

Education Plan for Doctor in Computer Science & Technology

(Discipline Code:0812,Award Doctor Degree of Engineering)

I Objectives

1. Grasp the theories of Marxism and establish a scientific world outlook, adhere to the basic lines of the Party, love the motherland, abide the law, form a good character, behave honestly and trustworthy, strictly and corporately, and maintain good research ethics and professionalism.

2. Master broad and solid basic theories and systematically in-depth specialized knowledge of the discipline, be qualified in higher levels of teaching, researching, engineering technology and technological management and can make innovative achievements in the discipline or specific technology.

3. Master two foreign languages, can skillfully read professional foreign language materials, use a foreign language to write papers and have good English listening and speaking ability and international academic exchange ability.

4. Maintain a good physical and mental health quality.

II Disciplinary Research Areas

1. Intelligent Technology & Intelligent Systems

2. Software Engineering

3. Machine Learning and Big Data Technology

4. Intelligent Information

Retrieval

5. Bioinformatics

6. Computer Networks

7. High Performance Computing & Cloud Computing

8. Dependable Computing

9. Knowledge Engineering & Knowledge Management

10. Digital Dissemination & Digital Publication

11. New Media Technology

12. Computer Vision

13. Information Processing & Intelligent Method for IoTs

14. Internet of Vehicles & Intelligent Logistics

15. Networking & Communication Technology of IoTs

16. Key Technology of Intelligent Transportation

17. Wearable Technology & Intelligent Industrial Services

III Educational System and Years of Study

The educational system for a Ph.D.. candidate with a master's degree is three years and the study period lasts generally three to four years, no more than five years. The educational system for who starts directly from undergraduate is five years and the study period is generally five to six years, a maximum of seven years.

IV Curriculum System and Credit Requirements

1. For Ph.D.. candidates with their master's degrees: The total credits should not be less than 16 credits, where the public degree course credits are not less than 6 credits, the professional degree course credits are not less than 4 credits, the elective courses credits are not less than 2 credits, the compulsory courses credits are not less than 4 credits.

2. For the candidates who start directly from their undergraduates: The total credits should not be less than 38 credits, where the public degree course credits are not less than 12 credits (including at least 4 credits for Mathematics Curriculum), the professional degree course credits are not less than 14 credits, the elective courses credits are not less than 8 credits, the compulsory courses credits are not less than 4 credits.

3. If a candidate did not attend any second foreign language class during his graduate study, he must elect a second foreign language at the doctoral phase.

Course Category	Course No.	Course Name	Hour	Credit	Semester	School	Remark
Public Degree Courses	003281001	First Foreign Language(Chinese)	108	6	12	School of International Education	With a masters degree
	003281002	Introduction to China	54	3	1	School of International Education	Compulsory
Professional Degree Courses	01011001	High-Performance Networking	54	3	1	School of Computer Science	
	01011002	Theory and Technology of Advanced Database Systems	54	3	1	School of Computer Science	
	01011003	Distributed Computing and Parallel Processing	54	3	1	School of Computer Science	
	01011004	Knowledge Science and Computing Science	54	3	1	School of Computer Science	
	01011005	Advanced Software Engineering	54	3	1	School of Computer Science	
	01011006	The Elements of Statistical Learning	54	3	1	School of Computer Science	
	01011007	Soft Computing Theory and Methods	54	3	2	School of Computer Science	
	01011008	Dependable Computing	54	3	2	School of Computer Science	
	01011009	Advanced Computer Architecture	54	3	1	School of Computer Science	

