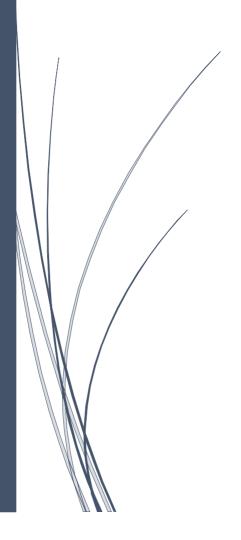
VIET NAM NATIONAL UNIVERSITY HCMC UNIVERSITY OF ECONOMICS AND LAW

**FACULTY OF INFORMATION SYSTEMS** 

## **COURSE DESCRIPTION**

**BACHELOR OF ECOMMERCE** 



No	Course name	Credit	Description
1	Introducing the E-commerce industry	2	The module includes 3 parts: Part 1: Basic introduction to the Management Information System industry, basic concepts of organization, business, business processes, and management. Part two: Introduction to the Management Information Systems major training program, structure of module series. Part three: Visiting and interacting with businesses and students, conducting essays, presentations, and group discussions on information technology application solutions for business management, management information system solutions management is being applied in businesses today, career orientations in the field of management information systems.
2	Microeconomics	3	The course equips learners with basic theoretical issues, forms and measurements of the digital economy. Current status of applications in certain sectors of the economy and the role of government in the digital economy. At the end of the module, learners need to understand and apply basic issues of the digital economy, such as concepts, forms, and manifestations of the digital economy in certain fields. Analyze and evaluate the digital economy through economic measurement indicators. Apply digital economy knowledge in certain fields to equip yourself with more knowledge, trends and practical awareness.
3	Introduction to Law	3	The subject will provide students with the following knowledge blocks: General knowledge about law such as concepts, characteristics, origins, legal doctrines, sources of law and lines of law.; Legal norms and legal relations; Developing laws and implementing

		1	A
			them; Violations of law and liability; State and legal institutions; Legal profession and basic legal skills
4	Economical maths	3	Course summary: The first part of the course provides introductory knowledge of linear algebra and some basic applications of linear algebra in economics, especially information planning. Part 2 equips you with knowledge about differential calculus of multivariable functions, an introduction to multiple integration and differential equations, and basic applications of single and multivariable analysis in economics.
5	New information and communication technology (New ICT)	2	In this course, students will study the principles of transforming business processes by applying different technologies, driving digital transformations in business and leading to the creation of smart enterprises. This module also discusses, using today's emerging technologies as examples, how to apply these technologies to different business areas. Thereby, helping students explore the various business opportunities that new technologies create and better understand how they can lead to major changes in the way of doing business and enable the creation of smart enterprises. Specifically, the module introduces fundamental issues and technologies in the new era such as: Introduction to information and communication technology, digital transformation, cloud computing, big data. data), artificial intelligence, 3D printing technology, block chain, Internet of Things.
6	Logic	2	Logic is the science of rational thinking: helping learners manipulate concepts accurately and effectively; helps improve judgment ability; Helps

			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
			reason logically and refute fallacies.
			In short, Logic is the science of
			improving rational and effective
			thinking skills in the process of
			perceiving the real world and practical
			activities.
			The personal finance subject is an
			elective general course for first-year
			students of all majors. This module
			mainly addresses aspects of personal
			and family financial management. The
			_
			module aims to provide financial
			concepts associated with financial
			issues/decisions that individuals and
			households frequently face in practice
			such as: managing funds/income; tax;
			save; Buying houses and valuable
			assets, borrowing, insurance,
			investing, planning financial plans for
			college and graduate studies. Through
			the module, students will grasp the
			principles as well as
			techniques/methods to manage
7	Personal Finance	2	income and expenditure or financial
,		2	assets and obligations of
			individuals/households. In addition,
			this module also addresses financial
			intermediaries in the relationship of
			financial institutions with
			individuals/households, as well as
			research on financial instruments used
			by individuals and households.
			commonly used family.
			Comprehensive content in the
			program includes: Overview of
			personal financial planning, personal
			financial reporting and analysis,
			personal financial risk management,
			spending and lifestyle, borrowing and
			relationships. relationship, service and
			career.
			This subject will help learners
8	Creativity and startup	2	discover their own creative abilities
8			and nurture their lifelong creative
			thinking ability. Providing a starting

