# Doctoral Degree Program in Computer Science & Technology

# (for International Students)

**(Discipline code: 0812, apply to Doctoral Degree in engineering)**

1. **Training Objectives**

The training objectives and graduation requirements of doctoral degree international students are consistent with those full-time Chinese students in the same discipline and faculty. It is in line with the corresponding educational level,professional education standards or related norms.The specific requirements are as follows.

1. Doctoral degree international Students should be familiar with China's national conditions and cultural knowledge, such as history, geography, society, economy and so on. They are required to understand China's political system and foreign policy, understand the mainstream values and public morals of Chinese society, and form a good legal concept and moral consciousness. With the awareness, knowledge, attitude and skills to be inclusive, cognizant and adapting to cultural diversity, international students are expect to play a role in mutual respect, understanding and solidarity among different nationalities, societies and nations.
2. Training objectives, curriculum system, teaching plan, practical teaching and other contents should be included in the program which meet the requirements of the corresponding professional education, teaching standards and norms, according with the talent training objectives and learning characteristics of international students.
3. Doctoral degree international students should master the broad and solid basic theories and systems of this discipline, and in-depth professional knowledge, have a broad international vision and be able to innovatively apply and develop the theories, skills and methods of the discipline in the world and have competitive advantage in international affairs.
4. For those doctoral degree international students whose discipline and major courses are delivered in Chinese shall be able to complete the study and research tasks in Chinese and use it to engage in work related to discipline. Upon graduation, the Chinese language ability should reach the level 5 according to the International Chinese proficiency Standard. For those doctoral degree international students whose discipline and major courses are delivered in foreign language shall be able to complete the study and research tasks in the corresponding language and use it to engage in work related to discipline. Upon graduation, the Chinese language ability should reach the level 3 according to the International Chinese proficiency Standard.
5. Doctoral degree international students should be physical and psychological health.
6. **Research Areas**

(1) Intelligent information processing

(2) Computing bioinformatics

(3) Parallel distributed computing

(4) Trusted software theory & technology

(5) Image processing & understanding

(6) Digital dissemination engineering

(7) Computer networks & information security

1. **Education System and Years of Study**

The education system for international students in the doctoral degree program is 4 years. The years of study is generally 4-5 years and the longest is no more than 7 years.

1. **Curriculum and credit requirements**
2. Credit requirements

The total credits are at least 23 credits, in which at least 21 credits are for course study and 2 credits for compulsory courses.The courses are composed of 9 credits of public degree courses, 4 credits of discipline degree courses and 8 credits of elective courses. The compulsory courses include 2 credits of practice course, 1 credit of academic activities and 1 credit of thesis proposal and mid-term assessment.

1. Curriculum

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course category** | | **Course No.** | **Course name** | **Teaching Hours** | **Experimental Hours** | **credits** | **Semester** | **School** | **Remark** |
| **Public degree courses**  **（9 credits）** | **Foreign language**  **（6 credits）** | **01981901** | **Basic Chinese 1** | **108** |  | **6** | **1** | **School of Law,Humanities and Sociology** |  |
| **Ideological and Political courses**  **（3 credits）** | **02111009** | **Introduction to China** | **36** |  | **2** | **2** | **School of Marxism** |  |
| **03281901** | **Chinese Culture Experience** | **18** |  | **1** | **1** | **School of international Education** |  |
| **Professional degree courses**  **(4 credits)** | | 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 | 2 | School of Computer Science |  |
| **Elective Courses**  **（4 credits）** | | **01981902** | **Basic Chinese 2** | **108** |  | **6** | **2** | **School of Law,Humanities and Sociology** | **required** |
| 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 | Information Security: Theory and Technologies | 36 |  | 2 | 2 | School of Computer Science |  |
| 01012015 | High Performance Graphics Computing | 18 |  | 1 | 1 | School of Computer Science |  |
| Compulsory Courses  (2 credits) | | 01014003 | Academic Activities |  |  | 1 | 4 | School of Computer Science |  |
| 01014001 | Thesis Proposal and Midterm  assessment |  |  | 1 | 4 | School of Computer Science |  |

1. **Compulsory Courses**
2. In order to encourage graduate students to take the initiative to care about and understand the development of the frontiers of the discipline at home and abroad, broaden their horizons and inspire creativity, each academic master degree student should participate in academic activities at least 5 times and write more than 500 words each time afterwards. After examination by the supervisor (Group), those who complete it will get 1 credit of compulsory courses.
3. The thesis proposal should not only proposes the research questions, but also proposes the basis of the problems and the ideas and implementation methods for solving these problems. After enrollment, the doctoral degree students should clarify the scientific research area, look up relevant literature at home and abroad, conduct extensive investigation and research and make the thesis proposal under the guidance of the supervisor. After examination, the research topic will be definite. After passing the thesis proposal, the candidate will get one credit.

The doctoral students must participate in the mid-term assessment of the school.The specific requirements for thesis proposal and mid-term assessment shall be implemented in accordance with the postgraduate handbook *Wuhan University of Technology Postgraduate Midterm Examination and Implementation Measures’.*

1. **Scientific Research and Dissertation**

According to the "Implementation Measures on Degree Awarding for International Students in Wuhan University of Technology", each discipline may propose specific requirements for academic achievements of academic doctoral students during their study period according to the characteristics of the discipline.

1. **Training Methods**

The training of doctoral students adopts the guidance method of the supervisor-responsible system or the supervisor-oriented steering group. The training methods should be flexible and diverse, and more heuristic and deliberative teaching methods to demonstrate the leading role of the supervisor.

1. **Others**
2. Doctoral degree international students whose Chinese language ability reach the level 3 according to the International Chinese proficiency Standard and get credits of courses related to Introduction to Chinese during the period of studying at a lower level degree in other Chinese universities, with the approval of the school, can be exempted from the public Chinese Language course and Introduction to China and get the corresponding credits.
3. Before thesis proposal, doctoral degree international students 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 thesis defense.
4. Doctoral degree international students should review more than 80 pieces of literature at home and abroad, in which foreign literature shall be no less than one third.
5. Doctoral degree international students 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 dissertation sessions, which shall be institutionalized and clearly clarified in the programs.
6. This program will be implemented from 2019 for doctoral degree international students.