

Instructive Cultivation Plan for the Program of Electronic Commerce (Grade 2020)

Course Code: 120801

1. Orientation

This program aims to cultivate applied innovative technical talents with the ability of e-commerce application development, e-commerce data analysis and e-commerce operation.

2. Cultivation Objectives

2.1 General Objective

This program cultivates all-round applied and innovative talents who understand modern management and information economy, who master the comprehensive skills in information technology and the electronic service, who have a solid professional foundation and good knowledge structure, who have certain Internet innovation and entrepreneurship quality, and who are able to engage in business operation, professional management and technical service in the network environment.

2.2 Cultivation Value

Guiding by the professional accomplishment of prospective e-commerce practitioners and the spirit of model works, this program cultivates talents with both political integrity and professional competence, who have good scientific accomplishment, integrity quality and social responsibility, who have good humanity and scientific rationalism, who have international view and cultural integration ability, and who have correct political awareness, overall situation awareness, core awareness and alignment awareness.

3. Requirement for Graduation

3.1 Requirement on Quality

3.1.1 Have proper moral, humanistic, scientific and professional qualities.

3.1.2 Have high network civilization quality, e-commerce integrity and credit quality, information security and confidentiality quality.

3.1.3 Have good interpersonal communication quality and teamwork spirit.

3.2 Requirement on Knowledge

3.2.1 Firmly master the basic theories and professional knowledge related to modern management, network economy and information technology.

3.2.2 Master the professional theories and specialized methods of e-commerce programs, be able to combine theory with practice, solve practical problems.

3.2.3 Understand the rapid development of e-commerce industry, pay attention to the technological innovation and business model innovation of e-commerce industry, timely master

the corresponding theoretical and technical knowledge.

3.3 Requirement on Ability

3.3.1 Have the ability to independently acquire the knowledge related to this program.

3.3.2 Have the ability to integrate the knowledge acquired and practice, and apply it to e-commerce practice flexibly.

3.3.3 Initially have the ability to carry out scientific researches by using the productive thinking, and the creativity, innovation and entrepreneurship ability based on multidisciplinary knowledge integration.

3.3.4 Have good ability of foreign language listening, speaking, reading and writing.

3.4 Professional Certificate Requirement

3.4.1 Ministry of Human Resources and Social Security of the People's Republic of China: Computer Information Technology Testing (Cross-border E-commerce Module) (Junior and Mediate).

3.4.2 Alibaba (China) Educational Technology Co., Ltd., National Human Resources Institute for Service Outsourcing: Chinese Cross-border E-commerce Specialist Level 3.

3.5 Suitable Posts

3.5.1 Technical and management posts in e-commerce enterprises and in the e-commerce department of relevant enterprises, including planning or editing of e-commerce websites, construction and maintenance of e-commerce websites, marketing planning of products and services, cross-border e-commerce operations, business intelligence decision-making, website optimization, planning and operation of e-commerce projects, etc.

4. Schooling System

Four-year undergraduate education

5. Length of Study

Generally four years. The shortest duration is not less than three years, and the longest is not more than six years.

6. Requirements for Graduation and Degree Conferring

Minimum Credits of Curriculum (required courses, practical trainings & extracurricular classes): 152.

Degree Awarded: Bachelor of Engineering

7. Disciplines

Computer Science and Technology, Management, Economics

8. Core Courses

8.1 E-commerce (in English)

This is a basic course for the program of e-commerce, the main contents include: concept of e-commerce, e-commerce development history, types of e-commerce, e-commerce technology,

e-commerce security, e-commerce payment, e-commerce marketing, e-commerce logistics, e-commerce laws, e-commerce development trends, mobile e-commerce, social e-commerce. Through the study of this course, students can not only master the specific operation of each operation link in the existing mature e-commerce mode, but also understand the essence of e-commerce: the application of information technology and the Internet in the field of business. The development of e-commerce is not only influenced by the development of technology, but also restricted by external factors such as laws and regulations. The relevant policy and significance of "the Belt and Road Initiative" and "China International Import Expo" are integrated in this course to make students understand that China's determination of expanding its opening up is the objective requirement and inevitable choice to deal with the new pattern of global trade, promote the upgrading of industrial structure, drive industrialization by informatization, promote informatization by industrialization, and take the road of new industrialization.

