计算机科学与技术专业硕士研究生培养方案

Graduate Degree Programs for Computer Science and Technology

1 培养目标 Objectives

掌握计算机科学与技术的基础理论和系统知识，了解学科的发展现状、趋势及研究前沿，具有严谨求实的科学态度和工作作风；具有从事本学科和相关学科领域科学研究、技术研发、工程管理等工作的能力；能够运用计算机科学与技术学科的方法、技术与工具从事科学研究、应用研发、技术创新及系统设计等工作。

Mastering the basic theory and system knowledge of computer science and technology, understanding the development, trend and research frontier of this discipline, and having rigorous research attitude and work method; having the ability of engaging in the scientific researching, technology developing and project managing in this discipline and related field; to fulfill the work of scientific researching, application developing, technology innovating and system designing with the methods, technologies and tools of computer science and technology.

2 研究方向 Research Fields

研究生培养研究方向主要包括：泛在计算、图形图像技术、信息安全、信息网络技术、云计算、物联网、大数据技术、软件测试等。

The research fields of the master degree candidates could be Ubiquitous Computing, Graphic and Imaging Technology, Information Security, Information Network, Cloud Computing, Internet of Things, Big Data Technology, Software Testing, etc.

3 学习要求 Requirements

课程学习时间一般应在一年内完成，论文工作时间不得少于一年。硕士生除了学习理论课外，还应参加一定的公益活动。研究生在导师和指导小组的指导下，独立完成理论学习、实验技能训练、科学研究实践和学位论文。

Courses learning normally should be finished within one year, and the work hour of dissertation should not be less than one year. Master candidates should also participate in some outside activities, such as socially useful activity. Master candidates should finish theoretical studying, experimental skill training, scientific researching, and dissertations independently supervised by the supervisor and steering group.

4 课程设置 Courses

研究生课程包括：核心课、选修课, 以及实践环节，如表 1 所示。

The courses for master candidates include foundation courses (degree courses), elective courses and compulsories, as listed in Table 1.

表 1 硕士研究生课程列表

Table 1 the Courses for Master Candidates

类别 Type	课程编码 Code	课程名称 Name of the course	学分 Credit	学时 Hour	学期 Term			
					1	2	3	4
核心课 Foundation Courses	1071670002	人工智能与知识工程【English】(张晖) Artificial Intelligence and Knowledge Engineering	3	48	√			
	1071670003	云计算与计算机系统结构【English】（王耀彬） Cloud Computing and Computer Architecture	3	36	√			
	1071680014	物联网与并行处理【English】（贾小林） Parallel Processing and Internet of Things	3	36		√		
	1071680015	图像分析与理解【English】（贾渊） Image Analysis and Understanding	3	36		√		
	1071670006	计算机科学数学基础【Chinese】（马立平） Mathematics for Computer Science	3	48		√		
	1071670001	高级软件系统分析与设计【Chinese】（陈念年） Advanced Software Systems Analysis and Design	3	48	√			
选修课 Elective Courses		机器学习与知识发现【English】（赵旭剑） Machine Learning and Knowledge Discovery	3	36		√		
		可视化与可视分析【English】（吴亚东） Visualization and Visual Analytics	3	36		√		
		软件测试与质量保证技术【English】（潘娅） Software Testing and Quality Controlling	3	36	√			
		计算机图形学【English】（何刚） Computer Graphics	3	36	√			
	1071680016	信息安全理论与实践【Chinese】（韦勇） Information Security Theory and Practice	2	32	√			
	1071680020	网络安全与防御【Chinese】（黄晓芳） Network Security and Defense	2	32		√		
	1071680022	数据可视化【Chinese】（张庆明） Data Visualization	2	32	√			
	1071680025	大数据技术【Chinese】（范太华、杨春明） Big Data Technology	2	32		√		
	1071680018	视觉测量技术与实践【Chinese】（陈念年） Visual Measurement Technology and Practice	2	32		√		
	1071680026	移动计算【Chinese】（刘志勤） Mobile Computing	2	32		√		
必修环节 Compulsories	1071690081	入学教育(王松) Admission Education	0.5	8	√			
	1071690083	社会实践（吴亚东） Social Practice	0.5	8		√		
	1071690082	文献综述与开题报告（吴亚东） Literature Review and Research Proposal	1	16			√	
	1071690084	学术活动(王松) Academic Activity	1	16				√

5 学分要求 Credits

硕士研究生修课学分构成及要求如表 2 所示。

The required credits of master degree are listed in Table 2.

表 2 研究生学分构成及要求

Table 1 the Requirements of Credits of Master Degree

总学分 Total Credits	课程学分≥25 Course Credits≥25		必修环节学分＝3 Compulsories=3			
	核心课 Foundation Courses	选修课 Elective Courses	入学教育 Admission education	文献综述与开题报告 Literature review and Research Proposal	学术活动 Academic activity	服务实践 Service practice
≥28	≥12	≥13	0.5	1	1	0.5