			point to foster open thinking and embracing differences, the module also encourages students to develop a sensitive mindset to the changing trends of the digital age, preparing for the journey of construction. own career in a position of autonomy. In addition, the module also initially equips learners with initial awareness of business and management in the field of startups, encouraging students to develop their own entrepreneurial capabilities as entrepreneurs. owner, co-owner or member.
9	Leadership	2	On the basis of understanding human nature, factors affecting human psychology, and psychological laws, learners can apply knowledge of leadership skills (Style, Authority Limitation, Motivation, Psychology) into handling real-life situations to achieve efficiency in management. Students can flexibly apply each leadership skill to respond to specific situations. Style Skills with 3 Style Model: Authoritarian, Democratic, Liberal. Skills Authority and power with the basis of 3 powers: Position, Personal, Political. Motivation and persuasion skills with the application of Maslow's 5-level theory of needs: Basic, safety, social, respect, expression. Psychological skills with 3 psychological attributes: Temperament, Personality, Ability.
10	Physical education 1	3	Students understand the principles and methods of practicing sports and the effects of this practice on the development of the body; techniques and rules for some sports such as badminton, volleyball, soccer, martial arts, and aerobics.
11	Triết học Mác – Lênin	3	Trang bị cho sinh viên hệ thống những nội dung cơ bản về thế giới quan và phương pháp luận duy vật biện

12	Enterprise law	3	chứng và duy vật lịch sử của Triết học Mác - Lênin. Bước đầu biết vận dụng các nguyên lý cơ bản của Triết học Mác - Lênin vào phân tích, đánh giá các vấn đề thực tiễn cuộc sống đặt ra.  The Business Law course provides students with basic knowledge of business courses, grasping the basic content of a number of legal issues related to businesses, legal issues in public relations. internal business system of the enterprise.
13	Macroeconomic	3	The course focuses on basic content such as studying the operating mechanism and factors that determine macroeconomic indicators and measuring macroeconomic indicators, determining aggregate supply, aggregate demand, and the role of macroeconomic indicators. The role and impact of fiscal policy, monetary policy, foreign trade policy and exchange rate policy, research and explore the relationship between macroeconomic indicators and short-term economic growth term and long term.
14	Accounting principles	3	Accounting principles is a module in the basic knowledge of the industry to equip learners with basic knowledge about accounting: Concepts, definitions, objects, principles, functions, tasks, and roles of accountants. maths; accounting methods; Apply accounting methods to the basic business operations of a specific unit. The accounting methods mentioned include: Accounting documents, inventory, calculating prices of accounting objects, accounts, double-entry bookkeeping and general accounting balance. The basic accounting knowledge of the module helps learners to continue to study

15	Management studies	3	accounting and auditing more deeply, and at the same time can apply it to support HP specialized fields in the economic sector.  The subject of management studies includes basic knowledge about the process of organizing and coordinating effective activities of administrators to achieve the common goals of the organization, in the changing conditions of the business environment. HP content includes 2 parts. The overview equips learners with general knowledge about management such as: Concepts and roles of management; the birth and development of theories of management; governance environment, the role of information in governance; and decision making in management. The study of the functions of management introduces learners to the four main functions of the Administrator: planning function, organizing function, leadership function, and control function.  In addition, the module also introduces learners to portraits of contemporary administrators and practical experiences related to governance issues in companies; and some applications of management theories in domestic and world businesses are integrated in each chapter
			The course layout includes 3 parts:
16	Statistics in business	3	The course layout includes 3 parts: Descriptive Statistics, Probability and Inferential Statistics to systematically provide statistical investigation methods including collecting initial information about economic phenomena - society and the processing of collected information. Equipped with basic methods of

		1	annia annomia analysis 1i- C
			socio-economic analysis as a basis for predicting future levels of phenomena
			to help make decisions in economic
			management.
			Introduction to the subjects, tasks,
			and research methods of Psychology
			in general; Some details about the
			history of the formation of
			Psychology; the nature of the
1.7	Applied psychology	2	phenomenon of human psychology;
17	Inplied psychology	2	Characteristic features of basic human
			psychological phenomena: cognitive,
			emotional, willful and personality
			processes and some collective
			psychological phenomena.
			Communication science is an
			elective course in the general
			knowledge block for students
			majoring in economics and law with
			content including the most central
	Communication science	2	knowledge system about
			communication. The module will be
			systematized and equipped with
18			general issues of communication such
			as concepts, principles, functions, and
			roles of communication activities;
			forms and means of communication;
			Social communication and
			communication skill systems need to
			be developed for students to meet the
			requirements of future study and work
			activities.
			The course equips students with
			non-sociology majors in general and
			non-major universities in particular
			with basic knowledge of the
			theoretical system of Sociology,
	G. • 1		including: History of formation and
19	Sociology	2	development of the discipline social
			science in the process of cognitive development, social progress and
			science and technology; basic
			concepts and categories of sociology;
			Main research areas of sociological
			science in human life through research
	1	i .	T SCICHCE HE HUHIAH THE HILDUSH TESEATCH