8.2 Basic Programming (Java)

The course focuses on the thoughts and methods of programming and covers procedural programming, as well as object-oriented programming. The course mainly introduces the basic thoughts, concepts and technologies of programming, good programming styles and procedural programming, including the data type, control structure, numerical array and all kinds of common algorithm, aiming to help the students master the methods of programming and have good programming styles through learning, training and practice. The course integrates the theory and practice, class instruction and after-class exercise together, stresses the instruction of thoughts and methods and aims to improve the students' ability of programming and debugging through practical instruction. The teaching method combines the humanistic spirit and the scientific spirit, the teaching content implants the classical Confucian sentences, the methods, contents and concepts of computational thinking cultivation are included in teaching

8.3 Management

It is a common basic course for the school of economics and management. Through the course, the students are able to master the basic functions, theories and methods of management. The main course contents include: development of management thoughts, basic features of management work and requirements on the skills of managers, basic procedures and theories of planning work, process and method of effective decision, basic structure of organization and basic theory of organization design, basic framework of HR management, basic theory of motivation and basic communication skills, basic theory and method of controlling, leadership and others. Through the study of this course, students are required to understand and think about the characteristics of business management under the socialist economic environment and the problems and solutions under the current situation.

8.4 Applied Statistics

The course mainly instructs the basic theory and methods of statistics. Through learning the statistic working process and methods like statistic investigation, statistic collection and statistic analysis, the course lay a foundation for the learning of students' learning of professional courses. The basic requirements of the course are as follows: understand the research objects of statistics

and its basic concept; master the basic methods of statistic investigation, master the statistic grouping and collection, skillfully master the concept and calculation of total amount index, relative index and average index, get familiar with the application of those comprehensive indexes; master the main analysis indicators of dynamic numerical arrays; master the compiling methods and factor analysis of comprehensive indicators; understand the sampling inference, correlation and regression analysis methods. Through the study of this course, students should be able to understand the problems of economic statistics under the current economic situation, analyze and understand the national economic policy with the knowledge they have learned, and recognize the international economic situation.

8.5 Basic Database Application

This course mainly introduces the basic concepts and practical applications of database system, the main contents include: basic knowledge of database, installation and configuration of database management system, SQL language, operation of database and table, transaction management, management of storage procedure, view management, advanced operation of database, database design, development trend of database technology, etc. Students are guided to study deeply and apply the knowledge acquired in class to practice, especially consider customer needs in the design of database, design reasonable databases, carry out data security measures and protections. protect user's privacy information and establish good integrity quality.

8.6 E-marketing

Through the course, the students are required to master the basic theory and methods of e-commerce marketing, learn to use the service tools of e-marketing and design websites, use the pricing strategy of different e-commerce marketing, apply the technology of constructing the e-commerce marketing channels, Internet promotion methods and the Internet advertisement methods, and understand the execution, organization and controlling of e-commerce marketing. The idea of integrity and resisting fake commodities is included in teaching, this course cultivates students' habit of transmitting positive energy, idea of not publishing false information and safeguarding product brand by product quality.

8.7 E-commerce System Analysis and Design Methods

This is a significant professional course for the program of e-commerce, it adopts the combination of online teaching and classroom teaching. This course It involves a wide range of aspects, and mainly discusses the principles, methods, techniques, tools and applications of the analysis and design process of e-commerce system. The course contents include the relevant knowledge involved in the construction of e-commerce system, the basic concepts and principles of system analysis and design and the life cycle process of system development, it focuses on teaching students the knowledge points they need to master in the stage of system analysis and system design, including research methods, data flow diagrams, entity relationships, functional processes and module design, and cultivating students' teamwork ability through team exercises to consolidate theoretical knowledge. In the course of teaching, it explains the importance of learning new technology and the importance of moral quality of e-commerce practitioners, and guides students to cultivate the consciousness of integrity and solidarity.

