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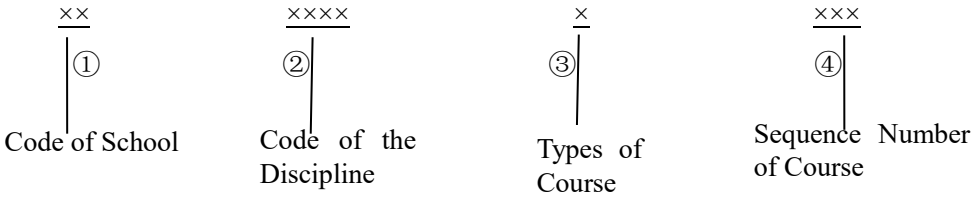
Introduction to the Course Numbers

Courses for foreign graduate students are identified by ten-digital numbers. The course-numbering system is to be understood as follows:



For example, course number‘0108106003’ means: this course is given by School of Information and Communication Engineering (01), it is a course of the discipline: Information and Communication Engineering（0810）, its course level is 600, which means the course is a major core course, and lastly, the course is the third course (003) on the list of major core courses (6) of the discipline: Information and Communication Engineering（0810）.

An illustration of course numbers is as follows:

①—the first two digits, i.e., number ‘01’, is the school which gives the course.

②— the second four digits, i.e., number ‘0810’, is the code of the discipline.

③—the third one digit, i.e., number ‘6’, is the code of course level (600), distinguishes different types of courses. In detail, the number “5” stands for Common Core Courses and Other Optional Courses, ‘6’ for major core courses, and ‘7’ for Disciplinary Optional Courses.

④—the last three digits is the sequence number of courses.

Table 1 Code of the School and its Corresponding Majors for Foreign Students

School Code	School Name	Corresponding Majors for Foreign Students	Student Type
01	School of Information and Communication Engineering	Information and Communication Engineering	Master, Ph.D
02	School of Electronic Science and Engineering	Electronic Science and Technology	Master, Ph.D
21	Institute of Fundamental and Frontier Sciences		
03	School of Materials and Energy	Materials Science and Engineering	Master, Ph.D
04	School of Mechanical and Electrical Engineering	Mechanical Engineering	Master, Ph.D
04	School of Mechanical and Electrical Engineering	Electrical Engineering	Master
05	School of Optoelectronic Science and Engineering	Optical Engineering	Master, Ph.D
21	Institute of Fundamental and Frontier Sciences		
06	School of Automation Engineering	Instrument Science and Technology	Master, Ph.D
06	School of Automation Engineering	Control Science and Engineering	Master, Ph.D
10	School of Aeronautics & Astronautics		
04	School of Mechanical and Electrical Engineering		Ph.D
08	School of Computer Science and Engineering (School of Cybersecurity)	Computer Science and Technology	Master, Ph.D
21	Institute of Fundamental and Frontier Sciences		
09	School of Information and Software Engineering	Software Engineering	Master, Ph.D
11	School of Mathematical Sciences	Mathematics	Master
12	School of Physics	Physics	Master, Ph.D
21	Institute of Fundamental and Frontier Sciences		
14	School of Life Science and Technology	Biomedical Engineering	Master, Ph.D
15	School of Management and Economics	Management Science and Engineering	Ph.D
15	School of Management and Economics	Business Administration	Ph.D
16	School of Public Affairs and Administration	Public Management	Master

Master Program (for International Students) in the Discipline of Information and Communication Engineering

Information and Communication Engineering of UESTC is the national key discipline, which constituted by 2 sub-disciplines, Communication and Information System, Signal and Information Processing. The disciplines related to Information and Communication Engineering of UESTC are the first batch of disciplines which were authorized to confer doctoral degree and to establish postdoctoral position, and also the first batch of Project 211, Project 985, Double First-Class key disciplines. The discipline was ranked as 2nd in National Discipline Evaluation from Ministry of Education in 2012 and was accredited as A+ in the fourth round of National Discipline Evaluation from Ministry of Education in 2017. The school has 2 academicians of Chinese Academy of Engineering, 8 awardees of National Thousand Talents Program, 2 National Renowned Professors, 5 awardees of Cheung Kong Scholars Program, 2 awardees of National Natural Science Foundation for Distinguished Young Scholars, 9 awardees of Thousand Talent Program for Young Outstanding Scientists and 1 awardees of National Youth Top-notch Talent Support Program. The research team of this discipline enjoys a good reputation both at home and abroad. The discipline has many international first-class academic research and talents cultivation platforms such as National key laboratories, Ministry key laboratories and Overseas Expertise Introduction Project for Discipline Innovation.

The research fields of this discipline are closely related with those of Electronics Science and Technology, Computer Science and Technology, Control Science and Engineering, Instruments Science and Technology.

1. Objectives

Masters of the discipline are expected to have a rather profound knowledge of the cutting-edge research and trend of the field and a relatively sound grasp of the theoretical and systematic expertise, as are able to master corresponding experimental skills, to be proficient in the use of computers, familiar with at least one simulation software closely related to this discipline, to know the new technology and development trend in a certain field of information and communication engineering at home and abroad and to solve the academic or technical issues innovatively, able to contribute academic papers and exchange views in conferences, and to demonstrate rigorous spirits in scientific approaches and working style and professional ethics, so as to be competent in research, development, teaching or management jobs at research institutes and universities.

A Survey of China and Comprehensive Chinese are compulsory for international master candidates who, on graduation, are to be able to communicate in Chinese to some extent.

2. Orientations

1) Wireless and Mobile Communication System
2) Anti-jamming and Secure Communication System
3) Radar Detection and Imaging Recognition
4) Intelligent Communication Network and Information Processing
5) Optical Fiber Sensing and Communication

6) Image and Video Processing
7) Communication Integrated Circuit and System
8) Intelligent Perception and Information System
9) Machine Learning and Artificial Intelligence
10) Signal and Information Intelligent Processing

3. Duration

The duration set for master candidates is two years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether four years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compul-sory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016004	Matrix Theory	60	3	2	
		1107016005	Numerical Analysis	60	3	2	
		0108106001	Optimization Theory and Application□	50	2.5	1	
		0108106013	Digital Communications□	40	2	2	

		0108106014	Digital Signal Processing□	40	2	1	
		0108106015	Optical Fiber Communication□	40	2	2	
		0208096101	IC Design□	40	2	1	
		0808126016	Network Security	60	3	1	
Non-degree Optional Courses	Disciplinary Optional Courses	0108107026	Optical Fiber Technology□	40	2	1	
		0208096013	Analog IC Design	40	2	2	
		0108107013	Fuzzy Logic△	40	2	2	
		0108107028	Radar Theory	30	1.5	2	
		0108106007	Signal Detection and Estimation	40	2	1	
		0108107027	Computational Intelligence Methods and Application	30	1.5	2	
		0808127022	Mathematical Fundamental of Information Security	40	2	1	
		0808127024	Internet Programming Design	40	2	2	
		1008116004	Theories and Methods of Systems Engineering□	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)		1	1,2	
			Elective Quality Education Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English.. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture and arts, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Master Program (for International Students) in the Discipline of Electronic Science and Technology

The Discipline of Electronic Science and Technology, which has been selected into the national project of First-class Universities and Disciplines of the World, is one of the national key disciplines of China. It consists of 5 second disciplines including electromagnetic field and microwave technology, microelectronics and solid state electronics, circuits and systems, electronic information materials and devices and electronic information materials and components.

1. Objectives

Masters of the discipline are expected to have a rather profound knowledge of the cutting-edge research and trend of the field and a relatively sound grasp of the theoretical and systematic expertise, as are able to master corresponding experimental skills, to be proficient in the use of computers, familiar at least with one simulation software closely related to this discipline, able to contribute academic papers and exchange views in conferences, and to demonstrate rigorous spirits in scientific approaches and working style and professional ethics, so as to be competent in research, development, teaching or management jobs at research institutes and universities.

2. Orientations

1) Electromagnetic Field and Microwave Technology
2) Integrated Circuits and Systems
3) Electronic Information Materials and Devices
4) Microelectronics and Solid Electronics
5) Physical electronics

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; at least one in core courses

should be taken. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compulsory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016002	Matrix Theory	60	3	1	
		1100016003	Numerical Analysis	60	3	2	
		0208096101	IC Design	40	2	2	
		0208096102	Electronic Packaging Technology△	40	2	1	
		0208096106	Advanced Electromagnetic Field Theory△	60	3	1	
Non-degree Optional Courses	Disciplinary Optional Courses	0208096103	Co-Design of Hardware and Software	40	2	2	
		0208096104	RF IC Design△	40	2	2	
		0208096105	Analog IC Design	40	2	1	
		0208097010	Flexible MEMS Technology and Integration△	40	2	2	English Courses for Chinese and Int'l Students
		0208097019	Advanced Digital IC Design△	40	2	2	
		0208097020	Basis of Integrated Circuit Simulation and Automation Design	40	2	1	
		0208097029	Introduction to Terahertz Science and Technology△	20	1	2	
		0108106007	Signal Detection and Estimation△	40	2	1	
		0108107025	Radar Theory	30	1.5	2	
	Other Optional Courses	6900005003	Chinese Reading &Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	AcademicActivities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Master Program (for International Students) in the Discipline of Materials Science and Engineering

The Discipline of Materials Science and Engineering studies the composition, structure, preparation process, properties and applications of materials. The research objects include the theory, design, preparation, testing and application of electrical, magnetic, acoustic, optical, thermal, mechanical and biological functional materials. The research process involves the acquisition, transformation, storage, processing and control of materials information. UESTC is the first batch selected into the national project of First-class Universities and Disciplines of the World. Research and development of electronic information materials and application are characteristics and advantages of UESTC. The discipline of Materials Science and Engineering has strong academic faculties, which include Yangtze River Scholars, National Thousand Talents Plan Scholars, doctoral supervisor, professors, associate professors, and a number of Ph.D talents, advanced experimental facilities and plenty of research funds.

With the development of science and technology, the discipline of Materials Science and Engineering has become more and more closely interdisciplinary with other disciplines. At the same time, as an important pillar of modern civilization, the discipline has become the forerunner and foundation of the development of modern science and technology, and has a very close relationship with the development of contemporary society.

1. Objectives

Masters of the discipline are expected to have a rather profound knowledge of the cutting-edge research and trend of the field and a relatively sound grasp of the theoretical and systematic expertise, as are able to master corresponding experimental skills, to be proficient in the use of computers, familiar at least with one simulation software closely related to this discipline, able to contribute academic papers and exchange views in conferences, and to demonstrate rigorous spirits in scientific approaches and working style and professional ethics, so as to be competent in research, development, teaching or management jobs at research institutes and universities.

2. Orientations

1) Electronic Information Materials and Devices
2) Materials Gene Project
3) Electronic Film and Integrated Devices
4) New Energy Materials and Devices
5) Printed Circuits and Printed Electronic Technology
6) Organic Functional Materials and Engineering

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1	Compul-sory
		6900005002	A Survey of China□	40	2	2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016004	Matrix Theory	60	3	1	
		1107016005	Numerical Analysis	60	3	2	
		0208096101	IC Design	40	2	2	
		0208096102	Electronic Packaging Technology□	40	2	1	
		0308056018	Fundamental of Physical and Chemical Power Sources	40	2	1	English Courses for Chinese and Int'l Students
Non-degree Optional Courses	Disciplinary Optional Courses	0208096104	RF IC Design□	40	2	2	
		0208096105	Analog IC Design□	40	2	1	
		0308057010	Materials design and calculation□	30	1.5	2	English Courses for Chinese and Int'l Students
		0308057016	Optoelectronic Conversion from Fundamental to Devices□	20	1	2	
		0308057021	Material Selection in Mechanic Design	30	1.5	2	

		0208097010	Flexible MEMS Technology and Integration□	40	2	2	
		0208097019	Advanced Digital IC Design□	40	2	2	
		0208097020	Basis of Integrated Circuit Simulation and Automation Design	40	2	1	
		0108107025	Radar Theory	30	1.5	2	
		0308177009	Laboratory safety and fire safety	20	1	1	
	Other Optional Courses	6900005003	Chinese Reading &Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	AcademicActivities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Master Program (for International Students) in the Discipline of Mechanical Engineering

Mechanical Engineering is the first level discipline based on natural science and engineering technology, which aims to study the related theory on mechanical design, manufacturing, control, operation and maintenance during the usage of the mechanical equipment, and further resolve practical engineering problems. This discipline covers several directions, such as mechanical design and theory, mechanical manufacturing and automation, and mechatronics engineering, which leads to the discipline advantage with the multi-disciplinary synthesis of machine, electronic information, and measurement & control technology.

1. Objectives

Masters of the discipline are required to achieve an intermediate level of proficiency in Chinese to communicate in Chinese. They are expected to have a rather profound knowledge of the cutting-edge research and trend of the field and relatively sound grasp of the theoretical and systematic expertise in mechanical engineering fields, as are able to master corresponding experimental skills, to be proficient in the use of computers, at least familiar with one software closely related to the discipline, so as to independently conduct the high-level research by integrating the machine science and information science.

2. Orientations

1) Equipment reliability and equipment monitoring management
2) Intelligent manufacturing equipment,
3) Intelligent perception and control technology
4) Micro-Nano manufacturing and information technology
5) Equipment intelligence design and simulation

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and the completion of the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Master candidates are allowed to

choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese □	60	2	1,2	Compu-lsory
		6900005002	A Survey of China □	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016004	Matrix Theory	60	3	1	
		1107016005	Numerical Analysis	60	3	2	
		1107016004	Optimization Methods and Applications □	50	2.5	1	
		0408026009	Micro-Electro-Mechanical System (MEMS) □	40	2	1	
		0408026010	Advanced Manufacturing Technology □	40	2	1	
		0408026004	Machinery Dynamics □	40	2	2	
		0808126020	Embedded Operating System and Application □	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0108106007	Signal Detection and Estimation □	40	2	1	
		0408027013	Reliability Design □	40	2	2	
		1008116004	Theories and Methods of Systems Engineering □	40	2	2	
		0608046001	Methods and Applications of Signal Processing □	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading &Writing □	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
		XX00025XXX	Elective Competence Development Courses	20	1	1,2	

Directions: 1. All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Master Program (for International Students) in the Discipline of Electrical Engineering

Electrical Engineering is an engineering discipline related to the research and application of electricity, electronics, and electromagnetics. It includes electricity, electronics, circuits, control and communications. It is an indispensable key discipline in today's high-tech fields. For nearly forty years, under the integrated and cross-functional roles of information and communication engineering, control science and engineering, it has become one of the core disciplines in modern science and technology. UESTC conforms to the national energy development strategy and relies on the comprehensive advantages of electronic information, including the wide-area measurement and control of power systems, smart grids, power electronics and power transmission, and new types of power generation and energy storage. As a special feature, it has achieved a large number of high-level scientific research achievements and laid a good foundation for cultivating high-caliber, multi-functional, and international high-end electrical engineering talents.

1. Objectives

The discipline is positioned to cultivate in the field of electrical engineering, especially in power and control, circuits and systems, power information and communications, with solid basic theory and system expertise, master of electrical engineering and computer applications high-tech talent. Master degree holders should understand the academic status and direction of development in the relevant research areas in China and abroad, have the ability to independently analyze and solve specific technical problems in the subject, have a good international perspective and international communication skills. Students would also be proficient in Chinese. With rigorous and realistic scientific attitude and style of work, courage to innovate and pioneering consciousness and good professional qualities, the students can be competent in related research, teaching, engineering technology development and management in the field of electrical engineering.

2. Orientations

1. Power System Analysis and Control
2. Power Transformation and Active Distribution Network
3. Advanced Transmission and Conversion Technology
4. Intelligent Monitoring and Diagnosis of Electrical Equipment
5. Motor System and Control
6. Power and Energy Economy

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master

candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; at least one in core courses should be taken. Master candidates are allowed to choose 1~2 Inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compulsory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016002	Matrix Theory	60	3	1	
		1100016003	Numerical Analysis	60	3	1	
		1100016004	Optimization Methods and Applications△	50	2.5	1	
		0408086009	Power Electronics	40	2	1	
		0408086008	Power System Operation and Control△	40	2	2	
		0808126020	Embedded Operating System and Application△	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0408087014	Electricity Market	40	2	1	
		0408087012	Renewable Energy Generation and Integration△	40	2	2	
		0108106007	Signal Detection and Estimation△	40	2	1	
		1008116004	Theories and Methods of System Engineering	40	2	2	
		0408057013	Reliability Design△	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading &Writing△	60	2	2	
			Inter-disciplinary Optional Courses				

Compulsory Sections	6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
		Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English.
2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring*

Master Program (for International Students) in the Discipline of Optical Engineering

Optical Engineering, which mainly focuses on Light Information Acquisition, Optical Transmission, Optical Switching, Optical Information Processing and Photoelectric Image Display, has wide applications in the industry, and becomes an important discipline in the current information technology field.

The teaching and research area of Optical Engineering in UESTC covers the theory and application of the whole optical engineering discipline, especially strong in optical communication, photonic integration, infrared and sensing technology, panel display and imaging technology. The discipline has undertaken a number of national key research projects, receiving sufficient funds, and wining several state or provincial awards. The main research direction of this discipline has stepped into the leading position in China, also having a certain international influence.

1. Objectives

Masters of the discipline are expected to have a rather profound knowledge of the cutting-edge research and trend of the field and a relatively sound grasp of the theoretical and systematic expertise, as are able to master corresponding experimental skills, to be proficient in the use of computers, familiar at least with one simulation software closely related to this discipline, able to contribute academic papers and exchange views in conferences, and to demonstrate rigorous spirits in scientific approaches and working style and professional ethics, so as to be competent in research, development, teaching or management jobs at research institutes and universities.

A Survey of China and Comprehensive Chinese are compulsory for international master candidates who, on graduation, are to be able to communicate in Chinese to some extent.

2. Orientations

1) Optic communication and optic integration
2) Photoelectric Detection and System Integration
3) Sensitive electronics and sensor network
4) Display and Imaging
5) Microwave photonics
6) Photoelectric measurement and control technology

3. Duration

The duration set for master candidates is two years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether four years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; At least one in core courses should be taken. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compul-sory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016004	Matrix Theory	60	3	1	
		1100016005	Numerical Analysis□	60	3	2	
		0508036021	Fiber Optics △	30	1.5	1	
		0508036001	Optoelectronics technology △	40	2	1	
		0108106015	Optical Fiber Communication △	40	2	2	
		0108106014	Digital Signal Processing	40	2	1	
		0108106013	Digital Communication	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0508037033	Organic electronics □	20	1	2	
		0508037029	Optoelectronics and Photonics□	20	1	2	
		0108107026	Optical Fiber Technology△	40	2	1	
		1207026016	Nano Optics△	40	2	2	
		0108106007	Signal Detection and Estimation△	40	2	1	
		0808127022	Mathematical Fundamental of Information Security	40	2	1	
		0808126016	Network Security	60	3	1	
	Other Optional Courses	6900005003	Chinese Reading &Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring*.