			methods and techniques, studying
20	International relationship	2	In addition to introducing some theoretical knowledge, methodology, sociological research methods, the module also helps students understand that society is a rich system because it includes many complex issues of modern society. The module content includes 14 chapters, briefly presenting the conditions and premises for the birth of sociology, the history of formation and development of this science (from chapter 1 to chapter 3), the issues Basic topics of sociology (chapters 4 to 12), sociological majors (chapter 13) and sociological research methods (chapter 14).
21	CULTURISM	2	The subject equips students with the following knowledge, learning and research methods: Methods and objects of cultural research; Concepts of culture, civilization, trends, schools of cultural studies; Methods of applying cultural studies in economics and tourism; Cultural guidelines and policies, cultural studies in the new context.
22	Physical education 2	2	Students understand the principles and methods of practicing sports and the effects of this practice on the development of the body; Techniques and rules for some sports such as badminton, volleyball, football, martial arts, aerobics
23	Defense Education	165	The course provides students with some basic knowledge about a country's military policy, basic military techniques and tactics, and the role of military politics in the process of economic development. society of a country. At the end of the module, students increase their awareness of national security and

			defense issues and are conscious of protecting national security.
24	Financial accountant	3	The course equips students with knowledge about the organization of accounting work in enterprises, operations, methods, and accounting procedures of a number of accounting sections (cash capital accounting, capital accounting, capital accounting). Accounts receivable - advances, accounting for raw materials, tools, accounting for salaries and payroll deductions, accounting for fixed assets and investment real estate, accounting for production costs and product price).
25	Thinking programming	3	The course provides students with knowledge about programming thinking, how to approach programming methods, and write algorithm flow charts. Basic application programming skills with the Python language, how to separate programs into multiple modules for processing, and how to translate reallife operations into computer software.
26	Principles of financial markets	3	The course includes knowledge related to tools, skills, and methods of economic thinking in some basic economic principles such as: structure and organization of domestic and foreign financial markets; explain the financial category and the role of the state budget; a simple approach to the problem of investment asset selection (asset demand theory); concept of balance, analysis of supply and demand; analyze fluctuations and risk structure of interest rates; operating on the foreign exchange market; information arbitrage (adverse selection and moral hazard)

	T	Γ	T
27	Data analysis	3	This course introduces the fundamentals of data analysis with python. First, it reviews some of the most popular python libraries in data science, Numpy, Pandas and Matplotlib. It then focuses on the basics of statistics, time series analysis, and natural language processing. The course follows a series of data analysis projects with python as a tool. The course uses a hands-on approach, integrating data analysis concepts with Python source code examples.
28	Business information system	2	The course is for second-year students majoring in business and management. The course introduces how businesses use technology to manage business and management activities in practice. The content in the module is completely updated with practice, learners can access and practice on the most modern business management systems today, SAP Business Suite ERP and SAP Business One ERP. The practice content is designed according to role-playing situations (case studies), through which learners play the role of employees in a multinational enterprise, working in different positions and participating operational participation in contextual business processes (business scenarios). All practice materials, case studies, lectures and software systems used in the module are provided by SAP corporation through the SAP UAP program (SAP University Alliances Program) of the University of Economics Law is a member. The module is the beginning of an expanded group of elective modules in the Management Information Systems major (for students at the end