8.8 E-commerce Logistics

This is a selective professional course, the main contents include overview of e-commerce logistics, e-commerce logistics market and logistics mode, e-commerce logistics distribution management, basic e-commerce logistics technology, e-commerce logistics information management system, supply chain management, logistics management methods and logistics cost accounting. Through the study of this course, students can understand the basic knowledge on the operation and management of e-commerce logistics. At the same time, through the analysis of some cases, we try to expand the students' thinking space, deepen the students' understanding of theoretical knowledge, and enhance students' ability to learn independently. Through the study of this course, students should be able to enhance their professional quality, understand the significance of "the Belt and Road Initiative" policy, understand the concept of green logistics and circular economy, and practice them in life and work.

8.9 Business Intelligence

Starting from the basic concepts and application of business intelligence, the course requires the students to understand the core technologies of business intelligence, including the basic technological contents of business intelligent system structure, data warehouse, OLAP and data mining. Based on that, the students are required to understand the application of business intelligence in mobile business, knowledge management, web mining, performance management, e-commerce and the development trend of business intelligence in the future. In the explanation of this course, the data of various industries with rapid development in China in recent years are cited, and the rapid development and strength of China are felt while data mining and business decision-making are carried out, which is helpful to cultivate the patriotism of students.

8.10 E-commerce Security Technologies and Management

The course introduces the meaning of e-commerce security, security threats and solutions of e-commerce system. The course contents include: principles, objectives, strategies and realization of e-commerce security, common attacking and prevention methods of network security and e-commerce website, inspection and recovery of website bugs, system and algorithm of public keys and passwords, digital signature and public key certificates, e-payment security and security agreements, transaction information security and solutions, development trend of e-commerce security technology. Students are educated to abide by security laws and regulations, use technology and management to prevent the destruction of e-commerce transactions and national property security, patriotism education and moral education are integrated in this course to make students become applied talents with both moral and professional ethics.

9. Practical Training

Practice of Introduction to E-commerce, Practice of Visual Design, Practice of E-shop Graphic Design, Practice of Static Business Website Design, Practice of E-commerce Shop Operation, Practice of Dynamic Business Website Design, Practice of Statistical Analysis Tools, Practice of New Media Operations, Practice of Search Engine Marketing and Optimization, Practice of Integrated E-commerce Projects, Comprehensive Practice of Cross-border E-commerce Platforms, Innovation and Entrepreneurship of E-commerce, Practice of Internet Development Technologies, Practice of Business Intelligence and Data Mining Projects, Post Practice in E-commerce

Enterprises and Practice of Professional Skills.

10. Course Structure and Course Hours (excluding extracurricular classes)

Category	Total Credits	%	Total Course Hours	Theory Learning	Practical Training
General Education	44.5	30	848	784	64
Basic Course	30	19	480	412	68
Professional Course	37	25	592	432	160
Practical Training	29.5	19	856	0	856
General Course	10	7	160	160	0
Total	151	100	2936	1788	1148
Theory : Practice (%)	61:39				