Master Program (for International Students) in the Discipline of Instrument Science and Technology

Instrument Science and Technology plays a significant role in the field of information science. The research area includes signal and information acquisition method and conversion amplification and processing technology, measurement methodology, metrology, instrument engineering, measurement and control system engineering, etc. As a sustainable and interdisciplinary program, it has a great leading and promoting effect on the development of high technology, industry and society.

The program can be dated back to the major named Electronic Measurement Technology and Instruments set up in 1956 by our university. It is an 1st level discipline in Sichuan Province and owns strong teaching and research strength in our university. After so many years' development, the program has been expanded into several research areas including wideband time-domain testing technology and instruments, comprehensive test, diagnosis and prediction of electronic system, microwave and communication testing technology, integrated circuit test and testability design theory and technology.

1. Objectives

Abide by the laws and have good moral character. Good at communicating in Chinese. Solid professional theory and skills. Familiar with the development and frontier knowledge in the program. Able to make independent theoretical and practical research and technical development. Good and rigorous research spirit. Able to engage in research, teaching, engineering and management in related areas.

2. Orientations

1) Wideband Time-domain Testing Technology and Instruments
2) Comprehensive Test, Diagnosis and Prediction of Electronic System
3) Microwave Millimeter Wave Testing Technology Remote Sensing
4) Integrated Circuit Test and Testability Design Theory and Technology
5) New Sensing Technology and Precision Measurement

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master

candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		**Course Number**	**Course Name**	**Class Hours**	**Credits**	**Semester**	**Notes**
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	Compul-sory 1 from 3
		1100016004	Matrix Theory	60	3	1	
		1107016005	Numerical Analysis	60	3	2	
		0108106011	Digital Signal Processing△	40	2	1	
		0208096101	IC Design△	40	2	1	
		0108106014	Signal Detection and Estimation△	40	2	1	
		0208096103	Co-Design of Hardware and Software	40	2	2	
		0608046001	Methods and Applications of Signal Processing△	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0208097020	Basis of Integrated Circuit Simulation and Automation Design	40	2	1	
		0808126020	Embedded Operating System and Application△	40	2	2	
		0208096013	Analog IC Design△	40	2	2	

		0208096104	RF IC Design	40	2	2	
		1008116004	Theories and Methods of Systems Engineering△	40	2	2	
		0608117008	Computer Vision△	40	2	1	
	Other Optional Courses	6900005003	Chinese Reading & Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the *Academic Activities Registration Form* and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring*.

Master Program (for International Students) in the Discipline of Control Science and Engineering

Control Science and Engineering a discipline related to research of control theory, method, technology and engineering application. Based on control theory, system theory and information theory, control science deals with mutual problems in various application areas, which are building system model, analyzing its inner and outer information, adopting control methods. The program has an obvious characteristics in combination of theory research and engineering application, disciplinary crossing and integration, civil-military integration technology, and plays an indispensable role in national economy development and national security.

This program is a key discipline in Sichuan Province with abundant teaching resources. After many years' development, the program has been expanded into several research areas including complex system control and optimization, new energy system control technology, computer vision and pattern recognition, robot technology and system, etc.. The development of this program brings great benefits to the society and country, and makes outstanding contribution to national defense, social service, talent training and so on.

1. Objectives

Abide by the laws and have good moral character. Master solid basic theories and knowledge. Able to communicate in Chinese. Able to engage in research, teaching, and independent technical job.

2. Orientations

1）Complex System and Intelligent Information Processing

2）New Energy System Control Technology

3）Pattern Recognition and Intelligent System

4）Measurement and Control Communication and Navigation Control

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be

changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	Compul-sory 1 from 3
		1100016004	Matrix Theory	60	3	1	
		1107016005	Numerical Analysis	60	3	2	
		0408086005	Power System Operation and Control△	40	2	2	
		0108106011	Digital Signal Processing△	40	2	1	
		0608046001	Methods and Applications of Signal Processing△	40	2	2	
		0608116002	Linear System Theory△	50	2.5	1	
		0608116004	Pattern Recognition△	40	2	1	
Non-degree Optional Courses	Disciplinary Optional Courses	0608117008	Computer Vision△	40	2	1	
		0108106007	Signal Detection and Estimation△	40	2	1	
		0208097020	Basis of Integrated Circuit Simulation and Automation Design	40	2	1	
		1008116004	Theories and Methods of Systems Engineering△	40	2	2	
		0808126020	Embedded Operating System and Application△	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading &Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring*.

Master Program (for International Students) in the Discipline of Computer Science and Technology

With its postdoctoral research station set up as early as in 1999, the discipline enjoys a rather strong comprehensive advantages and has demonstrated great competence in fundamental and applied researches. With its substantially enhanced research abilities, the discipline is drawing close to the national first level as a whole with part of its achievements coming up as the most advanced in the country. Altogether, cheerful results have been achieved in aspects of discipline orientations, academic teams, discipline platform constructions, scientific researches, cultivation of talents and academic exchanges.

1. Objectives

Masters of the discipline are expected to have a sound grasp of the fundamental theories and systematic expertise, and a thorough knowledge of the trend of the field. As masters of modern experimental approaches and skills of the field, they are enabled to carry out scientific researches or undertake engineering practices in their orientations. On graduation, they are competent in scientific researches related to the computer field, in software developments and analysis of computer application system, and in computer teaching work.

Masters of the discipline are also expected to have a basic knowledge of Chinese history and culture, and be capable of reading Chinese scientific literatures in simple Chinese and communicating with basic skills in the Chinese language.

2. Orientations

1) Information Security
2) Digital Media Technology
3) Embedded System
4) Computer Networks
5) Computing Intelligence
6) Cloud Computing

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of

courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; at least one in core courses should be taken. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese	60	2	1,2	Compul-sory
		6900005002	A Survey of China	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016004	Matrix Theory	60	3	1	
		1107016005	Numerical Analysis	60	3	2	
		0808126016	Network Security□	60	3	1	
		0808126017	Multimedia Technology and Applications □	60	3	1	
		0808126018	Software Development Technology □	60	3	1	
		0808126019	Mobile Computing□	40	2	2	
		0808126020	Embedded Operating Systemand Application□	40	2	2	
		0808126007	Big Data Analysis and Mining□	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0808127020	Foundation of Cryptography	40	2	2	
		0808127021	Security Protocol□	40	2	1	
		0808127022	Mathematical Fundamental of Information Security	40	2	1	
		0808127023	Operating System and Application Programming□	40	2	2	
		0808127024	Internet Programming Design	40	2	2	
		0808127025	Database Technique	40	2	2	
		0808127026	Object Oriented Technology	40	2	2	
		0808127027	Computer Graphics	40	2	2	

		0808127005	Cloud Computing□	20	1	1	
	Other Optional Courses	6900005003	Chinese Reading &Writing	60	2	2	
			Inter-disciplinary Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English.
2. □ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring*.

Master Program (for International Students) in the Discipline of Software Engineering

As the software industry becomes a pillar industry in national economy, the discipline of Software Engineering becomes one of the fast developing disciplines in Information Technology. The development in this field has a wind-range, multidimensional, multilayer and interdisciplinary architecture. The knowledge in this field includes software requirement, software design, software test, software maintenance, software configuration management, software project management, software quality, software security and software ethics and laws. It is also connected with various disciplines such as system engineering, domain engineering, digital technology, system management and support, network and information security, embedded system and marketing.

1. Objectives

The cultivation objectives focus on fundamental software theory. Complying with development of software technology and demand of software industry and following international software development mode, master degree graduates of the discipline are research-oriented talents with solid knowledge of software engineering theory, software development technology and software development process.

Masters of the discipline are expected to be familiar with advanced programming technologies, mainstream operating system and software development platforms. On graduation, they should be qualified for system analysis, design and programming by following international software development mode and standards. They should also have basic knowledge of project management and be capable of using modern software technology and tools. They should also be competent in scientific researches related to the fields of software engineering, system and software design, development and management.

Masters of the discipline are also expected to have a basic knowledge of Chinese history and culture, and be capable of reading Chinese scientific literature in simple Chinese and communicating with basic skills in Chinese language.

2. Orientations

1) Network security and network engineering
2) Software theory
3) Embedded software technology and application
4) Digital information processing
5) Cloud computing and big data
6) Intelligent computing

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master

candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1100016004	Matrix Theory	60	3	1	
		1107016005	Numerical Analysis	60	3	2	
		0908356010	Network Security: Theory and Practice△	40	2	1	
		0908356004	Software Architecture Model and Design△	40	2	2	
		0908356009	Fundamentals of Network Computing△	40	2	1	
		0908356007	Embedded System and Application	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0908357012	New Theory and Practice of Database△	40	2	1	
		0908357010	Internet Programming and Blockchain Applications	40	2	2	
		0908357014	Data Science and Application□	40	2	2	
		0908357009	Object-oriented Systems Analysis and Design	40	2	2	
		0908357011	Android Application Development	40	2	2	

	Other Optional Courses	6900005003	Chinese Reading &Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Master Program (for International Students) in the Discipline of Biomedical Engineering

Biomedical Engineering (BME) is an inter-disciplinary field involving the subject of Life Science, Cognitive Science and Information Science. BME in UESTC started from the year of 1986. During the discipline evaluation recently organized by Ministry of Education, BME in UESTC ranks the tenth among the BME disciplines of all the main universities in China. The current experimental conditions include the Key Laboratory of Neuroinformation of Ministry of Education, and other Sichuan Province supported Key Laboratories, which are equipped with 3.0T MR, EGI and NeuroScan EEG workstations, etc. Altogether, rich results have been achieved in the areas of brain imaging techniques and applications, visual electrophysiology and computational modeling, biomedical signal processing, medical imaging and processing, system biology, plant molecular genetics, nanomedicine, etc.

1. Objectives

Masters of the discipline are expected to have a rather profound knowledge of the cutting-edge research and trend of the field and a relatively sound grasp of the theoretical and systematic expertise in computer, human anatomy and physiology, and biomedical signal processing. Masters of the discipline are able to contribute academic papers and exchange views in conferences, and to demonstrate rigorous spirits in scientific approaches and working style and professional ethics, so as to be competent in research, development, teaching or management jobs at research institutes and universities in the areas of biomedical signal collection and processing, biomedical instruments.

A Survey of Chinese Cultures and Chinese Reading & Writing are compulsory for international master candidates who, on graduation, are to be able to communicate in Chinese to some extent.

2. Orientations

1) Brain Functions and Neural Information Engineering (EEG and fMRI Data Processing, Neural Electrophysiology, Brain-Computer Interface, Brain-inspired Intelligence, etc)

2) Medical Instruments, Medical Image and Signal Processing

3) Bioinformatics

4) Neurobiology

5) Cell Biology

6) Biochemistry and Molecular Neurobiology

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete

the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; at least one in core courses should be taken. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compul-sory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	
		1100016002	Matrix Theory	60	3	2	
		1100016003	Numerical Analysis	60	3	2	
		1408316006	Biomedical Statistics□	40	2	2	
		1404026004	Cognitive Neuroscience□	40	2	1	
		1407106009	Advanced Molecular Biology□	40	2	1	
		1407106010	Bioinformatics□	40	2	1	
		1408316004	Fundamentals of Brain Science□	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	1408316005	Advances in Brain Imaging□	40	2	2	
		1404026006	Psychophysical Experiments△	40	2	2	
		0208096101	IC Design	40	2	2	
		0108106010	Digital Communications△	40	2	2	
		0108106011	Digital Signal Processing△	40	2	1	
		0808126017	Multimedia Technology and Applications△	60	3	1	
		0808126018	Software Development Technology△	60	3	1	
		0608116004	Pattern Recognition	40	2	1	
	Other Optional	6900005003	Chinese Reading &Writing□	60	2	2	
			Inter-disciplinary Courses				

	Courses						
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the *Academic Activities Registration Form* and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis (or Research Report)

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Master Program (for International Students) in the Discipline of Mathematics

Mathematical Discipline of UESTCis identified as Key Primary Discipline in Sichuan Province, it has rights to grant Primary Discipline Doctoral and Postgraduate Programs and Post-doctoral Scientific Research Station, covering 5 secondary disciplines: Basic Mathematics, Computational Mathematics, Probability Theory and Mathematical Statistics, Applied Mathematics, Operations Research and Cybernetics.With the support of “10th Five-year”, “11th Five-year”, “211-Project” and “985-Project”, the discipline has became more competitive in basic research, applied basic research and interdisciplinary research, with strong comprehensive advantages of discipline, and its research level and ability have been improved significantly. And now, the Mathematical Disciplinehas formed its own research directions, which are internationally influential and domestic leading,coveringNumerical Linear Algebra and Scientific Computing, Modeling for Image and Visual Processing and High-PerformanceNumerical Algorithm, Dynamical Systems and Control, Numerical Solution of Differential/Integral Equations with Applications, Partial Differential Equations and Harmonic Analysis with Applications, Probability Theory with Applications, Porosity Modeling and Numerical Simulation, etc..Its theories and methods have played an important role in Physics, Chemistry, Biomedicine, Electronic Information Science, Life Science, Management Science, Automatic Control, Computer Science, Material Science, Environment Scienceand other fields.

1. Objectives

The major fosters high-level mathematical professionals who arebrave inpursuingtruth and dedicated to scientific research. Masters of mathematicaldiscipline are expected to master the current situation of the cutting-edge research and development trend of the relevant fields at home and abroad, to independently carry out research on basic theoriesas well as frontier topics and make innovative research results. The master’s degree recipients of this subject should be proficient in at least one foreign languagewith ability to read, write, listenand speak.

Masters of thisdiscipline are also expected to have a preliminary understanding of Chinese history and culture, and to be capable of reading simple Chinese scientific and technical literatures and communicating with others in simpleChinese.

2. Orientations

1. Numerical Linear Algebra and Scientific Computing with Applications
2. Modeling for Image and Visual Processing and High-PerformanceNumerical Algorithm
3. Dynamical Systems and Control
4. Numerical Solution of Differential/Integral Equations with Applications
5. Partial Differential Equations and Harmonic Analysis with Applications
6. Probability Theory with Applications
7. Optimization and its Application

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; at least one in core courses should be taken. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compul-sory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	
		1100016004	Matrix Theory	60	3	1	
		1107016001	Functional Analysis	60	3	1	
		1107016002	Partial Differential Equations	60	3	1	
		1107016004	Optimization Theories and Applications	60	3	1	
		1107016005	Numerical Analysis	60	3	2	
		1107016007	Numerical Algebra	60	3	2	
		1107146001	Advanced Probability Theory	60	3	1	

Non-degree Optional Courses	Discip-linary Optional Courses	1107016008	Numerical Solution of Partial Differential Equations	60	3	2	
		1107017004	Convex Analysis	40	2	2	
		1107017011	Special Matrices	60	3	2	
		1107146007	Limit Theorems in Probability and Statistics	40	2	2	
		1107147003	Multivariate Statistical Analysis	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading &Writing□	60	2	2	
			Inter-disciplinary Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English.

2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the *Academic Activities Registration Form* and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring*.

Master Program (for International Students) in the Discipline of Physics

Physics is the natural science that involves the study of matter and its motion through space and time, along with related concepts such as energy and force. It is conducted to disclose the structure of matter, interaction between matters, and the motion laws of matters in order to understand the universe. It results in many significant technologies and products.

The School of Physics at University of Electronic Science and Technology of China has the primary objective of advancing knowledge of physics and training of qualified manpower to acquire and develop an economy based on high technology. It is also involved in inter-disciplinary research with other branches of science as well as engaging in collaborative work with industry. Six fields, Theoretical Physics, Condensed Matter Physics, Radio physics, Optics, Plasma Physics, and Quantum Physics and Quantum Information, have established their reputation for research excellence. Collaborations in research across national borders and disciplines have been built. The school intends to play a key role in the advancement of China into a high-tech era.

This programme offers excellent opportunities for students to further develop their potential as intellectual leaders for a wide range of career paths. They will not only acquire fundamental and emerging knowledge in physics, but also solve practical problems of relevance to industrial development.

1. Objectives

Candidates of Master of Science in Physics are expected to have a profound knowledge in fundamental physics and experimental skills. They are also required to have a clear vision of cutting-edge research and emerging trends in physics.

International candidates of Master of Science in Physics are required to achieve an intermediate level of proficiency in Chinese to communicate in Chinese. They must take A Survey of China and Comprehensive Chinese.

2. Orientations

1) Theoretical Physics
2) Condensed Matter Physics
3) Radio Physics
4) Optics
5) Plasma Physics
6) Quantum Physics and Quantum Information

3. Duration

The duration set for master candidates is 2 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 26. Master candidates should complete the course work of no less than a total of 24 credits (out of which at least 15 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1	Compul-sory
		6900005002	A Survey of China△	40	2	2	
	Disciplinary Core Courses	1100016001	Stochastic Processes and Applications	60	3	1	At least 1 from 3
		1107016004	Optimization Methods and Applications△	50	2.5	2	
		1107016005	Numerical Analysis	60	3	2	
		0208096106	Advanced Electromagnetics Field Theory△	50	2.5	1	
		1207026006	Advanced Quantum Mechanics△	60	3	2	
		1207026002	Quantum Field Theory I△	50	2.5	1	
Non-degree Optional Courses	Disciplinary Optional Courses	1207026016	Nano Optics△	40	2	2	
		0108107025	Radar Theory	30	1.5	2	
		1207027013	Silicon-Based RF Integrated Circuits Design△	20	1	2	
		1207026001	General Relativity Theory△	40	2	2	
		1207026003	Quantum Field Theory II△	50	2.5	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sports, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the *Academic Activities Registration Form* and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Master Program (for International Students) in the Discipline of Public Management

School of Public Affairs and Administration (SPAA) is top ranked for our full line of degrees from undergraduate to master degrees including 4 bachelors' degrees, 2 master degrees of Public Management, Journalism and Communication, 2 professional programs of MPA and MJC respectively and English-instructed International Program in Public Management in highly rated education with provincially featured key disciplines, social science key research base and institutes and teaching center.