29	Technology foundation for	2	of year 3 and 4), through which learners continue to be equipped with in-depth knowledge of SAP ERP, and can be ready to work in businesses consulting, implementing and using ERP systems with positions such as: ERP Implementation Consultant (ERP Consultant), Business Functional Consultant (Business Functionality) Consultant), Bridge Engineer, Information System Audit (IT Audit).  This course equips students with knowledge about network platforms
29	Information Systems	2	and technology for IOT connection to
30	Marketing	2	technology infrastructure.  The basic Marketing course focuses on teaching basic theories about analyzing the marketing environment, customers, industry and competitors; Market segmentation and target market selection; and a number of issues related to products, pricing, sales distribution, promotion and branding.
31	Marxist-Leninist political economy	2	Basic theories of Marxist-Leninist political economy, including: theory of commodity production, basic laws of the market; Marx's theory of surplus value; Theory of monopoly capitalism and state monopoly. Basic content of applying Marxist-Leninist theory in the period of building socialism in Vietnam: socialist-oriented market economy; ownership issues and interest relationships; industrialization and modernization associated with knowledge-based economic development and international integration.
32	Programming techniques	3	The course provides students with advanced knowledge of application programming skills with Python, knowledge of object-oriented programming, file processing, interface design with Qt Designer, and

			library packaging.
33	Financial management	3	Financial management is a mandatory foundation course for 2nd year students (4th semester) of economics and business majors. The Financial Management module includes 7 chapters providing basic knowledge on topics: financial principles and financial operating mechanisms of private sector enterprises, financial statement analysis, risk theory and profitability and investment capital budgeting decisions. The content covered in the program includes: Overview of financial management, financial reporting and cash flow, financial statement analysis, time value of money, risk and profit, criteria Evaluate the financial efficiency of investment projects, estimate cash flows and assess project risks.
34	Econometric	3	The course introduces methods of using models, data and analysis to help students understand and describe socio-economic phenomena in order to plan effective policies/strategies. The science is clear. More specifically, the module will introduce standard methods to estimate relationships between observed economic factors and test hypotheses about those relationships.
35	Database	3	The course presents the role, needs and methods of structured data management in enterprise information systems. The course introduces popular database models, going into depth on the presentation and analysis of relational database models and applications. After completing the module, learners will have all the necessary skills and knowledge to fully carry out all stages of the process

			of building a database that meets the
			needs of storing and exploiting
			information for users. Management
			issues are raised. The module includes
			4 parts: Part one: Introduction to
			databases and the relational database
			model, stages of database
			construction; Part two: Using
			structured data query language - SQL
			in database management and
			information exploitation; Part three:
			Standardize the database, introduce
			standard formats, and provide
			solutions to evaluate and optimize the
			database; Part four: Programming
			database mining software with
			Python.
			The course consists of 4 parts (i)
			Part one: introduces general
			knowledge about information systems
			and components of an information
			system. (ii) Part two: provides
			knowledge about types of information
			systems according to management and
	Management		functional aspects; Information
36	information systems	3	systems in practice today such as
			ERP, SCM, CRM. (iii) Part three:
			equipping yourself with knowledge
			about the process of building and
			developing information systems. (iv)
			Part four: introduces knowledge to
			manage, secure and control
			information systems.
			"Scientific research methods" are
			taught with the main contents:
			research, steps to conduct a research,
			interdisciplinary research methods,
37			quantitative and qualitative research,
	Interdisciplinary research methods	2	methods of collecting information.
		2	information, data and data analysis
			methods for research, the contents and
			content sequence of a research report
			such as a thesis, and the introduction
			of interdisciplinary research issues in
			information systems management and

			e-commerce. In the presented content, there will be discussions about related case studies, as well as suggestions for topics (essays) and ways to present the results of a research as well as apply the methods learned in the course. throughout the student's learning and research process.
38	International economy	2	The course studies basic issues related to international economic activities and applies knowledge to design an item in an import-export project, thereby creating products related to this item. In addition, the Module also studies active learning methods, teamwork skills, problem solving, business communication, positive life attitude and business ethics issues.
39	Science socialism	2	The course is equipped with the basic content of scientific socialism, providing students with scientific theoretical bases to understand the historical mission of the working class and normative issues during the period. the transition period to socialism, the policy guidelines for building socialism in Vietnam; explain and have the right attitude towards the path to socialism - the path that our Party and people have chosen.
40	Database Management System	3	The course consists of 2 parts. Part one: Learn the basic introduction to SQL using Oracle 11g database technology. The course introduces relational database concepts and the SQL programming language. The course provides the necessary SQL skills that allow software developers to write queries that retrieve data from one or more data tables, and manipulate data in data tables. Learn about objects in the database schema. Create index files, constraints. Create