11. Teaching Schedule (1)

Category	Type	Provided by	Course Code	Course Name	Assessment	Credit	Course Hour	Theory Learning	Practical Training	Semester
General Education	Required	School of Marxism	b1080001	Basic Theory of Marxism	test	3	48	42	6	autumn 1
	Required	School of Marxism	b1080003	Morality and Laws	non-test	3	48	42	6	autumn 1
	Required	School of Marxism	b1080006	Outline of Modern Chinese History	non-test	3	48	42	6	spring 1
	Required	School of Marxism	b1080004	Introduction to the Thought of Mao Zedong and Theories of Socialism with Chinese Characteristics I	test	3	48	42	6	autumn 2
	Required	School of Marxism	b1080007	Introduction to the Thought of Mao Zedong and Theories of Socialism with Chinese Characteristics II	test	2	32	28	4	spring 2
	Required	School of Marxism	-----	Situation and Policy (Module 1-4)	non-test	2	32	28	4	autumn 1 - spring 2
	Required	School of Marxism	b1080008	Labor Education A	non-test	0.5	16	16		spring 1
	Required	College of Arts and Sciences	b1020082	Advanced Mathematics B1	test	4	64	64		autumn 1
	Required	College of Arts and Sciences	b1020083	Advanced Mathematics B2	test	2	32	32		spring 1
	Required	College of Arts and Sciences	b1020012	Linear Algebra	test	2	32	32		autumn 2
	Required	College of Arts and Sciences	b1020013	Probability Theory and Mathematical Statistics	test	2	32	32		autumn 2
	Required	College of Arts and Sciences	b1020018	College Chinese	non-test	2	32	32		autumn 1
	Required	Department of Physical Education	-----	PE I-VI	non-test	3	160	160		autumn 1 - autumn 4
	Required	Other	g1110003	Military Skills	non-test	0.5	2W			autumn 1
	Required	College of Arts and Sciences	g1110002	Military Theories	non-test	0.5	32	32		spring 1
	Required	Engineering Training Center	g1090001	Basic Engineering Training	non-test	2	32		32	spring 1
	* College English (Selective, 1 module required, 10 credits)	Module A	b1020003	General English III	test	3	48	48		autumn 1
			b1020004	General English IV	test	3	48	48		spring 1
			b1020005	General Academic English A	test	2	32	32		autumn 2
			-----	English Extension	non-test	2	32	32		spring 2
		Module B	b1020002	General English II	test	3	48	48		autumn 1
			b1020003	General English III	test	3	48	48		spring 1
			b1020006	General Academic English B	test	2	32	32		autumn 2
			-----	English Extension	non-test	2	32	32		spring 2
		Module C	b1020001	General English I	test	4	64	64		autumn 1
			b1020002	General English II	test	3	48	48		spring 1
	b1020003		General English III	test	3	48	48		autumn 2	
* College German	College of Arts and Sciences	b1020040	General German I	test	3	48	48		autumn 1	
	College of Arts and Sciences	b1020041	General German II	test	3	48	48		spring 1	
	College of Arts and Sciences	b1020042	General German III	test	4	64	64		autumn 2	
* College Japanese	College of Arts and Sciences	b1020077	General Japanese I	test	3	48	48		autumn 1	
	College of Arts and Sciences	b1020078	General Japanese II	test	3	48	48		spring 1	
	College of Arts and Sciences	b1020079	General Japanese III	test	4	64	64		autumn 2	
Sub-total (General Education)						44.5	848	784	64	
General Course	Selective	Other	b0----	Social Sciences and Humanities Literacy (4 credits) Natural Science and Technological Innovation (4 credits)	non-test	10	160	160	0	autumn, spring

				Public Arts (2 credits)					
Sub-total (General Course)						10	160	160	0

(*Notes: A total of 10 credits for the First Foreign Language, including College English, College German and College Japanese, students may choose one from the above-mentioned three foreign language according to their own needs; students, who choose College English as their First Foreign Language, shall select one module from Module A, Module B and Module C to learn.)

11. Teaching Schedule (2)

Category	Type	Provided by	Course Code	Course Name	Assessment	Credit	Course Hour	Theory Learning	Practical Training	Semester
Basic Course	Required	School of Economics and Management	b2030037	Management	test	3	48	48		autumn 1
	Required	School of Economics and Management	b2030226	Introduction to E-commerce (in English)	test	2	32	28	4	autumn 1
	Required	School of Economics and Management	b2030015	Basic Programming (Java)	test	4	64	40	24	spring 1
	Required	School of Economics and Management	b2030060	Accounting Principles	test	3	48	48		spring 1
	Required	School of Economics and Management	b2030125	Basic Database Application	test	2	32	24	8	spring 1
	Required	School of Economics and Management	b2030163	Operations Management	test	3	48	40	8	autumn 2
	Required	School of Economics and Management	b2030145	Western Economics	test	4	64	64		autumn 2
	Required	School of Economics and Management	b2030296	Applied Statistics (in English)	test	3	48	40	8	spring 2
	Required	School of Economics and Management	b2030276	Data Structure and Algorithm (Java)	test	2	32	24	8	spring 2
	Required	School of Economics and Management	b2030130	E-marketing	test	2	32	28	4	autumn 3
Required	School of Economics and Management	b2030110	Business Intelligence (in Chinese and English)	test	2	32	28	4	spring 3	
Sub-total (Basic Course)						30	480	412	68	
Professional Course	Required	School of Economics and Management	b2030133	Web Design	test	3	48	32	16	autumn 1
	Required	School of Economics and Management	b2030289	E-commerce Development Technologies	test	4	64	40	24	autumn 2
	Required	School of Economics and Management	b2030301	Computer Networks and Operations	non-test	2	32	16	16	spring 2
	Required	School of Economics and Management	b2030298	Theory and Practice of International Trade (in Chinese and English)	non-test	3	48	32	16	spring 2
	Required	School of Economics and Management	b2030297	Fundamentals of Python	non-test	2	32	16	16	spring 2
	Required	School of Economics and Management	b2030026	E-commerce Logistics	test	2	32	24	8	autumn 3
	Required	School of Economics and Management	b2030106	E-commerce System Analysis and Design Methods	non-test	2	32	24	8	autumn 3
	Required	School of Economics and Management	b2030302	Customer Relationship Management	non-test	2	32	32		autumn 3
	Required	School of Economics and Management	b2030171	Data Mining and Analysis	non-test	2	32	24	8	autumn 3
	Required	School of Economics and Management	b2030303	Internet Finance and Payment	non-test	2	32	32		spring 3
Required	School of Economics	b2030227	E-commerce Security Technologies and	test	2	32	24	8	spring 3	