SPAA offer many unusual advantages compared to other schools of Public Administration and Political School for UESTC is "a cradle for Chinese Electronic Information Industry". Our school's research and teaching is information knowledge based one. With joint efforts and contributions from SPAA faculty, we have witnessed proud legacy of teaching and researching nationwide with Top National Courses based Teaching Achievements, Nationally Recognized Research Projects Granted and enjoy popularity of academic influence worldwide via the platform of International Conference on Public Administration (ICPA).

1. Objectives

Comprised of a core curriculum, distribution requirements, areas of focus and electives, the two-year MPM is a science degree program designed for students with current and future managerial and development skills for the public service, at local, provincial and national levels of government. Many students focus their electives into an optional concentration of study comprised of topical courses at School of Public Affairs and Administration (SPAA) as well as in departments and schools across campus. The concentration areas offered by SPAA mainly reflect the areas in which faculty do research and are a way to choose a set of courses that provide depth in a substantive public management area. Students who do not select a concentration area are expected to select courses that make academic sense.

A Survey of China and *Comprehensive Chinese* are compulsory for international master candidates who, on graduation, are to be able to communicate in Chinese to some extent.

2. Orientations

1. Theory and Methodology for Administrative Management
2. Public Service and Public Policy
3. E-government and Smart Governance
4. Social Governance and Public Security

3. Duration

The duration set for master candidates is 2-4 years full-time. An extension can be applied for by those who cannot finish their courses in time owing to objective causes, yet altogether 4 years is the last due.

4. Progression and Requirements

The minimum sum total credits for international students of master candidates are 30. Master

candidates should complete the course work of no less than a total of 28 credits (out of which at least 17 credits should be acquired from degree courses), compulsory sections of no less than 2 credits, complete the thesis (or a research report) independently, and pass the degree thesis defense.

The supervisor responsibility mechanism is adopted in the education for international master candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis. The personal study plan cannot be changed without permission of the supervisor.

During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses and disciplinary core courses are compulsory; Master candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the requirements as described above can fill up the gap by repetition or make-up in the limit of one year. Those who fail to meet the credit requirements even till the end of the due time are to be terminated.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese	60	2	1	Compul-sory
		6900005002	A Survey of China	40	2	2	
	Disciplinary Core Courses	1612046011	Public Management	48	3	1	
		1612046012	Classic Readings of Public Administration	48	3	1	
		1612046013	Social Science Research Methods	32	2	2	
		1612046015	Public Economics	32	2	2	
		1612046016	E-government	32	2	2	
		1612046017	Public Human Resource Management	32	2	2	
		1612046018	Comparative Government and Politics	40	2.5	2	
		1612046019	The Globalization of World Politics	32	2	1	
		1612046020	Public Policy	40	2.5	1	
Non-degree Optional Courses	Disciplinary Optional Courses	1612047011	Government and Media	32	2	2	
		1612047012	Academic Writing	20	1	1	Compul-sory
	Other Optional Courses	6900005003	Chinese Reading &Writing	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 5 times)	0	1	1,2	
			Elective Competence Development Courses	16	1	1,2	

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of master candidates include two parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture and arts, etc, such courses are given to improve the master candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden master candidates' scope of knowledge, one should attend at least five academic lectures within and out of UESTC, and fill in the *Academic Activities Registration Form* and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Information and Communication Engineering

Information and Communication Engineering of UESTC is the national key discipline, which constituted by 2 sub-disciplines, Communication and Information System, Signal and Information Processing. The disciplines related to Information and Communication Engineering of UESTC are the first batch of disciplines which were authorized to confer doctoral degree and to establish postdoctoral position, and also the first batch of Project 211, Project 985, Double First-Class key disciplines. The discipline was ranked as 2nd in National Discipline Evaluation from Ministry of Education in 2012 and was accredited as A+ in the fourth round of National Discipline Evaluation from Ministry of Education in 2017. The school has 2 academicians of Chinese Academy of Engineering, 8 awardees of National Thousand Talents Program, 2 National Renowned Professors, 5 awardees of Cheung Kong Scholars Program, 2 awardees of National Natural Science Foundation for Distinguished Young Scholars, 9 awardees of Thousand Talent Program for Young Outstanding Scientists and 1 awardees of National Youth Top-notch Talent Support Program. The research team of this discipline enjoys a good reputation both at home and abroad. The discipline has many international first-class academic research and talents cultivation platforms such as National key laboratories, Ministry key laboratories and Overseas Expertise Introduction Project for Discipline Innovation.

The research fields of this discipline are closely related with those of Electronics Science and Technology, Computer Science and Technology, Control Science and Engineering, Instruments Science and Technology.

1. Objectives

Ph.Ds of the discipline are expected to have a profound knowledge of the cutting-edge research and trend of the field and a solid and extensive grasp of the theoretical and systematic expertise, as are able to complete experiments and studies of the filed independently, to know the new technology and development trend in a certain field of information and communication engineering at home and abroad and to solve the academic or technical issues innovatively, to be proficient in the use of computers, able to contribute high-level academic papers and exchange views in international conferences, and to demonstrate rigorous spirits in scientific approaches and independence in scientific pursuits with in-depth studies and innovative achievements, so as to have the competency of undertaking researches and developing projects independently and qualities of being academic leaders or project leaders.

2. Orientations

1) Wireless and Mobile Communication System
2) Anti-jamming and Secure Communication System
3) Radar Detection and Imaging Recognition
4) Intelligent Communication Network and Information Processing
5) Optical Fiber Sensing and Communication
6) Image and Video Processing
7) Communication Integrated Circuit and System

8) Intelligent Perception and Information System
9) Machine Learning and Artificial Intelligence
10) Signal and Information Intelligent Processing

3. Duration

The duration set for Ph.D candidates is three years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether six years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1107016005	Numerical Algebra	50	2.5	2	At least 1 from 2
		0108106001	Optimization Theory and Application□	50	2.5	1	
		0108106013	Digital Communications□	40	2	2	
		0108106014	Digital Signal Processing□	40	2	1	
		0108106015	Optical Fiber Communication□	40	2	2	
		0808126018	Software Development Technology	60	3	1	

Non-degree Optional Courses	Disciplinary Optional Courses	0108107026	Optical Fiber Technology□	40	2	1	
		0208096101	IC Design□	40	2	1	
		0108107013	Fuzzy Logic□	40	2	2	
		0108106007	Signal Detection and Estimation□	40	2	1	
		0108107027	Computational Intelligence Methods and Application	30	1.5	2	
		1008116004	Theories and Methods of Systems Engineering□	40	2	2	
		0808126007	Big Data Analysis and Mining □	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)		1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assessment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examina-tions required

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture and arts, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed

of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Rand Literature Review of the Dissertation (hereinafter as RPRLRD): before making the Research Proposal for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal.

7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Electronic Science and Technology

The Discipline of Electronic Science and Technology, which has been selected into the national project of *First-class Universities and Disciplines of the World*, is one of the national key disciplines of China. It consists of 5 second disciplines including electromagnetic field and microwave technology, microelectronics and solid state electronics, circuits and systems, Electronic Information Materials and Devices and Electronic information materials and components.

1. Objectives

The Discipline of Electronic Science and Technology is one of the national key discipline of China, consists of Physical electronics, electromagnetic field and microwave technology, microelectronics and solid state electronics, circuits and systems and Electronic Information Materials and Devices. The sub-discipline of electromagnetic field and microwave technology has been enlisted in the first key discipline series of China. At the same time, it becomes the key discipline of 211 projects and 985 projects. In pursuing the advanced level of scientific research, those disciplines all have very strong research capabilities and extensive academic impact.

Ph.Ds of the discipline are expected to have a profound knowledge of the cutting-edge research and trend of the field and a solid and extensive grasp of the theoretical and systematic expertise, as are able to complete experiments and studies of the filed independently, to be proficient in the use of computers, able to contribute high-level academic papers and exchange views in international conferences, and to demonstrate rigorous spirits in scientific approaches and independence in scientific pursuits with in-depth studies and innovative achievements, so as to have the competency of undertaking researches and developing projects independently and qualities of being academic leaders or project leaders.

2. Orientations

1) Electromagnetic Field and Microwave Technology
2) Integrated Circuits and Systems
3) Electronic Information Materials and Devices
4) Microelectronics and Solid Electronics
5) Physical electronics

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for internationalPh.D candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese	60	2	1,2	Compul-sory
		6900005002	A Survey of China	40	2	1,2	
	Disciplinary Core Courses	1100016004	Optimization Methods and Applications	50	2.5	1	At least 1 of 2
		1100016005	Numerical Algebra	50	2.5	2	
		0208096102	Electronic Packaging Technology	40	2	1	
		0208096106	Advanced Electromagnetic Field Theory	60	3	1	
		0208097019	Advanced Digital IC Design	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0208096104	RF IC Design	40	2	2	
		0208096105	Analog IC Design	40	2	1	
		0208097010	Flexible MEMS Technology and Integration	40	2	2	English Courses for Chinese and Int'l Students
		0208097029	Introduction to THz Science and Technology	20	1	2	
		0108106007	Signal Detection and Estimation	40	2	1	
	Other Optional Courses	6900005003	Chinese Reading & Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	AcademicActivities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	

	6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system	Assess-ment required
	6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system	Examin-ation required

Directions: All courses, except for the Chinese ones specified by the requirements, are totally given in English.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the *Academic Activities Registration Form* and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3)Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEP Cat the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPCcan integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research ProposalReport and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of theirdiscipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research ProposalReport.

7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Materials Science and Engineering

The Discipline of Materials Science and Engineering studies the composition, structure, preparation process, properties and applications of materials. The research objects include the theory, design, preparation, testing and application of electrical, magnetic, acoustic, optical, thermal, mechanical and biological functional materials. The research process involves the acquisition, transformation, storage, processing and control of materials information. UESTC is the first batch selected into the national project of First-class Universities and Disciplines of the World. Research and development of electronic information materials and application are characteristics and advantages of UESTC. The discipline of Materials Science and Engineering has strong academic faculties, which include Yangtze River Scholars, National Thousand Talents Plan Scholars, doctoral supervisor, professors, associate professors, and a number of Ph.D talents, advanced experimental facilities and plenty of research funds.

With the development of science and technology, the discipline of Materials Science and Engineering has become more and more closely interdisciplinary with other disciplines. At the same time, as an important pillar of modern civilization, the discipline has become the forerunner and foundation of the development of modern science and technology, and has a very close relationship with the development of contemporary society.

1. Objectives

Ph.Ds of the discipline of Materials Science and Engineering are expected to have a profound knowledge of the cutting-edge research and trend of the field and a solid and extensive grasp of the theoretical and systematic expertise, as are able to complete experiments and studies of the filed independently, to be proficient in the use of computers, able to contribute high-level academic papers and exchange views in international conferences, and to demonstrate rigorous spirits in scientific approaches and independence in scientific pursuits with in-depth studies and innovative achievements, so as to have the competency of undertaking researches and developing projects independently and qualities of being academic leaders or project leaders.

2. Orientations

1) Electronic Information Materials and Devices
2) Materials Gene Project
3) Electronic Film and Integrated Devices
4) New Energy Materials and Devices
5) Printed Circuits and Printed Electronic Technology
6) Organic Functional Materials and Engineering

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese	60	2	1,2	Compul-sory
		6900005002	A Survey of China	40	2	1,2	
	Disciplinary Core Courses	1107016004	Optimization Methods and Applications	50	2.5	1	At least 1 from 2
		1107016007	Numerical Algebra	50	2.5	2	
		0208096102	Electronic Packaging Technology	40	2	1	
		0208096106	Advanced Electromagnetic Field Theory	60	3	1	
		0208097019	Advanced Digital IC Design	40	2	2	English Courses for Chinese and Int'l Students
Non-degree Optional Courses	Disciplinary Optional Courses	0208096104	RF IC Design	40	2	2	
		0208096105	Analog IC Design□	40	2	1	
		0308057010	Materials design and computation	30	1.5	2	English Courses for Chinese and Int'l Students
		0308057016	Optoelectronic Conversion from Fundamental to Devices	20	1	2	
		0308057021	Material Selection in Mechanical Design	40	2	2	
		0208097032	Biomedical Imaging	40	2	2	

		0108106007	Signal Detection and Estimation	40	2	1	
		0308177009	Laboratory Safety and Fire Safety	20	1	1	
	Other Optional Courses	6900005003	Chinese Reading & Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	AcademicActivities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assess-ment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examin-ation required

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts; a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC) ： which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and

preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature, no less than 1/3 published in the past 5 years. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to UESTC Regulations for Postgraduate Degree Conferring. For Int'l students, the language used in the defense should be English.

Ph.D Program (for International Students) in the Discipline of Mechanical Engineering

Mechanical Engineering is the first level discipline based on natural science and engineering technology, which aims to study the related theory on mechanical design, manufacturing, control, operation and maintenance during the usage of the mechanical equipment, and further resolve practical engineering problems. This discipline covers several directions, such as mechanical design and theory, mechanical manufacturing and automation, and mechatronics engineering, which leads to the discipline advantage with the multi-disciplinary synthesis of machine, electronic information, and measurement & control technology.

1. Objectives

Ph.D candidates of the discipline are expected to have a profound knowledge of the cutting-edge research and trend of the field and a solid and extensive grasp of the theoretical and systematic expertise in a certain direction among mechatronic systems design, manufacturing and measurement and control, as are able to complete experiments and studies of the field independently, able to contribute high-level academic papers and exchange views in international conferences, and to demonstrate rigorous spirits in scientific approaches and independence in scientific pursuits with in-depth studies and innovative achievements, so as to have the competency of undertaking researches and developing projects independently and qualities of being academic leaders or projects leaders.

2. Orientations

1) Equipment reliability and equipment monitoring management
2) Intelligent manufacturing equipment,
3) Intelligent perception and control technology
4) Micro-Nano manufacturing and information technology
5) Equipment intelligence design and simulation

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and the completion of the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates

should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese □	60	2	1,2	Compul-sory
		6900005002	A Survey of China □	40	2	1,2	
	Discip-Linary Core Courses	1107016004	Optimization Methods and Applications □	50	2.5	1	At least 1 from 2
		1107016005	Numerical Analysis	60	3	2	
		0408026009	Micro-Electro-Mechanical System (MEMS) □	40	2	1	
		0408026010	Advanced Manufacturing Technology □	40	2	1	
		0408026004	Machinery Dynamics □	40	2	2	
		0808126020	Embedded Operating System and Application □	40	2	2	
Non-degree Optional Courses	Discip-linary Optional Courses	0108106007	Signal Detection and Estimation □	40	2	1	
		0408027013	Reliability Design □	40	2	2	
		1008116004	Theories and Methods of Systems Engineering □	40	2	2	
		0608046001	Methods and Applications of Signal Processing □	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading &Writing □	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the DissertationI	Unaccounted in credit system			Assessment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examination required

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate

is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Degree Thesis

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Optical Engineering

Optical Engineering, which mainly focuses on Light Information Acquisition, Optical Transmission, Optical Switching, Optical Information Processing and Photoelectric Image Display, has wide applications in the industry, and becomes an important discipline in the current information technology field.

The teaching and research area of Optical Engineering in UESTC covers the theory and application of the whole optical engineering discipline, especially strong in optical communication, photonic integration, infrared and sensing technology, panel display and imaging technology. The discipline has undertaken a number of national key research projects, receiving sufficient funds, and wining several state or provincial awards. The main research direction of this discipline has stepped into the leading position in China, also having a certain international influence.

1. Objectives

Ph.Ds of the discipline are expected to have a profound knowledge of the cutting-edge research and trend of the field and a solid and extensive grasp of the theoretical and systematic expertise, as are able to complete experiments and studies of the filed independently, to be proficient in the use of computers, able to contribute high-level academic papers and exchange views in international conferences, and to demonstrate rigorous spirits in scientific approaches and independence in scientific pursuits with in-depth studies and innovative achievements, so as to have the competency of undertaking researches and developing projects independently and qualities of being academic leaders or project leaders.

2. Orientations

1) Optic communication and optic integration
2) Photoelectric Detection and System Integration
3) Sensitive electronics and sensor network
4) Display and Imaging
5) Microwave photonics
6) Photoelectric measurement and control technology

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and

the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory, *at least one in core courses should be taken.*Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		**Course Number**	**Course Name**	**Class Hours**	**Credits**	**Semester**	**Notes**
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Core Courses	1107016004	Optimization Methods and Applications	50	2.5	1	At least 1 from 2
		1100016005	Numerical Analysis□	60	3	2	
	Disciplinary Core Courses	0208096106	Advanced Electromagnetic Field Theory	50	2.5	1	
		0508036021	Fiber Optics△	30	1.5	1	
		0508036001	Optoelectronics technology △	40	2	1	
		0108106015	Optical Fiber Communication △	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0508037033	Organic electronics □	20	1	2	
		0508037029	Optoelectronics and Photonics□	20	1	2	
		0108107026	Optical Fiber Technology△	40	2	1	
		1207026016	Nano Optics△	40	2	2	
		0108106007	Signal Detection and Estimation△	40	2	1	
	Other Optional Courses	6900005003	Chinese Reading & Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assess-ment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Exam-ination required

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2.□ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the *Academic Activities Registration Form* and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Instrument Science and Technology

Instrument Science and Technology plays a significant role in the field of information science. The research area includes signal and information acquisition method and conversion amplification and processing technology, measurement methodology, metrology, instrument engineering, measurement and control system engineering, etc. As a sustainable and interdisciplinary program, it has a great leading and promoting effect on the development of high technology, industry and society.

The program can be dated back to the major named Electronic Measurement Technology and Instruments set up in 1956 by our university. It is an 1st level discipline in Sichuan Province and owns strong teaching and research strength in our university. After so many years' development, the program has been expanded into several research areas including wideband time-domain testing technology and instruments, comprehensive test, diagnosis and prediction of electronic system, microwave and communication testing technology, integrated circuit test and testability design theory and technology.

1. Objectives

Abide by the laws and have good moral character. Good at communicating in Chinese. Solid and broad professional theory and skills. Familiar with the development and international academic frontier knowledge in the program. Able to make high-level theoretical and practical research and make creative research achievement in a certain area. Able to make independent scientific research and technical development. Good and rigorous research spirit. Competent for research, teaching, engineer development and technical management related to this area.

