners are aware of the importance of the subject, respect the author's rights and well implement the rules of the class.	2(2+0)	11	Project

81	Java Technology Labs (0+1)	Knowledge: The course equips learners with basic knowledge of the Java language: Basic java programs, classes, data types, variables, class methods, operators,and command commands. control; Object-oriented in java: Objects, classes, constructors and object destruction mechanisms, encapsulation, inheritance, polymorphism, interfaces; Programming interfaces with Swing; Instructions for using JDBC to connect and manage databases; Exception handling and garbage collection in Java. Skills: Train learners in teamwork skills, problem-solving thinking skills, providing error-correcting solutions, analytical thinking, and critical thinking. Attitude: Learners are aware of the importance of the subject, respect the author's rights and well implement the rules of the class.	1(0+1)	11	Labs
82	.NET Technology (2+0)	Knowledge: Understanding the architecture of ASP .NET Core technology. Skills: Proficient in using ASP .NET Core to develop applications. Attitude: Positive and proactive in learning.	2(2+0)	11	
83	.NET Technology Labs (0+1)	Knowledge: Understanding the architecture of ASP .NET Core technology. Skills: Proficient in using ASP .NET Core to develop applications. Attitude: Positive and proactive in learning.	1(0+1)	11	Labs
84	Advances in Software Security (2+0)	Analyze real-life situations that need to apply security methods on the application. Differentiate the security testing methods for each type of application. Use test methods on virtual machine systems. Analyze the security level of software applications and systems. Using Matlab, Visual Studio, and Virtualbox software, in designing and testing the security capabilities of the application. Recognizing the need and possibility of lifelong learning.	2(2+0)	11	Project
85	Advances in Software Security Labs(0+1)	Knowledge: Students can grasp and demonstrate the concepts and essential knowledge about application security and safety. How to prevent attacks and intrusions from the outside. Skills: The subject trains critical thinking skills, technical thinking, and systems thinking to assess the security capabilities of a software application or system. Attitude: Recognizing social responsibility, manners, discipline, professional ethics.	1(0+1)	11	Labs

86	Advances in Internet of Things (2+0)	The module Developing an Internet Of Things application helps students have basic concepts of the IoT, and the opportunities and challenges in building practical applications. Students participate in hands-on Arduino boards to build Internet Of Things applications that meet real-world needs.	2(2+0)	11	
87	Advances in Internet of Things Labs (0+1)	Skills: The subject trains analytical thinking, critical thinking, and systematic thinking skills to solve problems through lab practice, homework assignments, and class presentation..	1(0+1)	11	Labs
88	Advances in Big Data (2+0)	The Big Data Thematic module provides students with the basics of big data and related issues such as Universal data architecture of big data, helping students to visualize how to collect and analyze data; Big data ,processing algorithms such as K-Means, hash tables, big data processing with MapReduce Model; Big data search and mining including search and data mining techniques, social network clustering algorithms by topology discovery, emotion detection...; Security and privacy are challenges on insecurity in the face of high availability, vulnerability to attacks, related initiatives and emerging trends; The big data service agreement provides some SLA issues, big data negotiations…; Finally, there are applications of Big Data in many different fields. Big Data topics are necessary and important knowledge as a foundation for learners to continue researching professional issues.	2(2+0)	11	Project
89	Advances in Big Data Labs (0+1)	Identify important characteristics of big data Design and functional specifications of big data systems. Use effective teamwork skills. A good application of requirements analysis skills to build IT application products. Fluently use Python language to build functions for big data-themed IT application products.	1(0+1)	11	Labs
90	Advances in ICT Product Development (2+0)	Knowledge: Understanding DevOps. Skills: Building DevOps Deployment Tool Framework. Attitude: Positive and proactive in learning.	2(2+0)	11	

91	Advances in ICT Product Development Labs (0+1)	Knowledge: Understanding DevOps. Skills: Building DevOps Deployment Tool Framework. Attitude: Positive and proactive in learning.	1(0+1)	11	Labs
92	Enterprise Intern (0+5)	Vocational capacity: Practice analytical skills to assess requirements of problems, application features. Based on analysis and evaluation results; Students design, install, solve problems, and apply features. Attitude: Sense of personal and professional development.	5(0+5)	12	Writing internship report
93	Graduation Intern (0+5)	Vocational capacity: Practice analytical skills evaluate requirements of the problem, application features through practical experience in the project team at the organization/enterprise. Based on analysis and evaluation results; Students design, install, test, operate and maintain solutions to problems and application features. Attitude: Respect the discipline and culture in the business.	5(0+5)	13	Writing internship report
94	Graduation report (0+10)	Analyze the implementation requirements of particular software. Evaluate the implementation requirements of that software based on the analysis above with products currently on the market. Create software products based on the above evaluation analysis. Proficiently apply skills in analysis, design, database construction, algorithms and programming, and tools to build software. Apply skills in working and relating to others such as teamwork, team management, and proficient multimedia communication / guidance. Sense of learning, studying seriously and responsibly.	10(0+10)	14	Project

Bình Dương, ngày tháng 6 năm 2022

HIỆU TRƯỞNG

(Đã ký)

TS. Nguyễn Quốc Cường