			and query external data tables, convert data in data warehouse applications Part two: briefly learn about the architectural components of the database, system rights and object rights in the database. Use the Enterprise Manager (EM) tool to create users, assign rights, and create data storage areas. The main tool used in the course is Oracle SQL Developer and SQL*Plus is an optional tool.
41	Business Web Development	3	The course provides students with knowledge to design and program simple business websites through client-side programming languages: HTML, CSS, JavaScript, XML, DOM model, Angular.
42	Advanced Business Web Development	2	The course provides students with knowledge to design and program advanced business websites through client and server-side programming languages: Design, build and deploy business web applications with frontends. Popular -end, back-end frameworks.  Proficient in working with front-end frameworks: Angular, Veujs, Reactjs,; back-end: ExpressJs + Nodejs + MogoDB
43	Analysis and design of Management Information Systems	3	The course consists of 2 parts. Part one: introduces and reviews knowledge about information systems in general and management information systems in particular; Presents the stages and methods applied at each stage of the analysis and design process, advantages and disadvantages of the methods; Current status of application and deployment of management information systems in our country, advantages, disadvantages as well as development trends, and related job positions. Part two: presents each stage in detail such

44	Integrate business processes with ERP systems 1	2	as surveying the current situation, analyzing requirements, designing components, and proposing construction solutions.  The course provides students with basic knowledge about enterprise information systems - ERP systems. In particular, the module presents concepts related to organizations, business processes in organizations and the support of business information systems in the process of computerizing business activities.
45	Digital marketing analysis	2	This subject is part of a series of modules in the field of E-commerce - Emarketing to help students form an understanding of digital marketing analysis. By providing foundational knowledge, theory and practice of digital marketing analysis, the module will help students form the ability to analyze, set up and analyze digital marketing. At the same time, in-depth career orientation for students in the field of Marketing
46	History of the Communist Party of Vietnam	2	The course equips students with awareness of: The role of the Communist Party of Vietnam in the process of building and protecting the country, experience in leading the Vietnamese revolution through periods. At the same time, it also provides a panorama of important innovations in the Party's awareness and policies from 1986 onwards through party congresses. These lessons are the basis for learners to strengthen their patriotism, national pride and sense of responsibility in building confidence in the Party's leadership in the current integration context.
47	Ho Chi Minh Thought	2	The course equips students with Ho Chi Minh's thoughts on the nation and the national liberation revolution;

			socialism and the transition path to
			socialism in Vietnam; great national
			unity, combining national strength
			with the strength of the times;
			Communist Party of Vietnam; about
			building a state of the people, by the
			people, for the people; ethics,
			humanity and culture.
			The internship program is
			mandatory for regular students in the
			enterprise experience program and
			completes an internship report under
			the guidance of instructors and
			support from the enterprise. The
			program aims to help students have
			clearer orientation and more passion
			to pursue their chosen career. The
			program also helps students learn
			more knowledge and skills that can be
			applied in a specific business
			environment. During the learning
			process, students can observe
			activities at businesses, can exchange,
			learn and draw lessons from
			experience. Through observing the
	Visit and learn about		real environment, students will
48	businesses	3	understand more clearly the
	<i>businesses</i>		importance of the knowledge and
			skills trained in the classroom. In
			addition, when students go through
			the internship process, many of their
			soft skills will be cultivated and
			improved effectively by training
			sessions from experts at the business.
			Also through observing that reality,
			students have the opportunity to
			discuss with the staff at the training
			site, and their soft skills knowledge
			will gradually improve, helping
			students choose jobs that suit their
			abilities. skills and from there,
			students have more advantages in the
			job search phase to prepare for final
			internships and jobs after graduation.

	Intones -t - 1 '		The module provides advanced
49	Integrate business processes with ERP	2	knowledge of the module Integrating
50	systems 2  Software testing techniques	2	business processes with ERP 1.  The course equips students with judgment skills, detecting software errors, how to plan tests, and write test documents. (i) Overview of software testing, (ii) Testing in the software development process, (iii) Test case design, (iv) Testing support tools, (v) Plan testing and test documentation.
51	Machine Learning in business analytics	3	This course presents some machine learning techniques in a business and management context. Businesses are adopting machine learning (ML) technology at a rapid pace. Besides, this module will help students learn and apply a number of classification and prediction methods using supervised machine learning methods. Applying machine learning methods to analyze customer behavior and experiences to improve decision making and drive new product development, there is almost no modern business field that cannot do without the need for learning machine.
52	Business intelligence and decision support systems	3	The course helps students understand and be able to install, operate and exploit artificial intelligence management and exploitation solutions (Business Intelligence - BI). Managing data and information and providing statistics and reports plays a very important role for every unit, organization and especially businesses. Statistics reported in BI are intended to provide intuitive, accurate, complete and timely information that will help administrators in evaluating, forecasting the situation, planning strategies as well as building policies. , business development plan in the