2. Orientations

1) Wideband Time-domain Testing Technology and Instruments
2) Comprehensive Test, Diagnosis and Prediction of Electronic System
3) Microwave Millimeter Wave Testing Technology Remote Sensing
4) Integrated Circuit Test and Testability Design Theory and Technology
5) New Sensing Technology and Precision Measurement

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1107016004	Optimization Theory and Applications	50	2.5	1	Compul-sory 1 from 2
		1107016007	Numerical Algebra	50	2.5	2	
		0108106011	Digital Signal Processing△	40	2	1	
		0108106007	Signal Detection and Estimation△	40	2	1	
		0608046001	Methods and Applications of Signal Processing△	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0608117008	Computer Vision△	40	2	1	
		0208096101	IC Design△	40	2	1	
		0808126020	Embedded Operating System and Application△	40	2	2	
		0608117003	Performance Evaluation and Optimization for Complex Systems	20	1	1	
	Other Optional Courses	6900005003	Chinese Reading & Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assess-ment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examin-ation required

Directions: All courses, except for the Chinese ones specified by the requirements, are totally given in English.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring*.

Ph.D Program (for International Students) in the Discipline of Control Science and Engineering

Control Science and Engineering a discipline related to research of control theory, method, technology and engineering application. Based on control theory, system theory and information theory, control science deals with mutual problems in various application areas, which are building system model, analyzing its inner and outer information, adopting control methods. The program has an obvious characteristic in combination of theory research and engineering application, disciplinary crossing and integration, civil-military integration technology, and plays an indispensable role in national economy development and national security.

This program is a key discipline in Sichuan Province with abundant teaching resources. After many years' development, the program has been expanded into several research areas including complex system control and optimization, new energy system control technology, computer vision and pattern recognition, robot technology and system, etc. The development of this program brings great benefits to the society and country, and makes outstanding contribution to national defense, social service, talent training and so on.

1. Objectives

Abide by the laws and have good moral character. Master solid basic theories and knowledge. Able to communicate in Chinese. Able to make scientific research independently and creatively. Good and rigorous research spirit. Able to make creative achievement in scientific research.

2. Orientations

1) Complex System and Intelligent Information Processing
2) New Energy System Control Technology
3) Pattern Recognition and Intelligent System
4) Measurement and Control Communication and Navigation Control
5) Detection Technology and Automation Device

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the

degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1107016004	Optimization Theory and Applications	50	2.5	1	Compul-sory 1 from 2
		1107016007	Numerical Algebra	50	2.5	2	
		0608117008	Computer Vision△	40	2	1	
		0108106011	Digital Signal Processing△	40	2	1	
		0608116002	Linear System Theory△	50	2.5	1	
		0608116004	Pattern Recognition△	40	2	1	
Non-degree Optional Courses	Disciplinary Optional Courses	0608117003	Performance Evaluation and Optimization for Complex Systems	20	1	2	
		0808126020	Embedded Operating System and Application△	40	2	2	
		1008116004	Theories and Methods of Systems Engineering	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing△	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assess-ment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examin-ation required

Directions: All courses, except for the Chinese ones specified by the requirements, are totally given in English.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Computer Science and Technology

With its postdoctoral research station set up as early as in 1999, the discipline enjoys a rather strong comprehensive advantages and has demonstrated great competence in fundamental and applied researches. With its substantially enhanced research abilities, the discipline is drawing close to the national first level as a whole with part of its achievements coming up as the most advanced in the country. Altogether, cheerful results have been achieved in aspects of discipline orientations, academic teams, discipline platform constructions, scientific researches, cultivation of talents and academic exchanges.

1. Objectives

Ph.Ds of the discipline are expected to have a solid knowledge of fundamental mathematics, a systematic knowledge of the discipline's covered areas, and a profound knowledge of their orientations. With their vigorous consciousness of academic pursuits, acute awareness of innovation and an in-depth understanding of the present situations, the developing trends and the cutting-edge of the discipline, they are enabled to contribute high-level academic papers and exchange research concerns in international conferences, to carry out independent researches on fundamental theories and front issues of computer science with internationally acknowledged innovative achievements, and to undertake designing and developing large scale software or significant computer applied projects, and they are thus furnished with the qualities of being an academic leader or a project director and the qualifications for teaching in institutes of higher education.

International doctoral candidates are also expected to have a basic knowledge of Chinese history and culture, and be capable of reading Chinese scientific literatures in simple Chinese and communicating with basic skills in the Chinese language.

2. Orientations

1) Information Security
2) Digital Media Technology
3) Embedded System
4) Software Development Technology

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates.

The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Cre-dits	Seme-ster	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese	60	2	1,2	Compul-sory
		6900005002	A Survey of China	40	2	1,2	
	Disciplinary Core Courses	1107016004	Optimization Methods and Applications	50	2.5	1	At least 1 from 2
		1107016007	Numerical Algebra	50	2.5	2	
		0808126016	Network Security□	60	3	1	
		0808126017	Multimedia Technology and Applications□	60	3	1	
		0808126018	Software Development Technology□	60	3	1	
		0808126019	Mobile Computing□	40	2	2	
		0808126020	Embedded Operating System and Application□	40	2	2	
		0808126021	The Design of Cryptographic Algorithm	40	2	2	
		0808126004	Advanced Network Computing	40	2	1	
		0808126007	Big Data Analysis and Mining □	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0808127021	Security Protocol□	40	2	1	
		0808127023	Operating System and Application Programming□	40	2	2	
		0808127005	Cloud Computing□	20	1	1	
	Other Optional Courses	6900005003	Chinese Reading & Writing	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assessment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examination required

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in

English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to UESTC Regulations for Postgraduate Degree Conferring.

Ph.D Program (for International Students) in the Discipline of Software Engineering

As software industry becomes a pillar industry in national economy, discipline of Software Engineering becomes one of the fast developing disciplines in Information Technology. The development in this field has a wind-range, multidimensional, multilayer and interdisciplinary architecture. The knowledge in this field includes software requirement, software design, software test, software maintenance, software configuration management, software project management, software ethics and laws, software security and software quality. It is also connected with various disciplines such as system engineering, domain engineering, digital technology, embedded system, network and information security, system management and support and marketing.

1. Objectives

The PhD candidates of this discipline are selected from high-level talents in the field of software engineering, according to development of software technology and demand of software industry.

PhD Graduates of the discipline are expected to have a solid knowledge of the fundamentals in the field of software engineering. They are with comprehensive quality and able to carry out researches independently in the field. They are expected to achieve internationally acknowledged research results. They have broad academic visions, innovation consciousness, and in-depth understanding of present situations, developing trends and cutting-edge of the discipline. They are able to write academic papers in English and give lectures at international academic conferences. They can undertake the task of designing and developing large scale software projects. They are qualified as a teacher at institutes of higher education.

2. Orientations

1) Network Security
2) Real-time computing
3) Intelligent computing
4) Software theory

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student’s making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should

complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compul-sory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1107016004	Optimization Theories and Applications	50	2.5	1	At Least 1 from 2
		1107016007	Numerical Algebra	50	2.5	2	
		0908356009	Fundamentals of Network Computing□	40	2	1	
		0908356004	Software Architecture Model and Design□	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	0908357012	New Theory and Practice of Database□	40	2	1	
		0908356010	Network Security: Theory and Practice□	40	2	1	
		0908357014	Data Science and Application□	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assess-ment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examin-ation required

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Biomedical Engineering

Biomedical Engineering (BME) is an inter-disciplinary field involving the subject of Life Science, Cognitive Science and Information Science. BME in UESTC started from the year of 1986. During the discipline evaluation recently organized by Ministry of Education, BME in UESTC ranks the tenth among the BME disciplines of all the main universities in China. The current experimental conditions include the Key Laboratory of Neuroinformation of Ministry of Education, and other Sichuan Province supported Key Laboratories, which are equipped with 3.0T MR, EGI and NeuroScan EEG workstations, etc. Altogether, cheerful results have been achieved in the areas of brain imaging techniques and applications, visual electrophysiology and computational modeling, biomedical signal processing, medical imaging and processing, system biology, plant molecular genetics, nanomedicine, etc.

1. Objectives

Ph.Ds of the BME discipline are expected to have a profound knowledge of the cutting-edge research and trend of the fields of biomedicine and information techniques and a solid and extensive grasp of the theoretical and systematic expertise, as are able to complete experiments and studies of the filed independently, to be proficient in the use of computers, able to contribute high-level academic papers and exchange views in international conferences, and to demonstrate rigorous spirits in scientific approaches and independence in scientific pursuits with in-depth studies and innovative achievements, so as to have the competency of undertaking researches and developing projects independently and qualities of being academic leaders or project leaders.

2. Orientations

1. Brain Functions and Neural Information Engineering (EEG and fMRI Data Processing, Neural Electrophysiology, Brain-Computer Interface, Brain-inspired Intelligence, etc)
2. Medical Instruments, Medical Image and Signal Processing
3. Bioinformatics
4. Neurobiology
5. Cell Biology
6. Biochemistry and Molecular Neurobiology

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates.

The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compul-sory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1100016004	Optimization Methods and Applications	50	2.5	1	
		1100016005	Numerical Algebra	50	2.5	2	
		1404026004	Cognitive Neuroscience△	40	2	1	
		1407106009	Advanced Molecular Biology△	40	2	1	
		1407106010	Bioinformatics△	40	2	1	
		1408316004	Fundamentals of Brain Science	40	2	2	
Non-degree Optional Courses	Disciplinary Optional Courses	1408316005	Advances in Brain Imaging△	40	2	2	
		1404026006	Psychophysical Experiments△	40	2	2	
		1408316006	Biomedical Statistics△	40	2	2	
		0208097032	Biomedical Imaging	40	2	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing□	60	2	2	
			Inter-disciplinary Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assess-ment required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examin-ation required

Directions: All courses, except for the Chinese ones specified by the requirements, are totally given in English.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to UESTC Regulations for Postgraduate Degree Conferring.

Ph.D Program (for International Students) in the Discipline of Physics

Physics is the natural science that involves the study of matter and its motion through space and time, along with related concepts such as energy and force. It is conducted to disclose the structure of matter, interaction between matters, and the motion laws of matters in order to understand the universe. It results in many significant technologies and products.

The School of Physics at University of Electronic Science and Technology of China has the primary objective of advancing knowledge of physics and training of qualified manpower to acquire and develop an economy based on high technology. It is also involved in inter-disciplinary research with other branches of science as well as engaging in collaborative work with industry. Six fields, Theoretical Physics, Condensed Matter Physics, Radio physics, Optics, Plasma Physics, and Quantum Physics and Quantum Information, have established their reputation for research excellence. Collaborations in research across national borders and disciplines have been built. The school intends to play a key role in the advancement of China into a high-tech era.

This programme offers excellent opportunities for students to further develop their potential as intellectual leaders for a wide range of career paths. They will not only acquire fundamental and emerging knowledge in physics, but also solve practical problems of relevance to industrial development.

1. Objectives

Candidates of Doctor of Philosophy in Physics are expected to have a profound knowledge in fundamental physics and experimental skills. They are also required to have a clear vision of cutting-edge research and emerging trends in physics. The candidates should be able to develop research projects and conduct research independently.

International candidates of Doctor of Philosophy in Physics are required to achieve an intermediate level of proficiency in Chinese to communicate in Chinese. They must take A Survey of China and Comprehensive Chinese.

2. Orientations

1. Theoretical Physics
2. Condensed Matter Physics
3. Radio Physics
4. Optics
5. Plasma Physics
6. Quantum Physics and Quantum Information

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 14, Ph.D candidates should complete the course work of no less than a total of 12 credits (out of which at least 8 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese△	60	2	1,2	Compul-sory
		6900005002	A Survey of China△	40	2	1,2	
	Disciplinary Core Courses	1107016004	Optimization Theory and Applications△	50	2.5	1	At least 1 from 2
		1107016007	Numerical Algebra	50	2.5	2	
		0208096106	Advanced Electromagnetics Field Theory△	50	2.5	1	
Non-degree Optional Courses	Disciplinary Optional Courses	1207026006	Advanced Quantum Mechanics△	60	3	2	
		1207026016	Nano Optics△	40	2	2	
		1207027013	Silicon-Based RF Integrated Circuits Design△	20	1	2	
		1207026001	General Relativity Theory△	40	2	2	
		1207026002	Quantum Field Theory I△	50	2.5	1	
		1207026003	Quantum Field Theory II△	50	2.5	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing△	60	2	2	
			Inter-disciplinary Optional Courses				

Compulsory Sections	6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
		Elective Competence Development Courses	20	1	1,2	
	6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assess-ment required
	6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examin-ation required

Directions: 1.All courses, except for the Chinese ones specified by the requirements, are totally given in English. 2. △ means which can be selected by both Masters and Ph.Ds.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish

a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

1) Requirement of academic articles for Ph.D degree

Before applying for the Ph.D degree, the candidate should have published at least 1 SCI indexed article plus 1 EI indexed article, or 1 SCI indexed article plus 1 international conference article. In all these articles, the candidate must be the first author with University of Electronic Science and Technology as the author affiliations.

2) All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Business Administration

Ph.D program in the discipline of Business Administration of UESTC is focused on the integration of management knowledge and skills and modern information technologies and devoted to taking advantage of the University's superiority in scientific researches and resources in the field of information science and technology to better the program, as can be best reflected by the students' accomplishment and competency. Taking the cultivation of multidisciplinary and creative management experts with an international perspective and a command of modern management ideas and methods as its mission, the Business Administration program, after more than a decade's continuous efforts, has distinguished itself by clarified training targets, distinct training conceptions and characteristic modules.

1. Objectives

The discipline of Business Administration studies the business activities of profit-driven organizations and the applications of management theories. Ph.D candidates of the discipline are expected to have solid foundations with global horizon as well as in-depth theoretical background and systematic knowledge of research. They will be trained to exchange ideas in Chinese and obtain a profound knowledge of Chinese cultures. In addition, Ph.D candidates should be familiar with theory foundations and applications in disciplines as management science, economics, mathematics, and computer science, so that they have sharp insights on the cutting-edge issues in business administration theories and practices, and they can independently find creative solutions, or can conduct researches on fundamental theories, and form innovative research achievements. Qualified candidates are expected to work in positions such as teaching, researching, managing and industry planning at institutes of higher education, enterprises and government departments.

2. Orientations

1) Organizational Behavior and Human Resource Management
2) Strategic Management
3) Innovation & Entrepreneurship Management

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and

the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 16, Ph.D candidates should complete the course work of no less than a total of 14 credits (out of which at least 10 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; at least one in core courses should be taken. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compul-sory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1512026010	Organizational Theory	32	2	1	
		1512026009	Managerial Research Method	32	2	2	
		1502026011	Business Statistics△	40	2.5	1	
Non-degree Optional Courses	Disciplinary Optional Courses	1512028006	Research Topics on Innovation & Entrepreneurship Management	40	2.5	2	
		1512017011	Data Mining and Information Management□	40	2.5	1	
		1512017012	Service Management□	24	1.5	2	
		1512028004	Complexity Theory in Management Research	24	1.5	2	
	Other Optional Courses	6900005003	Chinese Reading & Writing□	60	2	2	
			Inter-disciplinary Optional Courses				
Compulsory Sections		6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
			Elective Competence Development Courses	20	1	1,2	
		6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assessm-ent required
		6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examination required

Directions: All courses, except for the Chinese ones specified by the requirements, are totally given in English.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate

is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

Ph.D Program (for International Students) in the Discipline of Management Science and Engineering

Ph.D program in the discipline of Management Science and Engineering is focused on the integration of management knowledge and skills and modern information technologies and devoted to taking advantage of the University's superiority in scientific researches and resources in the field of information science and technology to better the program, as can be best reflected by the students' accomplishment and competency. Taking the cultivation of multidisciplinary and creative management experts with an international perspective and a command of modern management ideas and methods as its mission, the program, after more than a decade's continuous efforts, has distinguished itself by clarified training targets, distinct training conceptions and characteristic modules.

1. Objectives

Ph.D candidates of the discipline are expected to have solid foundation in mathematics and statistics as well as in-depth theoretical background in and systematic knowledge of management science, economics and finance. They are to be familiar with fundamental system theories and engineering as well as the current application of computer system and network. With a profound knowledge of Chinese cultures, they are to be able to exchange ideas in Chinese. Empowered with skills in conducting researches on fundamental theories and cutting-edge issues in the field independently, they are to be qualified for positions such as teaching, researching, managing and industry planning at institutes of higher education, enterprises and government departments.

2. Orientations

1) Supply Chain
2) Information Management and Data Mining
3) E-Business
4) Financial Engineering

3. Duration

The duration set for Ph.D candidates is 3 years full-time. An extension can be applied for by those who cannot finish their courses on time owing to objective causes, yet altogether 6 years is the last due.

4. Progression and Requirements

International students of Ph.D candidates can take 1) full-time training, i.e. the whole progression is done at UESTC, or 2) on-the-job training, i.e. finishing the course work at UESTC and completing the dissertation in their home country, with no less than 1 year to be spent at UESTC for the research work around the dissertation. Either way chosen, the dissertation defense should be done at UESTC.

The supervisor responsibility mechanism is adopted in the education for international Ph.D candidates. The supervisor is responsible for the student's making of personal study plan, the choice of courses, and the completion of the research report or the degree thesis.

The minimum total credits for international students of Ph.D candidates is 16, Ph.D candidates should

complete the course work of no less than a total of 14 credits (out of which at least 10 should be of the degree course categories), compulsory sections of no less than 2 credits. During the course work, according to specifications by the discipline, the student is to pass examinations held for the degree courses and examinations or assessments held for the other optional courses. Of all the degree courses, common core courses are compulsory; at least one in core courses should be taken. Ph.D candidates are allowed to choose 1~2 inter-disciplinary core courses as their degree courses under supervisors' guidance. Degree courses can be taken to substitute non-degree courses, but not vice versa. International students of Chinese language abilities can apply to take courses given in Chinese to local full-time graduate students and acquire corresponding credits if pass.

Those who fail to meet the credit requirements will be denied the thesis defense.

