

Education Plan for Doctor in Information and Communication Engineering

(Discipline Code:0810,Award Doctor Degree of Engineering)

I Objectives

The discipline (specialty) aims to train all-round development of senior personnel from morally, intellectually and physically who could comply with Chinese Constitution and laws and Postgraduate Code of Conduct.

1. Those who master the basic theory of Marxism, establish the scientific world view, adhere to the Chinese Communist's basic line, and love the motherland, law-abiding, good character, honest and trustworthy, rigorous style of study, unity and cooperation, with good research ethics and professionalism.

2. Those who have the broad and solid foundation of theory and have systematic and profound professional knowledge in the field of information and communications engineering could undertake high level teaching, scientific research, engineering technical work and scientific and technical management and are capable of making innovative achievements in the discipline or expertise.

3. Those who master two foreign languages to read the professional foreign language are proficient in using a foreign language to write academic papers and have a good command of English listening and speaking ability and have ability to conduct international academic exchanges.

4. To have a healthy body and good psychological diathesis.

II Disciplinary Research Areas

- 1、 Optical Information Processing, Optical Fiber Sensing Theory and Technology
- 2、 Information Processing, Intelligent Monitoring Theory and Technology
- 3、 Communication System Theory and Communication Network technology
- 4、 Sensor Network , Information Security Theory and Technology

III Educational System and Years of Study

The educational system for Ph.D. candidate with master's degree lasts for 3 years. Learning period is generally 3-4 years, the longest no more than 6 years.

The total credits of graduation are not less than 16 credits, in which total credits of courses are not less than 12 credits and the degree courses not less than 10, compulsory activities not less than 4 credits.

IV Curriculum System and Credit Requirements

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	Compulsory
	003281002	Introduction to China	54	3	1	School of International	

Course Category	Course No.	Course Name	Hour	Credit	Semester	School	Remark
						Education	
	00911005	Modern Signal and Information Processing Theory	36	2	2	School of Information Engineering	no less than 4 credits
	00911006	Intelligent Control Based on Network Environment	36	2	2	School of Information Engineering	
	00911007	Multimedia Communication and Modern Information Networks	36	2	2	School of Information Engineering	
	00911008	Advanced Optic Fiber Sensing Technology and Application	36	2	2	Fiber center	
	02112101	The Marxist classics Readings	18	1	2	School of Marxism	
	00912001	Data Fusion Technology	36	2	2	School of Information Engineering	
	00912002	Embedded System	36	2	2	School of Information Engineering	
	00912011	Intelligent Robot	36	2	2	School of Information Engineering	
	00912004	Broadband Wireless Communication Network and Technology	36	2	2	School of Information Engineering	
	00912005	Modern Digital Image Processing	36	2	2	School of Information Engineering	
	00912006	Signal Integrity Theory and Design	36	2	2	School of Information Engineering	
	00912007	Wavelet Analysis Theory	36	2	2	School of Information Engineering	
	00912008	Self-adaptation Control	36	2	2		

Course Category	Course No.	Course Name	Hour	Credit	Semester	School	Remark
						School of Information Engineering	
	00912009	Electronic Circuit Used for Photoelectric Conversion	36	2	2	Fiber center	
	00912010	Waveguide Optics	36	2	2	Fiber center	
Compulsory Activities	00914001	Field Practice		2	1-6	School of Information Engineering	
	00914002	Thesis Proposal		1	3-4	School of Information Engineering	
	00914003	Academic Activities	10	1	3-4	School of Information Engineering	

1. Ph.D. candidates could not choose second foreign language if they have learn it during their Master learning period, otherwise the second foreign language should be selected as compulsory course.

2. The elective courses with master's degree should be not less than 2 credits.

3. Professional elective courses could be selected 1-2 credits within the whole university.

V Compulsory Courses

1. Practice Activities

Two credits for internship or practice.