			short and long term. Numbers and
			statistical forms are the most
			important basis for checking and
			evaluating the implementation of
			those plans, strategies and policies.
			Studying this module will help
			students apply the series of previous
			modules such as: Database,
			accounting, finance and management
			tools to organize a BI system to
			support good decision making. in
			businesses based on analyzing data
			inside and outside the business and
			this helps businesses gain a
			competitive advantage. In addition,
			this module will help students practice
			data analysis skills, soft skills and
			attitudes for future work.
			The course introduces the "real-life"
			experience of the Digital
			Transformation process by author
			Lindsay Herbert - who is in charge of
			digital transformation at IBM, directly
			directing large-scale innovation
			projects globally in all fields.
			organization, and is also a famous
			speaker in the field of digital
			transformation. You will participate in
			a detailed discussion about the five
			basic stages of the digital
	Digital		transformation process, which are: 1)
53	transformation in	3	Narrowing the gap: Narrowing the
	business		gap of inherent differences between
			businesses and customers customers
			and with the changes taking place
			every day in the business
			environment; 2) Discovery: Uncover
			your organization's hidden barriers,
			useful assets, and necessary resources
			to plan and prioritize routes to digital
			transformation; 3) Iterate: Iterate on
			short cycles, test with real users, and
			drive scalable innovations; 4) Using
			leverage: Using leverage successfully
			will eliminate barriers, access greater

54	Ecommerce	3	resources, expand influence and scope of activities; 5) Expand: Expand innovation and ways of working to adapt and change the new "business normal".  The course provides students with general knowledge about e-commerce as well as issues to grasp related to developing e-commerce systems and building e-commerce business projects.
55	Accounting information system	3	The course provides basic knowledge about information systems, helping students systematize modules in the field of business administration, thereby organizing an accounting information system to control assets as well as provide Timely useful information for managers inside and outside the enterprise when making business decisions. The module starts from introducing accounting information systems in businesses, then describes the main business processes and control objectives in each process, and finally the criteria and basis for Select and operate the accounting information system in the enterprise. Through the theory presented in class, combined with guided reference materials, students will build one or several specific business processes at a business unit. These processes must be appropriate to scale, management requirements and feasible.
56	Open source ERP development	3	Learn open source code, programming languages and open source applications to develop basic ERP systems.
57	Advanced data analysis	3	Businesses in most industries use data as a basis to make important decisions to gain competitive advantage, stimulate demand, find new customers, improve internal

			operating systems, and maximize maximize profits as well as to achieve many other goals. Therefore, data analysis skills become essential to provide useful information to help businesses make appropriate decisions. This module provides knowledge about deep learning, one of the advanced techniques applied to business data analysis that helps improve prediction performance compared to models from traditional machine learning.
58	Developing mobile commerce	3	Mobile computing, technical foundation of mobile application programming on the Android platform, front-end level. Mobile commerce concept and business and marketing models and forms.
59	Art of leadership	3	On the basis of understanding human nature, factors affecting human psychology, and psychological laws, learners can apply knowledge of leadership skills (Style, Authority Limitation, Motivation, Psychology) into handling real-life situations to achieve efficiency in management. Students can flexibly apply each leadership skill to deal with specific situations. Style Skills with 3 Style Model: Authoritarian, Democratic, Liberal. Skills Authority and power with the basis of 3 powers: Position, Personal, Political. Motivation and persuasion skills with the application of Maslow's 5-level theory of needs: basic, safety, social, respect, and expression. Psychological skills with 3 psychological attributes: temperament, personality, and ability.
60	Recommendation system	3	The course provides students as well as learners with basic knowledge about recommendation systems, classification of recommendation