5. Curriculum

Course Categories		Course Number	Course Name	Class Hours	Credits	Semester	Notes
Degree Courses	Common Core Courses	6900005001	Comprehensive Chinese□	60	2	1,2	Compulsory
		6900005002	A Survey of China□	40	2	1,2	
	Disciplinary Core Courses	1100016004	Optimization Methods and Applications	50	2.5	1	At least 1 from 2
		1100016005	Numerical Algebra	50	2.5	2	
		1502026011	Business Statistics△	40	2.5	1	Compulsory
		1512017012	Service Management□	24	1.5	2	
Non-degree Optional Courses	Disciplinary Optional Courses	1502027010	Management and Economic Research Method□	24	1.5	2	
		1502517005	Finance□	40	2.5	2	
		1512017010	Supply Chain Management□	40	2.5	1	
		1512017011	Data Mining and Information Management□	40	2.5	1	
		1512018004	Research Topics on Supply Chain Management	20	1	1	Supply Chain Management as prerequisite course
		1512018005	Research Topics on Data Mining and Information Management	20	1	1	Data Mining and Information Management as prerequisite course
		1512028004	Complexity Theory in Management Research	24	1.5	2	
		1512028005	Research Topics on Innovation and Entrepreneurship Management	40	2.5	1	
	Other	6900005003	Chinese Reading & Writing□	60	2	2	

Optional Courses		Inter-disciplinary Optional Courses				
Compulsory Sections	6400006003	Academic Activities (no less than 10 times)	0	1	1,2	
		Elective Competence Development Courses	20	1	1,2	
	6400006004	Research Proposal and Literature Review of the Dissertation	Unaccounted in credit system			Assessment required
	6400006005	Comprehensive Examination for Ph.D Candidates	Unaccounted in credit system			Examination required

Directions: All courses, except for the Chinese ones specified by the requirements, are totally given in English.

6. Compulsory Sections

The compulsory sections for international students of Ph.D candidates include four parts, a candidate is required to complete the following aspects:

1) Elective Competence Development Courses: through introducing the academic cutting edge knowledge, culture, arts and sport, etc, such courses are given to improve the Ph.D candidates' comprehensive competence. A candidate should take at least one course and get one credit after assessment.

2) Academic Activities: to enliven academic atmosphere and to further and broaden Ph.D candidates' scope of knowledge, one should attend at least ten academic lectures within and out of UESTC, and fill in the Academic Activities Registration Form and get the official stamp upon attendance. One credit can be granted to the candidate when he/she succeeds in completing the above procedures.

3) Comprehensive Examination for Ph.D. Candidates (hereinafter as CEPC): which is taken upon their completion of all required courses. It mainly tests their understanding of basic theories and professional knowledge, and also checks their mastery of the research directions, of the leading edge, and of the dynamics in relevant fields.

A. Ph.D. candidates should generally take the CEPC at the end of the first year after enrollment. Those who fail in CEPC will have the opportunity to resit in the next year. If one still fails the resit, then she/he cannot participate in the dissertation defense and will terminate the study.

B. The CEPC is implemented by the Examination Committee (hereinafter as EC), which is composed of three experts designated by the Academic Degree Evaluation Committee of the School. The chairman of EC must be a professor, while the other members being professors or associate professors.

C. The CEPC can integrate written and oral patterns with one-hundred-mark system. The written examination should account for at least 50%.

D. According to the actual situation, each discipline should organize two times of CEPC each year in April and October respectively. Having collected the test questions, test papers, oral test records and comments of the CEPC, the Teaching Affairs Secretary of each school should submit all these materials with the results of CEPC to the Section of Teaching Management in Graduate School for filing and preservation.

4) The Research Proposal Report and Literature Review of Dissertation (hereinafter as RPRLRD): before making the Research Proposal Report for the dissertation, all Ph.D. candidates should read more than 30 papers in the leading edge of their discipline from the latest literature. Then everyone should finish a literature review report of about 5,000 words as well as the corresponding Research Proposal Report.

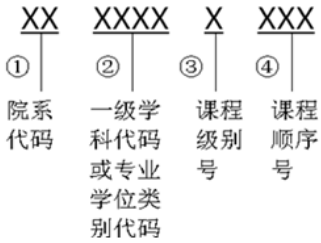
7. Dissertation

All degree thesis problems shall refer to *UESTC Regulations for Postgraduate Degree Conferring.*

研究生课程编号、课程分级及研究生获取课程学分计算说明

1. 课程编号方法：

所有课程使用同一规则，课程编号由院系代码+学科代码（专业学位类别（领域）代码）+课程级别号+顺序号，共 10 位：



例如：

某课程编号“0108105003”表示开课学院为信息与通信工程学院（01），一级学科为信息与通信工程（0810），课程级别为 500 级（5），该级别下的第 3 门课程（003）。

其中，工程硕士专业学位类别课程：采用该类别下各工程领域代码后四位。

例如：某课程编号“0152086003”。表示开课学院为信息与通信工程学院（01），专业学位类别为工程硕士，工程领域为电子与通信工程（085208），课程级别为 600 级（6），该级别下的第 3 门课程（003）。

2. 课程编号各位数具体内容如下

①——第一、二位，代表开课学院代码；

②——第三至六位，代表一级学科代码或专业学位类别（领域）代码后四位；

③——第七位，代表课程分级。如：0108105003，第七位为 5，表示 500 级课程。

④——第八至十位，代表该级号下课程顺序号。

3. 课程分级规定如下

研究生课程共分五级，分别用 400、500、600、700、800 级表示。各级别含义如下：

400 级——交叉学科初级基础理论课程。主要为非本学科背景的研究生开设的、本学科主要理论或技术基础课，课程难度相当于本学科已开设的本科高级课程。主要为跨学科考生补修本科核心课程。

500 级——本学科（专业学位类别（领域））基本理论、技术基础类课程。主要为本学科硕士研究生层次的专业理论或技术基础课程，主要为公共基础课、基础、素质教育类课程、人文教育与学术交流月人文素质教育课程。

600 级——本学科（专业学位类别（领域））研究生技术专业类课程。主要为研究生层次的专业性较强的课程，或内容难度较大、比较深入或涉及前沿的课程，包括课程作业、课程设计、实验设

计等内容。主要为专业基础课、实践教学环节课程、人文教育与学术交流月创新创业与企业课程。

700 级——本学科（专业学位类别或工程领域）新理论与新方法理论课程。主要针对研究生开设的前沿高新技术的理论或技术类课程。主要专业选修课、人文教育与学术交流月高水平学术课程。

800 级——高级讲座与研讨课程。主要为面向研究生开设的前沿类课程、研讨类和报告类等高层次课程。

4. 研究生获取学分规定

研究生修读不同级别的课程，根据各级别的学分要求计算实得学分。具体规定如下：

全日制硕士生学习 400 级课程不计学分，学习 500 级以上（含 500 级）课程按课程学分计算。

直博研究生选修 500 级以上（含 500 级）课程，按课程学分计算；专业课允许选修 600 级的课程，但 700 级的课程不少于 8 个学分。

学院对应代码及对应招收留学研究生专业

学院代码	学院名称	来华留学研究生招生专业	学生类型
01	信息与通信工程学院	信息与通信工程	硕士，博士
02	电子科学与工程学院	电子科学与技术	硕士，博士
21	基础与前沿研究院		
03	材料与能源学院	材料科学与工程	硕士，博士
04	机械与电气工程学院	机械工程	硕士，博士
04	机械与电气工程学院	电气工程	硕士
05	光电科学与工程学院	光学工程	硕士，博士
21	基础与前沿研究院		
06	自动化工程学院	仪器科学与技术	硕士，博士
06	自动化工程学院	控制科学与工程	硕士，博士
10	航空航天学院		
04	机械与电气工程学院		博士
08	计算机科学与工程学院（网络空间安全学院）	计算机科学与技术	硕士，博士
21	基础与前沿研究院		
09	信息与软件工程学院（示范性软件学院）	软件工程	硕士，博士
11	数学科学学院	数学	硕士
12	物理学院	物理学	硕士，博士
21	基础与前沿研究院		
14	生命科学与技术学院	生物医学工程	硕士，博士
15	经济与管理学院	管理科学与工程	博士
15	经济与管理学院	工商管理	博士
16	公共管理学院	公共管理	硕士

信息与通信工程学科 硕士研究生（留学生）培养方案

电子科技大学“信息与通信工程”一级学科是国家重点学科，包含 2 个二级学科，即属于国家重点学科与长江学者计划特聘教授设岗的两个二级学科“通信与信息系统”和“信号与信息处理”。我校“信息与通信工程”相关学科是国内首批获博士学位授予权、首批设立博士后流动站的学科，也是首批“211 工程”、“985 工程”重点建设学科及“双一流”重点建设学科，2012 年本学科在教育部学科评估中排名第 2，在 2017 年教育部公布的第四轮一级学科评估结果中被评为 A+。拥有中国工程院院士 2 人，千人计划入选者 8 人，全国教学名师 2 人，长江学者 5 人，国家杰出青年科学基金获得者 2 人，青年千人计划入选者 9 人，国家青年拔尖人才支持计划入选者 1 人。本学科研究团队在国内外享有良好声誉。本学科具有国家级重点实验室、教育部重点实验室、“111”学科引智基地等等具有国际一流水平的学术研究与人才培养平台。

本学科与电子科学与技术、计算机科学与技术、控制科学与工程、仪器科学与技术等学科的研究领域密切相关。

一、培养目标

本学科硕士学位获得者应对学科研究前沿和发展趋势有较深入的了解，具有通信学科的较深厚的基础理论和系统专门的知识，掌握相应的实验技能，熟练运用计算机，至少能熟练使用一个与本学科密切相关的仿真软件，了解国内外信息与通信工程学科某一领域的新技术和发展动向，创新性地解决本学科的学术或技术问题，能撰写学术论文并在会议上进行交流，有严谨的科学态度和工作作风与高尚的职业道德，能胜任科研、生产单位和高等院校的研究、开发、教学或技术管理工作。

留学研究生必修中国概况和综合汉语等，毕业时应具有一定的汉语交流能力。

二、研究方向

1. 无线与移动通信系统
2. 抗干扰与安全通信系统
3. 雷达探测与成像识别
4. 智能通信网络与信息处理
5. 光纤传感与通信
6. 图像与视频处理
7. 通信集成电路与系统
8. 智能感知与信息系统
9. 机器学习与人工智能
10. 信号与信息智能处理

三、学习年限

攻读硕士学位者，学习年限为 2 年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过 4 年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报

告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可替代非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过后获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1100016001	随机过程与应用	60	3	1	3 选 1
		1100016004	矩阵理论	60	3	1	
		1107016005	数值分析	60	3	2	
		0108106001	最优化理论与应用□	50	2.5	1	
		0108106013	数字通信基础□	40	2	2	
		0108106014	数字信号处理□	40	2	1	
		0108106015	光纤通信□	40	2	2	
		0208096101	集成电路与设计□	40	2	1	
		0808126016	网络安全	60	3	1	
非学位选修课	专业选修课	0108107026	光纤技术□	40	2	1	
		0208096013	模拟集成电路设计	40	2	2	
		0108107013	模糊逻辑□	40	2	2	
		0108107028	雷达原理	30	1.5	2	
		0108106007	信号检测与估计	40	2	1	
		0108107027	计算智能方法及其应用□	30	1.5	2	
		0808127022	信息安全数学基础	40	2	1	
		0808127024	互联网络程序设计	40	2	2	
		1008116004	系统工程理论与方法□	40	2	2	
	其他选修课	6900005003	汉语阅读与写作	60	2	2	
			跨学科选修课				
必修环节		6400006003	学术活动（不少于 5 次）		1	1,2	
			素质教育公选课	20	1	1,2	

说明：1. 除规定的汉语课程以外，其他课程均采用英语授课。2.“□”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化和艺术等为主，加强来华留学研究生综合素质教育，研究生可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，有举办学术活动单位的公章为依据，报所在学院研究生科备案，完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

电子科学与技术学科 硕士研究生（留学生）培养方案

电子科学与技术是进入国家“双一流”建设的重点一级学科，包含电磁场与微波技术、电路与系统、物理电子学、微电子学与固体电子学、电子信息材料与元器件等 5 个二级学科。该学科师资力量雄厚，在各个研究方向上都具有高水平的科研实力和广泛的国际学术影响。

一、培养目标

本学科硕士学位获得者应具有一定的汉语听、说、读、写能力，对学科研究前沿和发展趋势有较深入的了解，具有较深厚的电子科学技术学科的基础理论和系统专门的知识，掌握相应的实验技能，熟练运用计算机，至少能熟练使用一个与本学科密切相关的仿真软件，有严谨的科学态度和工作作风与高尚的职业道德，能胜任科研、生产单位和高等院校的研究、开发、教学或技术管理工作。

二、研究方向

1. 电磁场与微波技术
2. 集成电路与系统
3. 电子信息材料与元器件
4.微电子与固体电子
5 .物理电子学

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课、专业基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1100016001	随机过程与应用	60	3	1	至少3选1
		1100016002	矩阵理论	60	3	1	
		1100016003	数值分析	60	3	2	
		0208096101	集成电路与设计	40	2	2	
		0208096102	电子封装技术□	40	2	1	
		0208096106	高等电磁场理论□	60	3	1	
非学位选修课	专业选修课	0208096103	软硬件协同设计	40	2	2	
		0208096104	射频集成电路设计□	40	2	2	
		0208096105	模拟集成电路设计	40	2	1	
		0208097010	柔性 MEMS 系统与集成□	40	2	2	全英文,中外共选
		0208097019	高等数字集成电路设计□	40	2	2	
		0208097020	集成电路仿真与自动化设计基础	40	2	1	
		0208097029	太赫兹科学技术导论□	20	1	2	
		0108106007	信号检测与估计□	40	2	1	
		0108107025	雷达原理	30	1.5	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

材料科学与工程学科 硕士研究生（留学生）培养方案

“材料科学与工程”是研究材料的组成、结构、制备工艺与其性能及应用间相互关系的科学与技术，研究对象包括电、磁、声、光、热、力及生物等功能材料的理论、设计、制备、检测及应用，研究过程涉及到信息的获取、转换、存储、处理与控制。我校是首批“双一流”A 类建设高校，电子信息材料及应用的研究和开发是本学科的特色和优势。本学科现有长江学者特聘教授、国家千人计划、博士生导师、教授、副教授以及一批青年博士组成的学术队伍，拥有先进的实验设备和充足的科研经费。

随着科学技术的发展，本学科与其它学科的交叉越来越紧密，同时，作为当代文明的重要支柱，本学科已成为现代科学技术发展的先导和基础，与当代社会发展有着极为密切的依存关系。

一、培养目标

本学科硕士学位获得者应具有一定的汉语听、说、读、写能力，对学科研究前沿和发展趋势有较深入的了解，具有较深厚的材料科学与工程学科的基础理论和系统专门的知识，掌握相应的实验技能，熟练运用计算机，至少能熟练使用一个与本学科密切相关的仿真软件，有严谨的科学态度和工作作风与高尚的职业道德，能胜任科研、生产单位和高等院校的研究、开发、教学或技术管理工作。

二、研究方向

1. 电子信息材料与器件
2. 材料基因工程
3. 电子薄膜与集成器件
4. 新能源材料与器件
5. 印制电路与印制电子技术
6. 有机功能材料与工程

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，

将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1100016001	随机过程与应用	60	3	1	至少选 1 门
		1100016004	矩阵理论	60	3	1	
		1107016005	数值分析	60	3	2	
		0208096101	集成电路与设计	40	2	2	
		0208096102	电子封装技术□	40	2	1	
		0308056018	物理与化学电源基础	40	2	1	全英文,中外共选
非学位选修课	专业选修课	0208096104	射频集成电路设计□	40	2	2	
		0208096105	模拟集成电路设计□	40	2	1	
		0308057010	材料设计与计算□	30	1.5	2	全英文,中外共选
		0308057016	Optoelectronic Conversion from Fundamental to Devices□	20	1	2	
		0308057021	工程设计中的材料选择	30	1.5	2	
		0208097010	柔性 MEMS 系统与集成□	40	2	2	
		0208097019	高等数字集成电路设计□	40	2	2	
		0208097020	集成电路仿真与自动化设计基础	40	2	1	
		0108107025	雷达原理	30	1.5	2	
		0308177009	实验室安全与消防安全	20	1	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。来华留学生的答辩语言统一为英语。

机械工程学科 硕士研究生（留学生）培养方案

机械工程是以自然科学和工程技术科学为理论基础的一级学科，系统研究和解决现代社会生产和服务过程中的机械设计、制造、控制、使用和维修的相关理论和实际问题。本学科涵盖机械设计及理论、机械制造及其自动化、机械电子工程等研究方向，形成了机械、电子信息和计算机测控技术等多学科交叉综合的学科优势。

一、培养目标

本学科硕士学位获得者应具有一定的汉语听、说、读、写能力，对本学科的国内外技术发展现状和学术研究的前沿趋势有较深入的了解，具备坚实的机械科学与技术基础理论和专业知识，掌握相应的实验技能，熟练运用计算机，至少能熟练使用一个与本学科密切相关的软件，能在机械科学、信息科学的融合及其相关领域独立地开展较高学术意义或实用价值的科学研究工作。

二、研究方向

1. 装备可靠性与设备监控管理
2. 智能制造与装备
3. 智能感知与控制技术
4. 微纳制造与信息化
5. 装备智能设计与仿真

三、学习年限

攻读硕士学位者，学习年限为 2 年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过 4 年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	至少选 1 门
		1100016004	矩阵理论	60	3	1	
		1107016005	数值分析	60	3	2	
		1107016004	最优化理论与应用□	50	2.5	1	
		0408026005	微机电系统□	40	2	1	
		0408026006	先进制造技术□	40	2	1	
		0408026004	机械动力学□	40	2	2	
		0808126020	嵌入式操作系统及应用□	40	2	2	
非学位选修课	专业选修课	0108106007	信号检测与估计□	40	2	1	
		0408027013	可靠性设计□	40	2	2	
		1008116004	系统工程理论与方法□	40	2	2	
		0608046001	信号处理方法及应用□	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
		XX00025XXX	素质教育公选课	20	1	1,2	

说明：除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 个学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

电气工程学科 硕士研究生（留学生）培养方案

电气工程是一门关于电力、电子和电磁的研究与应用的工程学科，其涵盖的领域包括电力、电子、电路、控制和通信，是当今高新技术领域中不可或缺的关键学科。近四十年来在信息与通信工程、控制科学与工程等学科的综合、交叉作用下，已经成为现代科学技术领域的核心学科之一。我校顺应国家能源发展战略，依托学校在电子信息领域综合优势，以电力系统广域测量与控制、智能电网、电力电子与电力传动、新型发电与储能等领域的研究为特色，取得了一大批高水平的科研成果，为培养宽口径、复合型、国际化的高端电气工程人才奠定了很好的基础。

