

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的基础理论和系统的专门知识；具有从事科学研究工作或独立担负专门技术工作的能力。

三、研究方向

- 1、计算机系统结构（Computer Architecture）
- 2、计算机软件与理论（Computer Software and Theory）
- 3、计算机应用技术（Computer Application Technologies）

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本科学位者。
- 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

学术型硕士学制为 3 年，实行弹性学制，学习年限最短不低于 2 年，最长不超过 5 年。

六、学分要求和课程设置

本专业硕士留学研究生课程总学分为 28 学分，其中学位课程为 18 学分，非学位课程为 10 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 disciplines: 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 theories and systemic professional knowledge of computer science and technology; to be able to perform scientific or engineering work independently.

(3) To completely understand the current situation and future trend of computer science and technology and the latest development of relevant research fields.

3. Research Directions

- Computer Architecture
- Computer Software and Theory
- Computer Application Technology

4. Application Requirements

(1) You have received the bachelor 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 master program is 3 years; the duration is minimum 2 years and no more than 5 years.

6. Credits and Courses

A master student must take at least 28 credits of courses, including 18 credits of required course of the degree and 10 credits of Non-required course of the degree.

计算机科学与技术全英文留学硕士研究生课程设置

Courses for Master 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 18 学分 Required course of the degree 18 Credits	公共课程 General Courses	2015LXS01	*汉语 I Chinese Language I	32	2	秋 fall	必修课 Required Course
		2015LXS02	汉语 II Chinese Language II	32	2	春 spring	
		2015LXS03	*中国概况 Introduction to China	32	2	秋 fall	
	专业基础 课程 Major Basic Courses	2017JX03	高级程序设计 Advanced Computer Programming	32	2	秋 fall	必修课 Required Course
		2017JX04	算法设计与分析 Design and Analysis of Algorithms	32	2	春 spring	
		2017JX05	数理逻辑 Mathematical Logic	32	2	秋 fall	
	专业课程 Major Courses	2017JX06	Java 程序设计 Java Programming	32	2	秋 fall	选修 6 学分 6 Credits at least
		2017JX07	分布式计算 Distributed Computing	32	2	秋 fall	
		2017JX08	机器学习 Machine Learning	32	2	秋 fall	
		2017JX09	软件测试技术 Software Testing	32	2	春 spring	
		2017JX10	网络与信息安全 Network and Information Security	32	2	春 spring	
		2015JC26	计算机辅助设计 Computer-Aided Design	32	2	春 spring	
非学位课程 10 学分 Non-required course of the degree course 10 Credits	2015LXS05	*跨学科选修 Interdisciplinary Elective	32	2		必修课 Required Course	
	2015LXS07	科技论文写作 Academic Paper Writing	32	2			
	2015JX01	数据管理技术 Data Management Technology	32	2	秋 fall	选修 6 学分 6 Credits at least	
	2017JX11	数字图像处理 Digital Image Processing	32	2	秋 fall		
	2017JX12	信息检索 Information Retrieval	32	2	秋 fall		
	2017JX13	人工智能 Artificial Intelligence	32	2	春 spring		
	2017JX14	软件复用技术 Software Reuse	32	2	春 spring		
	2017JX15	多媒体技术 Multimedia Technology	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						