	and Management		Management						
Required	School of Economics and Management	b2030290	E-commerce Laws and Regulations	non-test	2	32	32		autumn 4
Sub-total (Required Professional Course)					28	448	328	120	
* Selective (9 credits)	Module A	b2030286	Mobile Development Technologies	non-test	3	48	32	16	autumn 3
		b2030157	New Technologies for E-commerce	non-test	2	32	20	12	spring 3
		b2030096	Framework Development Technologies	non-test	2	32	20	12	spring 3
		b2030291	Big Data Analysis Technologies and Applications	non-test	2	32	16	16	spring 3
	Module B	b2030287	Theory and Practice of Cross-border E-commerce (in Chinese and English)	non-test	3	48	32	16	autumn 3
		b2030292	Cross-border E-commerce Supply Chain Planning (in Chinese and English)	non-test	2	32	28	4	spring 3
		b2030293	Analysis of Cross-border E-commerce Data Operations (in Chinese and English)	non-test	2	32	32	16	spring 3
		b2030294	Integrated Customs Clearance of Cross-border E-commerce (in Chinese and English)	non-test	2	32	28	4	spring 3
	Module C	b2030288	Data, Model and Decision-making	non-test	3	48	32	16	autumn 3
		b2030295	Analysis of User Behavior Data	non-test	2	32	28	4	spring 3
		b2030161	Data Visualization Design	non-test	2	32	20	12	spring 3
		b2030291	Big Data Analysis Technologies and Applications	non-test	2	32	16	16	spring 3
Sub-total (Selective Professional Course)					9	144	104	40	
Sub-total (Professional Course)					37	592	432	160	

11. Teaching Schedule (3)

	Provided by	Course Code	Course Name	Assessment	Credit	Course Hour	Theory Learning	Practical Training
ed	School of Economics and Management	b4000025	Innovation and Entrepreneurship of E-commerce	non-test	2	48		48
ed	School of Economics and Management	b4030139	Practice of Visual Design	non-test	1	24		24
ed	School of Economics and Management	b4030097	Practice of Introduction to E-commerce	non-test	1	24		24
ed	School of Economics and Management	b4030015	Practice of E-commerce Shop Operation	non-test	1	24		24
ed	School of Economics and Management	b4030143	Comprehensive Practice of Programming	non-test	1	24		24
ed	School of Economics and Management	b4030127	Practice of E-shop Graphic Design	non-test	2	48		48
ed	School of Economics and Management	b4030144	Practice of Static Business Website Design	non-test	2	48		48
ed	School of Economics and Management	b4030145	Practice of Dynamic Business Website Design	non-test	2	48		48
ed	School of Economics and Management	b4030146	Practice of New Media Operations	non-test	2	48		48
ed	School of Economics and Management	b4030147	Practice of Statistical Analysis Tools	non-test	2	48		48
ed	School of Economics and Management	b4030142	Practice of Search Engine Marketing and Optimization	non-test	2	48		48
ed	School of Economics and Management	b4030101	Practice of Integrated E-commerce Projects	non-test	2	48		48
ed	School of Economics and Management	b4030093	Practice of Professional Skills	non-test	1	24		24
ed	School of Economics and Management	b4030200	Labor Education B	non-test	0.5	16		16
ed	School of Economics and Management	b4030131	Graduation Internship and Graduation Design (Thesis) of E-commerce	non-test	6	288		288
Sub-total (Required Practical Training)					22.5	808		808
	Module A	b4030148	Practice of Internet Development Technologies	non-test	2	48		48
	Module B or C	b4030094	Comprehensive Practice of Cross-border E-commerce Platforms	non-test	2	48		48
	Module C	b4030149	Practice of Business Intelligence and Data Mining Projects	non-test	2	48		48
	Module A or B or C	b4030150	Post Practice in E-commerce Enterprises	non-test	2	48		48
Sub-total (Selective Practical Training)					4	48		48
Sub-total (Practical Training)					29.5	856		856
ed	Other	b5110001	Extracurricular Classes	non-test	1			
Total					152	2936	1788	1144