一、培养目标

本学科定位于培养在电气工程领域，特别是电力与控制、电路与系统、电力信息与通信等方面，具备坚实的基础理论和系统的专业知识，掌握电气工程和计算机应用等专业技术的高端人才。硕士学位获得者应了解本学科有关研究领域国内外的学术现状和发展方向，具备独立分析和解决本学科的专门技术问题的能力，熟练掌握汉语，具备较好的国际化视野和国际交流能力，具有严谨求实的科学态度和工作作风、勇于创新的开拓意识和良好的职业素养，能胜任电气工程领域相关的科研、教学、工程技术开发及管理工作。

二、研究方向

1. 电力系统分析与控制
2. 电力变换与主动配电网
3. 先进输变电技术
4. 电气设备智能监测与诊断
5. 电机系统与控制
6. 电力能源经济

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课为必修课，基础课至少选修 1 门。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	至少选1门
		1100016002	矩阵理论	60	3	1	
		1100016003	数值分析	60	3	1	
		1100016004	最优化方法与应用□	50	2.5	1	
		0408086009	电力电子技术	40	2	1	
		0408086008	电力系统运行与控制	40	2	2	
		0808126020	嵌入式操作系统及应用□	40	2	2	
非学位选修	专业选修课	0408087014	电力市场	40	2	1	
		0408087012	新能源发电与并网	40	2	2	
		0108106007	信号检测与估计□	40	2	1	
		1008116004	系统工程理论与方法	40	2	2	
		0408057013	可靠性设计□	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于5次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。 2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获1个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加5次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得1个学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

光学工程学科 硕士研究生（留学生）培养方案

光学工程学科主要研究光信息获取、光存储、光传输、光交换、光信息处理以及光电图像显示等方向领域，在军事及民用领域有广泛的应用，是信息产业的重要支柱学科之一。

我校光学工程主要从事光学工程学科的理论及其相关应用方面的教学与科研，特别在光通信、集成光学与光电子器件、红外与传感技术、平板显示与成像技术等方面具有特色和优势，处于国内前列、国际先进。

光学工程学科在全国高校第四轮学科评估中获评 A 类学科。

一、培养目标

本学科硕士学位获得者应具有坚实的基础理论、系统的专业知识，了解本学科领域的前沿和动态，掌握现代实验方法和技能；并能适应科学进步及社会发展的需要，具有从事理论研究或独立担负工程技术实践的能力。同时应具有严谨求实的科学态度和工作作风，良好的合作精神和交流能力。毕业后能胜任相关的科学研究与工程技术开发、教学和技术管理等工作。

留学研究生必修中国概况和综合汉语等，毕业时应具有一定的汉语交流能力。

二、研究方向

1．光通信与集成光学
2．光电探测与系统集成
3．敏感电子学与传感网
4．显示与成像
5．微波光子学
6．光电测控与仪器

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课、专业基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可替代非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过后获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	必修，至少选 1 门
		1100016004	矩阵理论	60	3	1	
		1107016005	数值分析□	60	3	2	
		0508036021	光纤光学□	30	1.5	1	
		0508036001	光电子技术□	40	2	1	
		0108106015	光纤通信□	40	2	2	
		0108106014	数字信号处理	40	2	1	
		0108106013	数字通信基础	40	2	2	
非学位选修课	专业选修课	0508037033	有机电子学□	20	1	2	
		0508037029	光电子学与光子学□	20	1	2	
		0108107026	光纤技术□	40	2	1	
		1207026016	纳米光学□	40	2	2	
		0108106007	信号检测与估计□	40	2	1	
		0808127022	信息安全数学基础	40	2	1	
		0808126016	网络安全	60	3	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1. 除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

仪器科学与技术学科 硕士研究生（留学生）培养方案

仪器科学与技术是信息领域的重要组成部分，其主要研究内容包括：信号或信息的获取方法及转换放大与处理技术、测量方法学、计量学以及仪器工程学与测控系统工程学等。仪器科学与技术学科具有自身可持续发展的优势，具有突出的学科交叉性和科技前沿性等显著的特点，对高新科技与工业的发展和社会进步具有重要的引领作用和推动作用。

我校仪器科学与技术学科源于学校 1956 年创办的“电子测量技术及仪器”专业，是国内电子测量技术高层次人才培养基地之一。拥有一级学科博士点、博士后流动站，是四川省一级学科重点学科。学科教学科研实力雄厚，在多年的发展和建设中，形成了宽带时域测试技术及仪器、电子系统综合测试诊断与预测、微波与通信测试技术及仪器、集成电路测试与可测性设计理论及技术等研究方向，具有显著的电子测试优势和鲜明的军事电子特色，工程研究能力突出。

一、培养目标

遵纪守法，具有良好的道德品质；毕业时具有一定的汉语交流能力；在本学科领域具有坚实的专业理论基础和系统的专门知识；了解本学科领域的发展方向和学术研究前沿；具有独立进行理论和实验研究的初步能力和从事技术开发的能力；有严谨求实的科学作风；能从事本学科或相近学科的科研、教学、工程技术和管理工作。

二、研究方向

1．宽带时域测试技术及仪器
2．电子系统综合测试诊断与预测
3．微波毫米波测试技术及遥感
4．集成电路测试与可测性设计理论及技术
5．新型传感技术与精密测量

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文（含研究报告），通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，

将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	必修，至少选一门
		1100016004	矩阵理论	60	3	2	
		1107016005	数值分析	60	3	2	
		0108106014	数字信号处理□	40	2	1	考试
		0208096101	集成电路与设计□	40	2	1	考试
		0108106007	信号检测与估计□	40	2	1	考试
		0208096103	软硬件协同设计	40	2	2	考试
		0608046001	信号处理方法及应用□	40	2	2	考试
非学位选修课	专业选修课	0208097020	集成电路仿真与自动化设计基础	40	2	1	
		0808126020	嵌入式操作系统及应用□	40	2	2	
		0208096013	模拟集成电路设计□	50	2.5	1	
		0208096104	射频集成电路设计□	40	2	2	
		1008116004	系统工程理论与方法□	40	2	1	
		0608117008	计算机视觉□	40	2	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。 2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

控制科学与工程学科 硕士研究生（留学生）培养方案

控制科学与工程是研究控制的理论、方法、技术及其工程应用的学科。控制科学以控制论、系统论、信息论为基础，研究各应用领域内的共性问题，即为了实现控制目标，如何建立系统的模型，分析其内部与环境信息，采取何种控制与决策行为；且与各应用领域的密切结合，又形成了控制工程丰富多样的内容。本学科点在理论研究与工程实践相结合、学科交叉和军民结合等方面具有明显的特色与优势，在我国国民经济发展和国家安全方面发挥了重大作用。

我校控制科学与工程学科为四川省重点学科，师资力量雄厚，形成了复杂系统控制与优化、新能源系统控制技术、计算机视觉与模式识别、机器人技术与系统等研究方向，具有电子信息优势明显，学科交叉特色鲜明，工程研究能力突出等特点。本学科的发展受益于社会和国家的发展，同时也在国家的决策咨询、国防建设、行业推动、社会服务、人才培养等方面做出了突出的贡献。

一、培养目标

遵纪守法，具有良好的道德品质；掌握本学科领域坚实的基础理论和系统的专门知识；毕业时具有一定的汉语交流能力；具有从事科学研究、教学工作或独立担负专门技术工作的能力。

二、研究方向

1.复杂系统与智能信息处理
2.新能源系统及控制技术
3.模式识别与智能系统
4.测控通信与导航控制
5.检测技术与自动化装置

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文（含研究报告），通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	必修，至少修一门
		1100016004	矩阵理论	60	3	1	
		1107016005	数值分析	60	3	2	
		0408086005	电力系统运行与控制□	60	3	2	考试
		0108106014	数字信号处理□	40	2	1	考试
		0608046001	信号处理方法及应用□	40	2	2	考试
		0608116002	线性系统理论□	50	2.5	1	考试
		0608116004	模式识别□	40	2	1	考试
非学位选修课	专业选修课	0608117008	计算机视觉□	40	2	1	
		0108106007	信号检测与估计□	40	2	1	
		1008116004	系统工程理论与方法□	40	2	1	
		0208097020	集成电路仿真与自动化设计基础	40	2	1	
		0808126020	嵌入式操作系统及应用□	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。 2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

计算机科学与技术学科 硕士研究生（留学生）培养方案

电子科技大学“计算机科学与技术”于 1999 年建成一级学科博士后流动站，本学科已形成强有力的基础研究和应用研究能力，具有较强的学科综合优势。学科研究水平和研究能力大幅度提升，整体接近国内一流水平，部分研究方向达到国内先进水平。在学科方向、学术团队、学科平台、科学研究、人才培养、学术交流等方面取得了突出的成绩。

一、培养目标

硕士学位获得者应具有本学科坚实的基础理论、系统的专业知识，了解本学科主要的技术发展状况，掌握本学科的现代实验方法和技能。在所学专业方向上，具有从事科学理论研究或担负工程技术实践工作的能力。毕业后能胜任与计算机领域相关的科学研究、计算机应用系统的软件开发与分析，以及计算机领域教学工作。

硕士学位获得者还应对中国的历史与文化有初步的了解，能阅读简单的中文科技文献，并具有简单的汉语对话能力。

二、研究方向

1. 信息安全
2. 数字媒体技术
3. 嵌入式系统
4. 计算机网络
5. 计算智能
6. 云计算

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课、专业基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语	60	2	1,2	必修
		6900005002	中国概况	40	2	1,2	
	专业基础课	1100016001	随机过程与应用	60	3	1	至少选一门
		1100016004	矩阵理论	60	3	1	
		1107016005	数值分析	60	3	2	
		0808126016	网络安全△	60	3	1	
		0808126017	多媒体技术与应用△	60	3	1	
		0808126018	软件开发技术△	60	3	1	
		0808126019	移动计算技术△	40	2	2	
		0808126020	嵌入式操作系统及应用△	40	2	2	
		0808126007	大数据分析与挖掘△	40	2	2	
非学位选修课	专业选修课	0808127020	密码学基础	40	2	2	
		0808127021	安全协议△	40	2	1	
		0808127022	信息安全数学基础	40	2	1	
		0808127023	操作系统结构与应用编程△	40	2	2	
		0808127024	互联网络程序设计	40	2	2	
		0808127025	数据库技术	40	2	2	
		0808127026	面向对象编程技术	40	2	2	
		0808127027	计算机图形学	40	2	2	
		0808127005	云计算△	20	1	1	
	其他选修课	6900005003	汉语阅读与写作	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

软件工程学科 硕士研究生（留学生）培养方案

软件工程学科是信息技术领域中发展最快的学科领域之一，软件产业也成为各国经济发展的支柱产业。软件工程领域总体发展形成了宽范围、多维度、多层次、多交叉的体系结构，知识领域包括软件需求、软件设计、软件构建、软件测试、软件维护、软件配置管理、软件项目管理、软件质量、软件安全、软件道德与法律等；也涉及到系统工程、领域工程、数字化技术、嵌入式系统、网络与信息安全，系统管理与支持、市场营销等多学科交叉领域。

一、培养目标

本学科培养以软件理论为基础，根据软件技术的发展和软件行业的需求，按照国际化软件开发标准与模式，培养掌握软件工程基本理论、熟悉软件技术及软件开发过程的研究型人才。

本学科硕士毕业生除了熟练掌握先进的程序设计技术、主流系统平台与工具，能遵循国际软件开发规范与标准进行系统分析、设计和编程，具有一定的项目管理知识和能力，能熟练应用现代软件技术、方法和工具，从事软件工程领域及其他应用领域的系统与软件设计、开发、管理的研究性工作外，还应对中国的历史与文化有初步的了解，能阅读简单的中文科技文献，并具有简单的汉语对话能力。

二、研究方向

1．网络安全与网络工程
2．软件理论
3．嵌入式软件技术与应用
4．数字信息处理
5．云计算与大数据
6．智能计算

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

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五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	至少选 1 门
		1100016004	矩阵理论	60	3	1	
		1107016005	数值分析	60	3	2	
		0908356010	网络安全：理论与实践□	40	2	1	
		0908356004	软件架构模型与设计□	40	2	2	
		0908356009	网络计算导论□	40	2	1	
		0908356007	嵌入式系统及应用	40	2	2	
非学位选修课	专业选修课	0908357012	新型数据库理论与实践□	40	2	1	
		0908357010	互联网编程与区块链应用	40	2	2	
		0908357014	数据科学与应用□	40	2	2	
		0908357009	面向对象系统分析与设计	40	2	2	
		0908357011	Android 应用程序开发	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

生物医学工程学科 硕士研究生（留学生）培养方案

生物医学工程是现代科学技术与生物医学问题相结合的一个交叉领域，与电子信息科学与技术、计算机科学与技术、生物医学、认知神经科学和分子生物学等学科的研究领域密切相关。我校本学科创办于 1986 年。现有正副教授 40 余名，其中含中科院院士 1 名、千人 5 名、长江/杰青 3 名。设有国家国际科技合作基地-神经信息国际联合研究中心，以及神经信息教育部重点实验室、高场磁共振脑成像四川省重点实验室等三个部（省）重点实验室，拥有 3T MR 脑成像中心，以及 EGI 及 Neuroscan 脑电工作站等具有国际水平的实验仪器设备。在脑功能成像技术及应用、视觉神经电生理、生物医学信号处理、医学成像与处理、生物信息学等方面成果显著。

一、培养目标

本学科硕士获得者应掌握生物医学信号处理的基本理论及技术、具有较好的计算机软硬件技术知识，以及人体解剖和生理学等生物医学方面的基础知识，掌握一门外国语。具备独立从事生物医学信号采集与处理、生物医学电子仪器的设计开发及相关基础研究的能力，能胜任在科研单位、生产部门及高等院校从事研究、开发、教学工作。

硕士学位获得者还应对中国的历史与文化有初步的了解，能阅读简单的中文科技文献，并具有简单的汉语对话能力。

二、研究方向

1. 脑功能与神经信息工程（含脑机接口、类脑技术等）
2. 医疗设备、医学图像与信号处理
3. 生物信息学
4. 神经生物学
5. 细胞生物学
6. 生物化学与分子生物学

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课、专业基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的

学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	基础课	1100016001	随机过程与应用	60	3	1	
		1100016002	矩阵理论	60	3	2	
		1100016003	数值分析	60	3	2	
	专业基础课	1408316006	生物医学统计□	40	2	2	
		1404026004	认知神经科学□	40	2	1	
		1407106009	高级分子生物学□	40	2	1	
		1407106010	生物信息学□	40	2	1	
		1408316004	脑科学基础□	40	2	2	
非学位选修课	专业选修课	1408316005	脑成像进展□	40	2	2	
		1404026006	心理物理实验□	40	2	2	
		0208096101	集成电路与设计	40	2	2	
		0108106010	数字通信基础□	40	2	2	
		0108106011	数字信号处理□	40	2	1	
		0808126017	多媒体技术与应用□	60	3	1	
		0808126018	软件开发技术□	60	3	1	
		0608116004	模式识别	40	2	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。 2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》。

数学学科 硕士研究生（留学生）培养方案

电子科技大学数学学科拥有一级学科博士、硕士学位授予权、博士后流动站，涵盖基础数学、计算数学、概率论与数理统计、应用数学、运筹学与控制论 5 个二级学科，是四川省重点一级学科。经过“十五”、“十一五”、“211 工程”和“985 工程”的建设，本学科已在基础研究、应用基础研究及交叉学科研究方面形成较强竞争力，具有较强的学科综合优势，学科研究水平和研究能力大幅提升，已形成具有国际影响和国内领先的研究方向。研究方向涵盖数值代数与科学计算、图像与视觉处理建模与高性能算法、动力系统与控制、微分/积分方程数值解及应用、偏微分方程与调和分析及应用、概率论及应用、孔隙建模和数值模拟等。其理论和方法在物理学、化学、生物医学、电子信息科学、生命科学、管理科学、自动控制、计算机科学、材料科学和环境科学等方面均有着极其重要的作用。

一、培养目标

本专业培养勇于追求真理和献身于科学研究的高层次数学专业人才。本学科硕士学位获得者应掌握有关领域的国内外前沿现状和发展趋势，具有独立从事学科领域中的基础理论及前沿课题的研究并做出创新的研究成果。至少熟练掌握一门外语，具有“读、写、听、说”能力。

硕士学位获得者还应对中国的历史与文化有初步的了解，能阅读简单的中文科技文献，并具有简单的汉语对话能力。

二、研究方向

1. 数值代数与科学计算及应用
2. 图像与视觉处理建模与高性能数值算法
3. 动力系统与控制
4. 微分/积分方程数值解及应用
5. 偏微分方程与调和分析及应用
6. 概率论及应用
7. 最优化及应用

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课、专业基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	
		1100016004	矩阵理论	60	3	1	
		1107016001	泛函分析	60	3	1	
		1107016002	偏微分方程	60	3	1	
		1107016004	最优化理论与应用	60	3	1	
		1107016005	数值分析	60	3	2	
		1107016007	数值代数	60	3	2	
		1107146001	高等概率论	60	3	1	
非学位选修课	专业选修课	1107016008	偏微分方程数值解法	60	3	2	
		1107017004	凸分析	60	3	2	
		1107017011	特殊矩阵	40	2	2	
		1107146007	概率极限理论	40	2	2	
		1107147003	多元统计分析	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。 2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

物理学学科 硕士研究生（留学生）培养方案

物理学是研究物质及其运动的自然科学，揭示物质的结构、物质之间的相互作用和物质的运动规律，为理解自然界奠定坚实的基础。物理学新方法、新理论是众多新技术、新产品的重要源头。

电子科技大学物理学院拥有物理学一级学科博士学位授予权，设有博士后流动站。本学科依托物理学研究和与其它学科的交叉领域的研究，支撑相关工程技术的研发，提升学生对物理知识的掌握，培养合格的科技人才，促进服务于经济发展的高技术研究。本学科包含理论物理、凝聚态物理、无线电物理、光学、等离子体物理、量子物理与量子信息等六个优势学科方向，具有较强的基础研究能力和理工渗透、协调发展的明显特色，取得良好的学术声誉。物理学院致力于在高科技时代中发挥关键作用。

本学科课程体系立足于物理学学科，培养学生在宽口径职业方向的领导潜能，培养学生获取物理学基础知识和新兴知识的能力，培养学生解决与工业发展有关实际问题的能力。

一、培养目标

本学科硕士学位获得者应对物理学相关研究前沿和发展趋势有较深入的了解，具有物理学科较深厚的基础理论和系统专门的知识，掌握相关的实验技能，熟练运用计算机及相关信息技术，学会撰写学术论文并在国际会议上进行交流，有严谨的科学态度、工作作风和高尚的职业道德，毕业后能胜任科研、生产单位的研究、开发工作。