Ph.D.candidates could get 2 credits when they simulate an application of Vertical Projects that is above province (city) level and the Natural (SOCIAL) Science Foundation and make a 20-minutes-PPT,only when would they go through the check and review of teachers(in group)

Thesis proposal and mid-term assessment

One credit for thesis proposal and mid-term assessment

After admission, under the guidance of supervisors, Ph.D. candidates should make clear direction of scientific research, consult the relevant journals at home and abroad, make extensive investigation and study, make report on the selection of topic proposal in order to determine the research topic after their theses proposals pass audit. Ph.D. candidates could get 1 credit after their thesis proposals are approved.

Ph.D. candidates should participate in the mid-term assessment of the school. The specific requirements of the Ph.D. candidates about theses proposal and mid-term assessment should be implemented according to "the mid-term assessment and the selection of topic provision at the Postgraduate Manual.

Academic activities`

One credit for academic activities

Ph.D. candidates should give academic reports at least 5 times in public, and participate in academic activities at least 10 times and write out reports more than 500 words of each time, those who get through assessment and review could get 1 credit.

VI Scientific Research and Dissertation

Ph.D. Candidates should emphasize the training of their scientific research ability throughout the course of the study, after the topic of thesis is determined, periodical summaries and stage work reports shall be written.

1. Before the theses defense, Ph.D.candidates should publish doctoral academic papers no less than 2 in academic journals at home and abroad or international academic conferences in the subject or related disciplines with first author or second author (supervisor as the first author) in the name of Wuhan University of Technology, the contents of which are in accordance with that of doctoral dissertation, of which should meet one of following requirements:

① 2 high level academic papers should be published in the SCI Indexed international academic journals in the subject or related disciplines.

② 1 high level academic paper should be published in the SCI Indexed international academic journals in the subject or related disciplines. Furthermore, 2 high level academic papers should be published, one in EI Indexed journals another in Chinese Class B and above academic journals or international top academic conference papers in the subject or related disciplines.

③ 1 high level academic papers should be published in the SCI Indexed international academic journals in the subject or related disciplines, Furthermore, 1 domestic or foreign authorized invention patent should be obtained.

2. Ph.D. dissertation is an important part of postgraduate training and is a comprehensive training for Ph.D. candidates to carry out scientific research or to undertake specialized technical work and is the main link to cultivate the innovation abilities and to achieve abilities to discover, analyze and solve problems by using the knowledge learned.

① Ph.D. dissertation should adhere to the principle of theory with practice, and should be systematic and complete academic papers, and should make innovative achievements in science or specialized technology.

② The thesis should be completed independently by himself, which is to show that Ph.D. candidates have the ability to engage in scientific research or to undertake independently professional technical work, That is to indicate that Ph.D. candidates have the ability to analyze and solve problems from journals review, topic report to determination of reasonable research plan, experiment process and data processing.

③ Generally thesis should include the basis for the project, experimental methods and experimental results and data processing and the theoretical analysis, conclusion and references. Requirements should be that the expression is clear and coherent with accurate chart and correct measurement unit, printing and binding. Words 70,000 -100,000.

④ During the mid-term, Ph.D. candidates should make an interim report about new development of their work in the special academic conference at the teaching and research department whereas the experts would review the progress and period achievement of their papers.

3. Ph.D. defense would be carried out after Ph.D.thesis should have been completed three months ago.

As paper review adopt blind trial system, so Ph.D.candidates should go through qualification check and pass the detection of academic misconduct detection system before they apply for blind review, the qualified could be sent out to get blind review.

4. The research time of Ph.D. dissertation is no less than one year, the minimum should be at least 8 months from the opening report approved to application for degree thesis defense.

VII Cultivation Mode and Method

The guidance method of the tutorial system and the supervisor-based team would be taken in Ph.D. candidates training. The training methods which take heuristic, seminar teaching style should be flexible and diverse, giving full play to the supervisor's leading role.

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.

3. Ph.D. candidates are required to pass all the degree courses and get the credits before their theses opening proposal. Students are allowed to take some of the other elective courses according to contents of dissertation after theses opening proposals. All the courses shall be completed before the application of dissertation defense.

4. Ph.D.candidates would review domestic and foreign journals about the same subject that should be more than 100 papers, in which foreign journals should be no less than one third.

5. 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 preparation of their theses which shall be institutionalized and clearly clarified in the programs.

6. The training program would be implemented from the 2016 Science Ph.D. candidates.