*1.Guidance for the selective modules professional course and practical training:

There are different modules for professional course to be selected according to different ability requirements, students must select one module to learn and achieve the credits required by the module. The selective modules of practice training must be selected according to the corresponding module of professional course.

Module A: Mobile Development Module

This module focuses on in-deep learning of H5 technology, Android mobile development and SpringMVC framework technology and data analysis, and cultivates comprehensive technical talents who have the ability of UI design, mobile APP design, business website development and maintenance, mobile interconnection product design, testing and software project management, who are familiar with e-commerce processes, and who are capable of relevant program development and software technology support posts.

Module B: Cross-border E-commerce Module

This module focuses on in-deep learning of cross-border e-commerce practice and operation, cross-border e-commerce logistics options and dynamic planning, cross-border e-commerce platform data analysis and customs clearance, and cultivates talents urgently needed in the e-commerce industry who have the ability to provide cross-border e-commerce solutions for enterprises, clearly identify the conditions for cross-border e-commerce and master the needs and marketing strategies of the target market, and who are capable of foreign trade operation and promotion posts in cross-border e-commerce (export) platforms.

Module C: Data Analysis Module

This module focuses on in-deep learning of business data model design and decision analysis, e-commerce user behavior data analysis and targeted marketing, e-commerce data visual design, e-commerce big data analysis and application, and cultivates professional talents such as e-commerce operation and maintenance data analysts, e-commerce website data analysts and data software technology support technicians.

2. Professional Certificates can be gained after learning following courses:

Upon the study of "E-marketing", "E-commerce Logistics", "Internet Finance and Payment", "Theory and Practice of International Trade", "Theory and Practice of Cross-border E-commerce (in Chinese and English)", "Practice of E-commerce Shop Operation", "Practice of New Media Operations" and "Comprehensive Practice of Cross-border E-commerce Platforms" courses, students may take the examinations for the professional qualification certificates related to this project: Computer Information Technology Testing (Cross-border E-commerce Module) (Junior and Mediate), Chinese Cross-border E-commerce Specialist Level 3.

Students may apply the exemption of and the credits corresponding to the "Theory and Practice of Cross-border E-commerce (in Chinese and English)", "Comprehensive Practice of Cross-border E-commerce Platforms" and "Practice of Professional Skills" courses after obtaining the Qualification Certificate for Computer Information Technology Testing (Cross-border E-commerce Module) (Junior and Mediate), Chinese Cross-border E-commerce Specialist Level 3.

12. Prerequisite for Course Study

No.	Course Name	Prerequisite Courses	No.	Course Name	Prerequisite Courses
1	Data Structure and Algorithm (Java)	Basic Programming (Java)	5	Practice of Statistical Analysis Tools	Applied Statistics (in English)
2	E-commerce Development Technologies	Basic Database Application	6	Theory and Practice of Cross-border E-commerce (in Chinese and English)	Theory and Practice of International Trade (in Chinese and English)
		Basic Programming (Java)			
3	Framework Development Technologies	E-commerce Development Technologies	7	Practice of Dynamic Business Website Design	Web Design
					E-commerce Development Technologies
4	Practice of Static Business Website Design	Web Design	8		

13. Extracurricular Class

Through taking extracurricular classes, students are encouraged to take part in academic lectures, social practice activities, campus cultural and sports activities, innovative and entrepreneurial activities, voluntary activities, etc. to improve their social adaptability and enhance the competitiveness in the job market. Details are specified in Students' Manual.