留学研究生必修中国文化概论和汉语阅读与写作等，毕业时具有一定的汉语交流能力。

二、研究方向

1. 理论物理
2. 凝聚态物理
3. 无线电物理
4. 光学
5. 等离子体物理
6. 量子物理与量子信息

三、学习年限

攻读硕士学位者，学习年限为两年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过四年。

四、培养方式与课程学习要求

总学分要求不低于 26 学分，课程总学分不低于 24 学分，其中学位课不低于 15 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文，通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的

专业课程，通过者获得相应学分。未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1100016001	随机过程及应用	60	3	1	至少选一门
		1107016004	最优化理论与应用□	50	2.5	1	
		1107016005	数值分析	60	3	2	
		0208096106	高等电磁场理论□	60	3	1	
		1207026006	高等量子力学□	60	3	2	
		1207026002	量子场论（一）□	50	2.5	1	
非学位选修课	专业选修课	1207026016	纳米光学□	40	2	2	
		0108107028	雷达原理	30	1.5	2	
		1207027013	硅基射频集成电路设计□	20	1	2	
		1207026001	广义相对论□	40	2	2	
		1207026003	量子场论（二）□	50	2.5	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	

说明：除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

公共管理学科 硕士研究生（留学生）培养方案

公共管理是一门综合性强，研究范围广，极具实践价值的学科，本学科以政治学、管理学、社会学等学科为基础，对公共管理进行综合的全面研究，揭示公共组织、公共体制、公共伦理、公共决策、公共管理程式、公共管理方法与技术的一般规律和理论，研究公共管理的历史和现状，探索提高公共管理有效性的方法路径，注重总结世界各国在行政管理领域的经验，构建在信息化的条件下符合时代特征的新型行政管理模式，培养 21 世纪高质量、高水平的公共管理国际化人才。

一、培养目标

本学科硕士学位获得者应具有较强的管理学理论基础和系统的专业知识，能深入的掌握政治学理论、公共管理学、公共经济学、组织行为学、行政学等专业基础知识，具有较强的理论水平，掌握一门外国语和计算机工具，具有较强的分析问题解决问题的能力、组织管理能力和电子政务水平，并且拥有较高政治学和管理学理论素养，能够理论联系实际，同时具有严谨的科学态度和工作作风，能胜任政府部门、公共组织，社团组织、高等院校、国有企业行政管理工作。

留学研究生必修中国概论和综合汉语等，毕业时应具有一定的汉语交流能力。

二、研究方向

1．行政管理理论与方法　　2．公共服务与政策分析

3．电子政务与智慧城市　　4．社会治理与公共安全

三、学习年限

攻读硕士学位者，学习年限为 2-4 年。若因客观原因不能按时完成学业者，可申请适当延长学习年限，但最长学习年限不超过 4 年。

四、培养方式与课程学习要求

留学研究生培养方式：

总学分要求不低于 30 学分，课程总学分不低于 28 学分，其中学位课不低于 17 学分；必修环节不低于 2 学分。开展学位论文工作，撰写一篇学位论文（含研究报告），通过答辩。

留学研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展研究报告或学位论文工作。

课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课、专业基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未达到上述要求者，可以在一年内补修或重修有关课程，在规定期限内仍没有达到学分要求者，将被终止学业。

五、课程设置

类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语	60	2	1,2	必修
		6900005002	中国概况	40	2	1,2	
	专业基础课	1612046011	公共管理学	48	3	1	
		1612046012	公共行政学经典文献选读	48	3	1	
		1612046013	社会科学研究方法	32	2	2	
		1612046015	公共经济学	32	2	2	
		1612046016	电子政务	32	2	2	
		1612046017	公共人力资源管理	32	2	2	
		1612046018	比较政府与政治	40	2.5	2	
		1612046019	全球化与世界政治	32	2	1	
		1612046020	公共政策	40	2.5	1	
非学位选修课	专业选修课	1612047011	政府与传媒	32	2	2	
		1612047012	学术论文写作	20	1	1	必修
	其他选修课	6900005003	汉语阅读与写作	60	2	2	
			跨学科选修课				
必修环节		6400006003	学术活动（不少于 5 次）	0	1	1,2	
			素质教育公选课	16	1	1,2	

说明：除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学硕士研究生必修环节包含两大部分，要求留学研究生分别完成以下内容：

1）素质教育公选课：以介绍学术前沿知识、中外文化和艺术等为主，加强来华留学研究生综合素质教育，研究生可选修一门，考核通过后获 1 个学分。

2）学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，硕士研究生在校期间须参加 5 次以上校内外学术报告会，填写学术活动登记表，有举办学术活动单位的公章为依据，报所在学院研究生科备案，全部完成后获得 1 学分。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

信息与通信工程学科 博士研究生（留学生）培养方案

电子科技大学“信息与通信工程”一级学科是国家重点学科，包含 2 个二级学科，即属于国家重点学科与长江学者计划特聘教授设岗的两个二级学科“通信与信息系统”和“信号与信息处理”。我校“信息与通信工程”相关学科是国内首批获博士学位授予权、首批设立博士后流动站的学科，也是首批“211 工程”、“985 工程”重点建设学科及“双一流”重点建设学科，2012 年本学科在教育部学科评估中排名第 2，在 2017 年教育部公布的第四轮一级学科评估结果中被评为 A+。拥有中国工程院院士 2 人，千人计划入选者 8 人，全国教学名师 2 人，长江学者 5 人，国家杰出青年科学基金获得者 2 人，青年千人计划入选者 9 人，国家青年拔尖人才支持计划入选者 1 人。本学科研究团队在国内外享有良好声誉。本学科具有国家级重点实验室、教育部重点实验室、“111”学科引智基地等等具有国际一流水平的学术研究与人才培养平台。

本学科与电子科学与技术、计算机科学与技术、控制科学与工程、仪器科学与技术等学科的研究领域密切相关。

一、培养目标

本学科博士学位获得者应对本学科研究前沿和发展趋势有系统深入的了解，在通信学科方面有坚实宽广的理论基础，具有独立完成本学科相关实验研究的能力，了解国内外信息与通信工程学科某一领域的新技术和发展动向，创新性地解决本学科的学术或技术问题，能熟练使用计算机，能撰写高水平学术论文，并能在国际会议上进行交流。有严谨求实的科学态度和工作方法，能独立从事科学研究，对本学科某方面具有深入研究并取得独创性成果，能独立承担相关的研究和开发课题，具备成为学术带头人或项目负责人的素质。

二、研究方向

1. 无线与移动通信系统
2. 抗干扰与安全通信系统
3. 雷达探测与成像识别
4. 智能通信网络与信息处理
5. 光纤传感与通信
6. 图像与视频处理
7. 通信集成电路与系统
8. 智能感知与信息系统
9. 机器学习与人工智能
10. 信号与信息智能处理

三、学习年限

攻读博士学位者，学习年限为 3 年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过 6 年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；
2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的

时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可替代非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过后获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1107016005	数值代数	50	2.5	2	二选一
		0108106001	最优化理论与应用□	50	2.5	1	
		0108106013	数字通信基础□	40	2	2	
		0108106014	数字信号处理□	40	2	1	
		0108106015	光纤通信□	40	2	2	
		0808126018	软件开发技术	60	3	1	
非学位选修课	专业选修课	0108107026	光纤技术□	40	2	1	
		0208096101	集成电路与设计□	40	2	1	
		0108106007	信号检测与估计□	40	2	1	
		0108107027	计算智能方法及其应用□	30	1.5	2	
		0108107013	模糊逻辑□	40	2	2	
		1008116004	系统工程理论与方法□	40	2	2	
		0808126007	大数据分析与挖掘	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科选修课				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分		1,2	考查
		6400006005	博士生综合考试	不计学分			考试

说明：1. 除规定的汉语课程以外，其他课程均采用英语授课。2. “△”符号表示该课程硕博共选。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化和艺术等为主，加强来华留学研究生综合素质教育，研究生可选修一门，考核通过后获 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，有举办学术活动单位的公章为依据，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

电子科学与技术学科 博士研究生（留学生）培养方案

电子科学与技术是进入国家“双一流”建设的重点一级学科，包含电磁场与微波技术、电路与系统、物理电子学、微电子学与固体电子学、电子信息材料与元器件等 5 个二级学科。该学科师资力量雄厚，在各个研究方向上都具有高水平的科研实力和广泛的国际学术影响。

一、培养目标

博士学位获得者应具有一定的汉语听、说、读、写能力，对本学科研究前沿和发展趋势有系统深入的了解，在电子科学与技术方面有坚实宽广的理论基础，具有独立完成本学科相关实验研究与工程实践能力，能应用英语撰写高水平学术论文，并能在国际会议上进行交流。能独立从事科学研究，承担相关的研究和开发课题，具备成为学术带头人或项目负责人的素质，能胜任在科研单位、产业部门或高等院校有关方面的研究、科研开发，教学和技术管理工作。

二、研究方向

1. 电磁场与微波技术
2. 集成电路与系统
3. 电子信息材料与元器件
4.微电子与固体电子
5 .物理电子学

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；
2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1100016004	最优化方法及应用	50	2.5	1	至少 2 选 1
		1100016005	数值代数	50	2.5	2	
		0208096102	电子封装技术	40	2	1	
		0208096106	高等电磁场理论	60	3	1	
		0208097019	高等数字集成电路设计	40	2	2	全英文，中外共选
非学位选修课	专业选修课	0208096104	射频集成电路设计	40	2	2	
		0208096105	模拟集成电路设计	40	2	1	
		0208097010	柔性 MEMS 系统与集成	40	2	2	全英文，中外共选
		0208097029	太赫兹科学技术导论	20	1	2	
		0108106007	信号检测与估计	40	2	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述I	不计学分			考查
		6400006005	博士综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综

合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

材料科学与工程学科 博士研究生（留学生）培养方案

“材料科学与工程”是研究材料的组成、结构、制备工艺与其性能及应用间相互关系的科学与技术，研究对象包括电、磁、声、光、热、力及生物等功能材料的理论、设计、制备、检测及应用，研究过程涉及到信息的获取、转换、存储、处理与控制。我校是首批“双一流”A 类建设高校，电子信息材料及应用的研究和开发是本学科的特色和优势。本学科现有长江学者特聘教授、国家千人计划、博士生导师、教授、副教授以及一批青年博士组成的学术队伍，拥有先进的实验设备和充足的科研经费。

随着科学技术的发展，本学科与其它学科的交叉越来越紧密，同时，作为当代文明的重要支柱，本学科已成为现代科学技术发展的先导和基础，与当代社会发展有着极为密切的依存关系。

一、培养目标

博士学位获得者应具有一定的汉语听、说、读、写能力，对本学科研究前沿和发展趋势有系统深入的了解，在材料科学与工程方面有坚实宽广的理论基础，具有独立完成本学科相关实验研究与工程实践能力，能应用英语撰写高水平学术论文，并能在国际会议上进行交流。能独立从事科学研究，承担相关的研究和开发课题，具备成为学术带头人或项目负责人的素质，能胜任在科研单位、产业部门或高等院校有关方面的研究、科研开发，教学和技术管理工作。

二、研究方向

1．电子信息材料与器件　　2. 材料基因工程

3．电子薄膜与集成器件　　4. 新能源材料与器件

5．印制电路与印制电子技术　　6. 有机功能材料与工程

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；

2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位

课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1	必修
		6900005002	中国概况□	40	2	2	
	专业基础课	1107016004	最优化理论与应用	50	2.5	1	至少选一门
		1107016007	数值代数	50	2.5	2	
		0208096102	电子封装技术	40	2	1	
		0208096106	高等电磁场理论	60	3	1	
		0208097019	高等数字集成电路设计	40	2	2	全英文,中外共选
非学位选修课	专业选修课	0208096104	射频集成电路设计	40	2	2	
		0208096105	模拟集成电路设计□	40	2	1	
		0308057010	材料设计与计算	30	1.5	2	全英文,中外共选
		0308057016	Optoelectronic Conversion from Fundamental to Devices	20	1	2	
		0308057021	工程设计中的材料选择	30	1.5	2	
		0208097032	生物医学成像	40	2	2	
		0108106007	信号检测与估计	40	2	1	
		0308177009	实验室安全与消防安全	20	1	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，近 5 年文献不低于 1/3，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。来华留学生的答辩语言统一为英语。

机械工程学科 博士研究生（留学生）培养方案

机械工程是以自然科学和工程技术科学为理论基础的一级学科，系统研究和解决现代社会生产和服务过程中的机械设计、制造、控制、使用和维修的相关理论和实际问题。本学科涵盖机械设计及理论、机械制造及其自动化、机械电子工程等研究方向，形成了机械、电子信息和计算机测控技术等多学科交叉综合的学科优势。

一、培养目标

本学科博士学位获得者应对本学科研究前沿和发展趋势有系统深入的了解，在机电系统设计、制造、测控等特定方向具有坚实宽广的理论基础，具有独立完成本学科相关实验研究与工程实践能力，能应用英语撰写高水平学术论文，并能在国际会议上进行交流。能独立从事科学研究，承担相关的研究和开发课题，具备成为学术带头人或项目负责人的素质。

博士学位获得者还应对中国的历史与文化有初步的了解，能阅读简单的中文科技文献，并具有简单的汉语对话能力。

二、 研究方向

1. 装备可靠性与设备监控管理
2. 智能制造与装备
3. 智能感知与控制技术
4. 微纳制造与信息化
5. 装备智能设计与仿真

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；
2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1107016004	最优化理论与应用□	50	2.5	1	至少选一门
		1107016005	数值分析	60	3	2	
		0408026009	微机电系统□	40	2	1	
		0408026010	先进制造技术□	40	2	1	
		0408026004	机械动力学□	40	2	2	
		0808126020	嵌入式操作系统及应用□	40	2	2	
非学位选修课	专业选修课	0108106007	信号检测与估计□	40	2	1	
		0408057013	可靠性设计□	40	2	2	
		1008116004	系统工程理论与方法□	40	2	2	
		0608046001	信号处理方法及应用□	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
		XX00025XXX	素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：1. 除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活

动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

光学工程学科 博士研究生（留学生）培养方案

光学工程学科主要研究光信息获取、光存储、光传输、光交换、光信息处理以及光电图像显示等方向领域，在军事及民用领域有广泛的应用，是信息产业的重要支柱学科之一。

我校光学工程主要从事光学工程学科的理论及其相关应用方面的教学与科研，特别在光通信、集成光学与光电子器件、红外与传感技术、平板显示与成像技术等方面具有特色和优势，处于国内前列、国际先进。

光学工程学科在全国高校第四轮学科评估中获评 A 类学科。

一、培养目标

本学科博士学位获得者应对本学科研究前沿和发展趋势有系统深入的了解，在光学工程学科方面有坚实宽广的理论基础，具有独立完成本学科相关实验研究的能力，能熟练使用计算机，能撰写高水平学术论文，并能在国际会议上进行交流。有严谨求实的科学态度和工作方法，能独立从事科学研究，对本学科某方面具有深入研究并取得独创性成果，能独立承担相关的研究和开发课题，具备成为学术带头人或项目负责人的素质。

二、研究方向

1．光通信与集成光学　　2．光电探测与系统集成

3．敏感电子学与传感网　　4．显示与成像

5．微波光子学　　6．光电测控与仪器

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；

2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1107016004	最优化理论与应用	50	2.5	1	必修，至少选 1 门
		1107016005	数值分析□	60	3	2	
		0208096106	高等电磁场理论	50	2.5	1	
		0508036021	光纤光学□	30	1.5	1	
		0508036001	光电子技术□	40	2	1	
		0108106015	光纤通信□	40	2	2	
非学位选修课	专业选修课	0508037033	有机电子学□	20	1	2	
		0508037029	光电子学与光子学□	20	1	2	
		0108107026	光纤技术□	40	2	1	
		1207026016	纳米光学□	40	2	2	
		0108106007	信号检测与估计□	40	2	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：1. 除规定的汉语课程以外，其他课程均采用英语授课。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综

合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

仪器科学与技术学科 博士研究生（留学生）培养方案

仪器科学与技术是信息领域的重要组成部分，其主要研究内容包括：信号或信息的获取方法及转换放大与处理技术、测量方法学、计量学以及仪器工程学与测控系统工程学等。仪器科学与技术学科具有自身可持续发展的优势，具有突出的学科交叉性和科技前沿性等显著的特点，对高新科技与工业的发展和社会进步具有重要的引领作用和推动作用。

我校仪器科学与技术学科源于学校 1956 年创办的“电子测量技术及仪器”专业，是国内电子测量技术高层次人才培养基地之一。拥有一级学科博士点、博士后流动站，是四川省一级学科重点学科。学科教学科研实力雄厚，在多年的发展和建设中，形成了宽带时域测试技术及仪器、电子系统综合测试诊断与预测、微波与通信测试技术及仪器、集成电路测试与可测性设计理论及技术等研究方向，具有显著的电子测试优势和鲜明的军事电子特色，工程研究能力突出。

一、培养目标

遵纪守法，具有良好的道德品质；毕业时具有一定的汉语交流能力；在本学科的研究领域中具有坚实宽广的理论基础和系统深入的专门知识；深入了解本学科领域的发展方向及国际学术研究前沿；能够从事高水平的理论和实验研究，并在某一方面取得创造性的研究成果；具有独立从事科学研究和技术开发的能力；有严谨求实的科学作风；能胜任本学科或相近学科的科研、教学、工程开发或技术管理工作。

二、研究方向

1．宽带时域测试技术及仪器
2．电子系统综合测试诊断与预测
3．微波毫米波测试技术及遥感
4．集成电路测试与可测性设计理论及技术
5．新型传感技术与精密测量

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；

2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考

查。学位课中，公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1107016004	最优化理论与应用	50	2.5	1	必修，至少选一门
		1107016007	数值代数	50	2.5	2	
		0108106014	数字信号处理□	40	2	1	考试
		0108106007	信号检测与估计□	40	2	1	考试
		0608046001	信号处理方法及应用□	40	2	2	考试
非学位选修课	专业选修课	0608117008	计算机视觉□	40	2	1	
		0208096101	集成电路与设计□	40	2	1	
		0808126020	嵌入式操作系统及应用□	40	2	2	
		0608117003	复杂系统性能评价和优化	20	1	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加