	T	T	
			systems, similarity measures, and
			evaluation indicators in
			recommendation systems. Basic
			knowledge of recommendation
			systems based on collaborative
			filtering and content-based
			recommendation systems. Besides,
			prediction methods for
			recommendation systems are also
			researched at basic and advanced
			levels. Machine learning techniques
			for collaborative filtering
			recommendation systems are also
			considered such as KNN and its
			variants, SAR; Matrix decomposition
			models: SVD, SVD++, NMF, ALS.
			The module also provides knowledge
			about collaborative filtering
			recommendation systems using
			advanced models such as sequential
			models (A2SVD, Caser, SUM, SLi-
			Rec), models based on derivative
			properties (VAE). , BiVAE), deep
			learning-based models (FastAI, NCF,
			LightGCN). The fundamental
			knowledge of content-based
			recommendation systems is also
			discussed and researched (TF-IDF,
			· ·
			Word2Vec, GloVe, Doc2Vec, Bert).
			In addition, concepts and basic
			knowledge about hybrid
			recommendation systems are also
			included in the content of the module.
			The module introduces students to
			basic knowledge of Digital Business
			and Artificial Intelligence; Equipping
			students with university study skills
	Introducing the major		and methods, teamwork skills, report
	of Digital Business		writing skills, written communication
61	and Artificial	2	and opinion presentation. This module
	Intelligence		also introduces each module in detail
	3		and each series of modules in the
			training program will also be
			introduced so that students can clearly
			•
			orient themselves throughout the

			learning process and explore their
			own potential to Choose a suitable
			career and be inspired to study the
			chosen field. Students can visit and
			learn about businesses, survey
			business sectors through e-commerce
			websites on the Internet, business
			processes and data analysis to serve
			business management purposes.
			From there, students gain the ability to
			apply data mining techniques to
			discover new knowledge to support
			decision making at organizations and
		1	businesses in specific fields.
			Internship is a mandatory internship
			for full-time students to create
			conditions for students to access
			practice and consolidate the
			knowledge and skills they have been
			trained through an internship report
			under the guidance of students.
			guidance from lecturers and
			businesses. Internships at the end of
			the course help students connect
			trained knowledge and skills with
			industry-related practice, creating
			conditions for students to gain a
			deeper understanding of business
			operations and participate in activities.
	Intona din		motivated and even have the
62	Internship	4	
			opportunity to be assigned to perform
			actual work at the company as an
			employee. The internship at the end of
			the course also aims to create
			conditions for students to develop
			their creative thinking ability in
			practice, practice soft skills, and meet
			the demands of specific operations
			and jobs at the internship unit.
			practice. In addition, the internship at
			the end of the course also helps
			students build a more professional
			working style, have a more positive
			attitude towards the profession, and
			approach practice to gain a deeper
			approach practice to Sum a deeper

63	Special Topic: Big Data and Applications	2	understanding of professional work. Furthermore, students have many opportunities to learn deeply about professional expertise, organizational structure and specific tasks related to the training major in the internship agency, helping students raise their sense of responsibility on the job and prepare for your chosen career after graduation.  The module provides students with basic knowledge about Big Data: Basic concepts, benefits of Big Data, as well as support tools for big data processing such as Hadoop, Spark Besides, , students are also provided with knowledge about big data processing, understanding the mechanism and operating principles of online data stream processing in the Big Data environment. In addition, students are also equipped with knowledge about libraries, techniques related to supervised machine learning, unsupervised machine learning and deep learning (Deep Learning) to solve problems of collecting, data preprocessing, model selection, model refinement and model evaluation for data analysis, data visualization in Big Data
64	Special Topic: Information System	2	environment.  This module provides basic knowledge about information system project management including the processes performed in the project and the software project deployment model. For each process, students will
	project management		learn in detail about the management tasks that will be performed as well as clearly understand the inputs and outputs of each process.
65	Graduation thesis	4	The graduation thesis helps students have the conditions and opportunities to improve their knowledge and

practice more necessary in-depth skills through conducting research in the field of training to solve real-life problems. . After completing the thesis report, students will practice their thinking ability and know how to pose problems to come up with solutions independently and Create conditions creatively. and opportunities for students to improve the knowledge and skills they have been equipped with and promote their strengths through the implementation of scientific research. More specifically, the graduation thesis will help students systematize knowledge and skills and apply them in research topics in a scientific and creative way; Train and improve your ability to think, pose and solve problems independently and creatively; and train students to be self-motivated and independent in research and develop their strengths through a report of research results that can be related to practice.

FACULTY OF INFORMATION SYSTEMS

DEAN

LÊ HOÀNH SỬ