计算机科学与技术（0812）

学科门类：工学（08）一级学科：计算机科学与技术（0812）

一、专业描述

河海大学计算机科学与技术学科始于 1978 年开始招生的电子计算机及应用本科专业，1996 年获得计算机应用技术硕士学位授予权，同年被评为水利部重点学科，2000 年获得计算机科学与技术一级学科硕士点，2002 年被评为江苏省普通高校“青蓝工程”优秀学科梯队，2005 年获得计算机应用技术二级学科博士学位授予权，2009 年获计算机科学与技术博士后流动站。2010 年获得“计算机科学与技术”一级学科博士学位授予权。计算机科学与技术一级学科包含 3 个二级学科：计算机体系结构、计算机软件与理论、计算机应用。

近年来，计算机科学与技术学科紧密结合江苏软件强省建设和水利现代化建设的重大需求，依托河海大学优势学科平台建设，承接了国家“973”、“863”、自然科学基金等基础研究类项目，以及三峡工程管理系统、国家防汛抗旱指挥系统、数字黄河工程、水资源监控管理系统等一批重大工程的信息化建设项目，积极推进水利信息化工作，形成学科的优势与特色。

二、培养目标

在本门学科上掌握坚实宽广的基础理论和系统深入的专门知识；具有独立从事科学研究工作的能力；在科学或专门技术上做出创造性的成果。

三、研究方向

1、软件新技术（Novel Software Technologies）

2、数据与知识工程（Data & Knowledge Engineering）

3、信息安全与可信计算（Information Security & Trusted Computing）

4、智能信息处理（Intelligent Information Processing）

5、语义 Web 与万维网科学（Semantic Web & Web Science）

四、申请条件

1、已在我国认可的海内外高校或学术机构获得硕士学位者。

2、能够用英语进行课程学习、阅读文献和进行学术写作，能够用英语进行日常交流。

五、培养年限

攻读博士学位的标准学制为 4 年，实行弹性学制，学习年限最短不低于 3 年，最长不超过 6 年。

六、学分要求和课程设置

本专业博士留学研究生课程总学分为 15 学分，其中学位课程为 11 学分，非学位课程为 4 学分。另设教学环节。具体开设课程见附表。

Computer Science and Technology (0812)

Discipline: Engineering (08)

First-Class Discipline: Computer Science and Technology (0812)

1. Discipline Description

The discipline of Computer Science and Technology in Hohai University (hereinafter referred to as HHU-CS) started from 1978. It was authorized to offer Master and Doctorate degrees in the first-class discipline Computer Science and Technology in 2000 and 2010, respectively. HHU-CS was named as one of the key disciplines of the Ministry of Water Resources of the People's Republic of China in 1996 and one of the state-level characteristic disciplines in China in 2008. In 2009, a post-doctoral research station of Computer Science and Technology was established. As one of the first-class disciplines, Computer Science and Technology includes three second-level disciples: Computer Architecture, Computer Software and Theory, and Computer Application Technologies.

Recently, HHU-CS has undertaken many state-level projects such as the National Basic Research Program of China (973 Program), the National High-Tech Research and Development Program of China (863 Program), the National Key Technologies Research and Development Program of China and the National Natural Science Foundation of China, as well as the informatization of many major engineering projects, e.g. the Three Gorges Management System, the State Flood Control and Drought Relief Command System and the Digital Yellow River Project.

HHU-CS has 45 faculty and staff members. Adhering to the talents cultivation idea of "strengthening the foundation, attaching importance to practice and pursuing innovation", HHU-CS has established a complete cultivating system from undergraduates to doctoral candidates. In recent years, HHU-CS has published hundreds of high quality scientific articles in refereed journals and conference proceedings and received dozens of state-level awards and honors.

2. Program Description

(1) To have practical, realistic and scientific attitude, and to generate proper, meticulous and honest academic atmosphere; to connect theory with practice; to be good at intensive study and teamwork.

(2) To thoroughly command fundamental and broad theories, as well as systemic and in-depth professional knowledge of computer science and technology; to be able to perform scientific or engineering work independently and creatively.

(3) To completely understand the current situation and future trend of computer science and technology and the latest development of relevant research fields; to be capable of performing teaching and technology management in relevant fields.

3. Research Directions

- Novel Software Technologies
- Data & Knowledge Engineering
- Information Security & Trusted Computing
- Intelligent Information Processing
- Semantic Web & Web Science

4. Application Requirements

(1) You have received the master degree from the domestic and overseas universities or academic institutions accredited by the Ministry of Education.

(2) You have the ability to read and write academic papers and communicate in English.

5. Educational System and Duration

The doctorate program is 4 years, the duration is minimum 3 years and no more than 6 years.

6. Credits and Courses

A doctoral student must take at least 15 credits of courses, including 11 credits of Required course of the degree and 4 credits of Non-required course of the degree.

计算机科学与技术全英文留学博士研究生课程设置

Courses for Doctoral Students of Computer Science and Technology

课程类别 Categories		课程编号 Course No	课程名称 Course Name	学时 Hours	学分 Credits	开课学期 Term	备注 Note
学位课程 11 学分 Required course of the degree 11Credits	公共课程 General Courses	2015LXS01	*汉语 I Chinese Language I	32	2	秋 fall	必修 Required Course
		2015LXS03	*中国概况 Introduction to China	32	2	秋 fall	
	专业课程 Major Courses	2017JX27	学科前沿专题 Modern Science of the Discipline	16	1	秋 fall	必修 Required Course
		2017JX28	数据管理与分析技术 Data Management & Analysis Technologies	32	2	秋 fall	选修 6 学分 6 Credits at least
		2017JX19	高级逻辑 Advanced Logic	32	2	秋 fall	
		2017JX20	可计算性与计算复杂性 Computability & Computational Complexity	32	2	秋 fall	
		2017JX21	分布计算与分布式系统 Distributed Computing & Systems	32	2	秋 fall	
		2017JX22	科学计算可视化 Visualization in Scientific Computing	32	2	春 spring	
		2017JX23	数字媒体技术 Digital Media Technology	32	2	春 spring	
非学位课程 4 学分 Non-required course of the degree 4 Credits		2015LXS07	科技论文写作 Academic Paper Writing	32	2	秋 fall	必修课 RequiredCourse
		2017JX24	Web 知识表示 Knowledge Representation on the Web	32	2	秋 fall	选修 2 学分 2 Credits at least
		2015LXS05	跨学科选修 Interdisciplinary Elective	32	2		
		2017JX25	人工神经网络 Artificial Neural Networks	32	2	春 spring	
		2017JX26	新型软件体系结构 Novel Software Architecture	32	2	春 spring	
		2017JX16	模型检验 Model Checking	32	2	秋 fall	
教学环节 Academic Activities	学术活动 Seminar and Conferences						必修 Required Course
	科学研究 Scientific Research						
	文献阅读与综述 Literature Reading and Reviewing						