Course Category	Course No.	Course Name	Hour	Credit	Semester	School	Remark
Elective Courses	01012001	Knowledge Engineering and knowledge Management	36	2	1	School of Computer Science	
	01012002	Service Computing and System Integration	36	2	1	School of Computer Science	
	01012004	Algorithm and Computation Complexity Theory	36	2	1	School of Computer Science	
	01012005	Mobile Computing and Grid Technology	36	2	2	School of Computer Science	
	01012006	Intelligent Network Technology	36	2	2	School of Computer Science	
	01012007	Human Computer Interaction and Pervasive Computing	36	2	2	School of Computer Science	
	01012008	Intelligence Technology and Intelligence System	36	2	2	School of Computer Science	
	01012009	Software Quality Assurance and Automation	36	2	2	School of Computer Science	
	01012010	Component-Based Software Technology	36	2	2	School of Computer Science	
	01012011	New Programming and Software Methodology	36	2	2	School of Computer Science	
	01012013	Web Information Retrieval	36	2	2	School of Computer Science	
	01012014		36	2	2		

Course Category	Course No.	Course Name	Hour	Credit	Semester	School	Remark
		Information Security: Theory and Technologies				School of Computer Science	
	01012015	High Performance Graphics Computing	18	1	1	School of Computer Science	
	02112101	The Marxist Classics Readings	18	1	2	School of Marxism	
	01813001-004	Second Foreign Language (A and B) (English, Japanese, French, German, Russian)	72	4	2	School of Foreign Languages	
Compulsory Courses	01014001	Thesis Proposal		1	6	Graduate School	
	01014002	Internship and Practical Training		2	3	School of Computer Science	
	01014003	Academic Activities		1	3	School of Computer Science	At least 10 times

V Compulsory Courses

1. Internship or Practice (2 credits)

Candidates are required to stimulate a provincial (city) level and a natural (social) science fund project application and 30 minutes' presentation. After inspected and reviewed by the supervisor (Group), those who passed will get two credits.

2. Academic Activities (1 credit)

In order to encourage candidates to take concern and understand the state of art at home and abroad, broaden their horizons and inspire their creativity, each candidate should make public academic report at least five times, attend academic reports at least 10 times, and write 500 words or more each time after participating in academic activities. After examination by the supervisor (Group), those who complete it will get 1 credit of compulsory courses.

3. Thesis Proposal and Interim Assessment (1 credit)

Under the guidance of supervisors, candidates should pinpoint their research areas, look up relevant literature at home and abroad, conduct extensive investigations and make report on the selection of dissertation. After examination, the research topic will be definite. After passing thesis proposal defense, the candidate will get one credit.

Ph.D.. candidates must participate in the medium-term assessment. Specific requirements for the report on topics selection of the dissertation and interim assessment shall be carried out in accordance with the relevant provisions in graduate students' manual.

VI Scientific Research and Dissertation

PhD candidates must emphasize their scientific research ability throughout the course of the study, after selecting the topic, periodical summaries and stage work reports shall be written.

PhD candidates applying for the degree must meet the relevant requirements of publication in the graduates' manual. Dissertation must pass the test by TMLC2 and reach the requirements of the Academic Degree Evaluation Committee for dissertation before the defense.

VII Cultivate Mode and Method

Tutor or tutor-based instruction group is the mode of cultivation, with flexible and diverse, heuristic, seminar-style teaching methods demonstrating the leading role of the supervisor.

VIII Others

1. To examine the effects of instruction, ensure the quality, the items listed in the program must have an assessment. Assessment methods and performance assessment methods need to be clearly stated in the course syllabus.

2. Ph.D.. candidates who were enrolled ahead of schedule shall be trained as students starting from graduates under the program.

2. Before thesis proposal, Ph.D.. candidates are required to pass all the degree courses and get the credits before thesis proposal. Students are allowed to take some of the other elective courses according to the dissertation after thesis proposal. All the courses shall be completed before the application of dissertation defense.

3. Each discipline shall make specific regulations and requirements in the amount of literature to be read for the students during the study period. Science and Engineering candidates should review more than 80 pieces of literature at home and abroad (100 for candidates of other disciplines), in which foreign literature shall be no less than one third.

4. Ph.D.. candidates shall report their own learning and research work to the supervisor at least once a month at the course learning stage, and at least twice a month during the paper sessions, which shall be institutionalized and clearly clarified in the programs.

5. This program will enact from 2016.