学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

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4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

控制科学与工程学科 博士研究生（留学生）培养方案

控制科学与工程是研究控制的理论、方法、技术及其工程应用的学科。控制科学以控制论、系统论、信息论为基础，研究各应用领域内的共性问题，即为了实现控制目标，如何建立系统的模型，分析其内部与环境信息，采取何种控制与决策行为；且与各应用领域的密切结合，又形成了控制工程丰富多样的内容。本学科点在理论研究与工程实践相结合、学科交叉和军民结合等方面具有明显的特色与优势，在我国国民经济发展和国家安全方面发挥了重大作用。

我校控制科学与工程学科为四川省重点学科，师资力量雄厚，形成了复杂系统与智能优化、新能源系统控制技术、计算机视觉与模式识别、机器人技术与系统等研究方向，具有电子信息优势明显，学科交叉特色鲜明，工程研究能力突出等特点。本学科的发展受益于社会和国家的发展，同时也在国家的决策咨询、国防建设、行业推动、社会服务、人才培养等方面做出了突出的贡献。

一、培养目标

热爱祖国，遵纪守法，具有良好的道德品质；在本学科领域掌握坚实宽广的基础理论和系统深入的专门知识；毕业时具有一定的汉语交流能力；具有独立地、创造性地从事科学研究的能力，并具有严谨求实的科学作风；能够在科学研究或专门技术上做出创造性的成果。

二、研究方向

1.复杂系统与智能信息处理　　2.新能源系统及控制技术

3.模式识别与智能系统　　4.测控通信与导航控制

5.检测技术与自动化装置　　6.系统工程

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

1. 脱产培养。整个培养过程均在我校完成；

2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

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五、课程设置

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		6900005002	中国概况△	40	2	1,2	
	专业基础课	1107016004	最优化理论与应用	50	2.5	1	必修，至少选一门
		1107016007	数值代数	50	2.5	2	
		0608117008	计算机视觉□	40	2	1	考试
		0108106014	数字信号处理□	40	2	1	考试
		0608116002	线性系统理论□	50	2.5	1	考试
		0608116004	模式识别□	40	2	1	考试
非学位选修课	专业选修课	0608117003	复杂系统性能评价和优化	20	1	2	
		0808126020	嵌入式操作系统及应用□	40	2	2	
		1008116004	系统工程理论与方法□	40	2	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综

合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

计算机科学与技术学科 博士研究生（留学生）培养方案

电子科技大学“计算机科学与技术”于 1999 年建成一级学科博士后流动站，本一级学科已形成强有力的基础研究和应用研究能力，具有较强的学科综合优势。学科研究水平和研究能力大幅度提升，整体接近国内一流水平，部分研究方向达到国内先进水平。在学科方向、学术团队、学科平台、科学研究、人才培养、学术交流等方面取得了突出的成绩。

一、培养目标

本学科博士学位获得者具有坚实的数学基础知识、系统的学科领域知识和精深的研究方向知识；学术思想活跃，创新意识强，了解学科现状、发展方向和前沿；能撰写高水平学术论文，能在国际学术会议上交流研究内容；能独立从事计算机领域内的基础理论和学科前沿课题的研究，能做出创新性的被国际认同的研究成果，可承担大型软件或重大计算机应用项目的设计和开发，具备成为学术带头人和项目负责人的素质，能胜任高等院校的教学工作。

博士学位获得者还应对中国的历史与文化有初步的了解，能阅读简单的中文科技文献，并具有简单的汉语对话能力。

二、研究方向

1. 信息安全
2. 数字媒体技术
3. 嵌入式系统
4. 软件开发技术

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；
2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1107016004	最优化方法与应用	50	2.5	1	至少选 1 门
		1107016007	数值代数	50	2.5	2	
		0808126016	网络安全△	60	3	1	
		0808126017	多媒体技术与应用△	60	3	1	
		0808126018	软件开发技术△	60	3	1	
		0808126019	移动计算技术△	40	2	2	
		0808126020	嵌入式操作系统及应用△	40	2	2	
		0808126021	密码算法设计	40	2	2	
		0808126004	高级网络计算	40	2	1	
		0808126007	大数据分析与挖掘△	40	2	2	
非学位选修课	专业选修课	0808127021	安全协议△	40	2	1	
		0808127023	操作系统结构与应用编程△	40	2	2	
		0808127005	云计算△	20	1	1	
	其他选修课	6900005003	汉语阅读与写作△	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活

动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

软件工程学科 博士研究生（留学生）培养方案

软件工程学科是信息技术领域中发展最快的学科领域之一，软件产业也成为各国经济发展的支柱产业。软件工程领域总体发展形成了宽范围、多维度、多层次、多交叉的体系结构，知识领域包括软件需求、软件设计、软件构建、软件测试、软件维护、软件配置管理、软件项目管理、软件质量、软件安全、软件道德与法律等；也涉及到系统工程、领域工程、数字化技术、嵌入式系统、网络与信息安全，系统管理与支持、市场营销等多学科交叉领域。

一、培养目标

本学科根据软件技术的发展和软件行业的需求，面向软件工程领域高层次人才招生。本学科博士学位获得者应在软件工程方面具有坚实宽广的理论基础；具有独立从事科研的能力和良好的综合素质；能独立地、创造性地从事软件领域内的科研工作并取得被国际认同的科研成果；学术视野开阔，创新意识强，了解学科现状、发展和前沿；能用英语撰写学术论文并在国际学术会议上交流；可承担大型软件项目的设计和开发；能胜任高等院校的教学工作。

二、研究方向

1．网络安全　　2．实时计算

3．智能计算　　4．软件理论

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；

2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1107016004	最优化理论与应用	50	2.5	1	至少选 1 门
		1107016007	数值代数	50	2.5	2	
		0908356009	网络计算导论□	40	2	1	
		0908356004	软件架构模型与设计□	40	2	2	
非学位选修课	专业选修课	0908357012	新型数据库理论与实践□	40	2	1	
		0908356010	网络安全：理论与实践□	40	2	1	
		0908357014	数据科学与应用□	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：1.除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委

员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

生物医学工程学科 博士研究生（留学生）培养方案

生物医学工程是现代科学技术与生物医学问题相结合的一个交叉领域，与电子信息科学与技术、计算机科学与技术、生物医学、认知神经科学和分子生物学等学科的研究领域密切相关。我校本学科创办于 1986 年。现有正副教授 40 余名，其中含中科院院士 1 名、千人 5 名、长江/杰青 3 名。设有国家国际科技合作基地-神经信息国际联合研究中心，以及神经信息教育部重点实验室、高场磁共振脑成像四川省重点实验室等三个部（省）重点实验室，拥有 3T MR 脑成像中心，以及 EGI 及 Neuroscan 脑电工作站等具有国际水平的实验仪器设备。在脑功能成像技术及应用、视觉神经电生理、生物医学信号处理、医学成像与处理、生物信息学等方面成果显著。

一、培养目标

具备相应的电子信息科学与生物医学的坚实理论基础和系统深入的专门知识。本学科博士学位获得者应掌握有关领域的国内外前沿现状和发展趋势，具有独立从事学科领域中的基础理论及前沿课题的研究能力，并做出创新的研究成果。至少熟练掌握一门外语，具有“读、写、听、说”能力。

博士学位获得者还应对中国的历史与文化有初步的了解，能阅读简单的中文科技文献，并具有简单的汉语对话能力。

二、研究方向

1. 脑功能与神经信息工程（含脑机接口、类脑技术等）
2. 医疗设备、医学图像与信号处理
3. 生物信息学
4. 神经生物学
5. 细胞生物学
6. 生物化学与分子生物学

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；
2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节

不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	基础课	1100016004	最优化方法及应用	50	2.5	1	
		1100016005	数值代数	50	2.5	2	
	专业基础课	1404026004	认知神经科学□	40	2	1	
		1407106009	高级分子生物学□	40	2	1	
		1407106010	生物信息学□	40	2	2	
		1408316004	脑科学基础	40	2	2	
非学位选修课	专业选修课	1408316005	脑成像进展□	40	2	2	
		1404026006	心理物理实验□	40	2	2	
		1408316006	生物医学统计□	40	2	1	
		0208097032	生物医学成像	40	2	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究

生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

物理学学科 博士研究生（留学生）培养方案

物理学是研究物质及其运动的自然科学，揭示物质的结构、物质之间的相互作用和物质的运动规律，为理解自然界奠定坚实的基础。物理学新方法、新理论是众多新技术、新产品的重要源头。

电子科技大学物理学院拥有物理学一级学科博士学位授予权，设有博士后流动站。本学科依托物理学研究和与其它学科的交叉领域的研究，支撑相关工程技术的研发，提升学生对物理知识的掌握，培养合格的科技人才，促进服务于经济发展的高技术研究。本学科包含理论物理、凝聚态物理、无线电物理、光学、等离子体物理、量子物理与量子信息等六个优势学科方向，具有较强的基础研究能力和理工渗透、协调发展的明显特色，取得良好的学术声誉。物理学院致力于在高科技时代中发挥关键作用。

本学科课程体系立足于物理学学科，培养学生在宽口径职业方向的领导潜能，培养学生获取物理学基础知识和新兴知识的能力，培养学生解决与工业发展有关实际问题的能力。

一、培养目标

本学科博士学位获得者应对相关领域研究前沿和发展趋势有较深入的了解，具有相关学科较深厚的基础理论和系统专门的知识，掌握相关的实验技能，熟练运用计算机及相关信息技术，具备独立、创新性地从事相应学科中的相关课题研究的能力，有严谨的科学态度、工作作风和高尚的职业道德，毕业后能胜任科研、技术开发以及高校教学等工作。

留学研究生必修中国文化概论和汉语阅读与写作等，毕业时具有一定的汉语交流能力。

二、研究方向

1. 理论物理
2. 凝聚态物理
3. 无线电物理
4. 光学
5. 等离子体物理
6. 量子物理与量子信息

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；
2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 14 学分，课程总学分不低于 12 学分，其中学位课不低于 8 学分；必修环节

不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。公共基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语□	60	2	1,2	必修
		6900005002	中国概况□	40	2	1,2	
	专业基础课	1107016004	最优化理论与应用□	50	2.5	1	至少选一门
		1107016007	数值代数	50	2.5	2	
		0208096106	高等电磁场理论□	60	3	1	
非学位选修课	专业选修课	1207026006	高等量子力学□	60	3	2	
		1207026016	纳米光学□	40	2	2	
		1207027013	硅基射频集成电路设计□	20	1	2	
		1207026001	广义相对论□	40	2	2	
		1207026002	量子场论（一）□	50	2.5	1	
		1207026003	量子场论（二）□	50	2.5	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。2.“△”符号表示该课程硕博共选。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

1．发表学术论文

博士生在申请学位论文答辩前以独立第一作者身份、并以电子科技大学为第一单位，发表 1 篇 SCI 论文与 1 篇国际会议论文，或发表 1 篇 SCI 论文与 1 篇 EI 论文。

2. 学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

工商管理学科 博士研究生（留学生）培养方案

电子科技大学工商管理博士研究生培养项目强化管理知识、技能与现代信息技术相结合的培养模式，致力于将学校在信息科学技术领域的学科优势、科研优势和资源优势转化为培养优势，并最终落实为学员的竞争优势。通过数年的专业训练，把学生培养成具有国际化视野、掌握现代管理思想和方法的复合型、创新型管理人才。历经十余年磨砺和持续努力，工商管理博士研究生项目已形成了清晰的培养目标、明确的培养理念和独特的培养模式。

一、培养目标

旨在培养基础坚实、专业精深、创新能力突出、具有国际视野的高端学术人才，以及工商管理领域的高层次管理人才。学生应具备宽广、厚实的知识体系，洞悉本学科研究现状、前沿和发展趋势；掌握并能熟练运用管理学、经济学、数学、计算机等学科的理论和方法，知行合一，敏锐地发现工商企业管理理论和实践中不断涌现的热点和难点，并创造性解决问题；能够独立从事本领域中的基础理论及前沿课题研究，形成创新性研究成果；能胜任高等院校、企业和政府部门的教学和科研、高级管理和产业规划等工作。

二、研究方向

1. 组织行为与人力资源管理
2. 战略管理
3. 创新创业管理

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士生培养方式：

1. 脱产培养。整个培养过程均在我校完成；
2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

总学分要求不低于 16 学分，课程总学分不低于 14 学分，其中学位课不低于 10 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课与专业基础课为必修课。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1502026011	商务统计□	40	2.5	1	必修
		1512026010	组织理论	32	2	1	必修
		1512026009	管理研究方法	32	2	2	必修
非学位选修课	专业选修课	1512028006	创新创业管理研究	40	2.5	2	
		1512028004	复杂理论与管理研究□	24	1.5	2	
		1512017012	服务管理□	24	1.5	2	
		1512017011	数据挖掘与信息管理□	40	2.5	1	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于 10 次）		1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。

管理科学与工程学科 博士研究生（留学生）培养方案

电子科技大学管理科学与工程博士研究生培养项目强化管理知识和技能与现代信息技术相结合的培养模式，致力于将学校在信息科学技术领域的学科优势、科研优势和资源优势转化为培养优势，并最终落实为学员的竞争优势。培养具有国际化视野、掌握现代管理思想和方法的复合型、创新型管理人才。历经十余年磨砺和持续努力，管理科学与工程博士研究生项目已形成了清晰的培养目标、明确的培养理念和独特的培养模式。

一、培养目标

本学科博士学位获得者应具有扎实的数理基础、管理科学与工程和经济与金融学科方面宽广坚实的理论基础以及系统深入的专业知识，并掌握系统理论与系统工程的基础知识，熟悉计算机系统和网络技术的应用现状。对中国文化应有较深入的了解，能使用汉语言进行交流。具有独立从事本学科领域中的基础理论及前沿课题的研究能力，并有创新的研究成果，能胜任高等院校、企业和政府部门的教学和科研、高级管理和产业规划等工作。

二、研究方向

1．供应链　　2．信息管理与数据挖掘

3．电子商务　　4．金融工程

三、学习年限

攻读博士学位者，学习年限为三年。若因客观原因不能按时完成学业者，可申请延长学习年限，但最长学习年限不超过六年。

四、培养方式与课程学习要求

留学博士研究生培养方式：

1. 脱产培养。整个培养过程均在我校完成；

2. 在职培养。课程学习在我校完成，论文工作可在留学生本国完成，但在我校从事论文研究的时间累计不得少于一年。两种培养方式的论文答辩均须在我校完成。

留学博士研究生培养实行导师负责制。导师负责指导研究生制定个人培养计划、选课、开展学位论文工作。

文管类：总学分要求不低于 16 学分，课程总学分不低于 14 学分，其中学位课不低于 10 学分；必修环节不低于 2 学分。课程学习期间，应通过本专业规定的学位课程考试，以及其他选修课程的考试或考查。学位课中，公共基础课为必修课，基础课至少选修一门。允许在导师指导下跨学科选修 1~2 门学位课作为本学科的学位课。学位课可代替非学位课，但非学位课不能替代学位课。有汉语基础者，可申请选修面向国内全日制研究生用中文讲授的专业课程，通过者获得相应学分。

未完成课程学习的学分要求者，不能参加论文答辩。

五、课程设置

课程类别		课程编号	课程名称	学时	学分	开课学期	备注
学位课	公共基础课	6900005001	综合汉语△	60	2	1,2	必修
		6900005002	中国概况△	40	2	1,2	
	专业基础课	1100016004	最优化方法与应用	50	2.5	1	至少2选1
		1100016005	数值代数	50	2.5	2	
		1502026011	商务统计□	40	2	1	必修
		1512017012	服务管理□	24	1.5	2	
非学位选修课	专业选修课	1502027010	经济管理研究方法□	24	1.5	2	
		1502517005	金融学□	40	2.5	2	
		1512017010	供应链管理□	40	2.5	1	
		1512017011	数据挖掘与信息管理□	40	2.5	1	
		1512018004	供应链管理研究	16	1	1	先修课程为供应链管理
		1512018005	数据挖掘与信息管理研究	24	1	2	先修课程为数据挖掘与信息管理
		1512028004	复杂理论与管理研究	24	1.5	2	
		1512028005	创新创业管理研究	40	2.5	2	
	其他选修课	6900005003	汉语阅读与写作□	60	2	2	
			跨学科相关课程				
必修环节		6400006003	学术活动（不少于10次）	0	1	1,2	
			素质教育公选课	20	1	1,2	
		6400006004	论文开题报告及文献阅读综述	不计学分			考查
		6400006005	博士生综合考试	不计学分			考试

说明：除规定的汉语课程以外，其他课程均采用英语授课。

六、必修环节

来华留学博士研究生必修环节包含四大部分，要求留学研究生分别完成以下内容：

1. 素质教育公选课：以介绍学术前沿知识、中外文化、艺术和体育等为主，加强来华留学研究生综合素质教育，须至少获得 1 个学分。

2. 学术活动：为进一步活跃学术气氛并拓宽来华留学研究生的知识面，博士研究生应广泛参加学术活动，在校期间须参加 10 次以上校内外学术报告会，填写学术活动登记表，加盖举办学术活

动单位的公章，报所在学院研究生科备案，全部完成后获得 1 学分。

3. 博士生综合考试是博士生修完课程后进行的、主要考查博士生有关基础理论和专业知识的综合考试，同时适当检查博士生对所研究方向及有关领域前沿动态的掌握程度。

（1）博士生一般应于入学一年后参加综合考试。综合考试未通过者，允许在下一年参加一次补考，补考仍未通过者，不得参加论文答辩，作退学处理。

（2）博士生综合考试由学位评定分委员会指定三名专家组成的考试委员会负责实施。考试委员会主席必须由教授以上职称的专家担任，考试委员会其他成员必须由副教授以上职称的专家担任。

（3）综合考试采用笔试和口试相结合的方式，以百分制评定成绩。其中笔试成绩所占比例不得低于 50%。

（4）各学科根据实际情况每年集中举行两次综合考试，时间定在每年的四月和十月。综合考试的试题、试卷、口试记录及评语等由所在学院研究生秘书收齐后，与成绩一并报研究生院教学管理科备案保存。

4. 论文开题报告及文献阅读综述：指博士研究生在学位论文开题之前，必须阅读本学科前沿的文献 30 篇以上，并写出 5000 字左右的文献综述报告，完成相应的开题报告。

七、学位论文

学位论文工作按照《电子科技大学研究生学位授予实施细则》的规定执行。