

(085400) 电子信息学科 2020 级非全日制工程博士培养方案 (软件学院)

2020 Part-time PhD Program for Electronic Information

一、基本信息 Basic Information

院系名称 School	(037) 电子信息与电气工程学院(软件学院) School of Electronic Information & Electrical Engineering	适用年级 Grade	2020 级 Class		
适用专业 Major	电子信息 Electronic Information	标准学制 Duration	4 年 Years		
学习形式 Study Mode	非全日制 Part time				
项目类型 Program Type	专业型 Professional				
培养层次 Program Level	普博生 Regular Doctoral Students				
最低学分 Min Credit	16	最低 GPA 学分 Min GPA Credit	0	最低 GPA Min GPA	0

二、学科简介 Introduction

从 2001 年正式成立并被教育部和发改委批准为国家示范性软件学院，上海交通大学软件学院经过多年的探索与实践，开展的精英工程人才培养模式及毕业生综合能力获得业界普遍认同；被教育部批准为“特色专业”建设点、“人才培养模式创新实验区”；目前专业包括系统软件、智慧应用与数据服务等科研方向，历届毕业生的就业率和就业质量一直处于学校各专业的行列。

The school of software of Shanghai Jiao Tong University was officially established in 2001 and approved by the Ministry of Education and the National Development and Reform Commission as the National Demonstration Software Institute. After years of exploration and practice, it has been widely recognized by the industry for its elite engineering talent training model and the comprehensive ability of graduates. And it approved by the Ministry of Education as a “special profession” construction point and “innovation experimental zone for talent training mode”. Software engineering currently includes research systems such as System Software, Smart Applications and Data Services. The employment rate and employment quality of previous graduates have always been at the forefront of all majors in the school.

三、培养目标 Program Objective

软件学院培养计算机科技与技术专业（博士研究生）面向领域的、高层次、开放型、复合型、国际化人才，通过“知识探究、能力建设、人格养成”三位一体育人理念的实现路径，以及与之相适应的人才培养支持系统（校内外各类培养平台资源）。

Software of Software aims to train Computer Science and Technology academic Ph.D graduate for professional-oriented, high-level, open, compound, and international talents, through the “knowledge inquiry, capacity building, personality development” three-to-one sporting people concept realization path, and the talent training support system (all kinds of training platform resources inside and outside the school).

四、培养方式及学习年限 Training Mode and Study Duration

本项目采用非全日制学习、导师制培养模式；学习年限 3-4 年，经批准可适当缩短或延长，最短不少于 2 年，最长（含休学）不超过 7 年。

The project is part time study, and tutor training mode. The study period is 3 to 4 years. It can be shortened or lengthened after ratification. The shortest study period can't be less than 2 years and the longest can't be more than 7 years (including suspension of schooling).

五、课程学习要求 Course Requirement

须修读完成不少于 16 学分（其中，GPA 学分不要求，GPA 绩点不要求）。

Total credits \geq 16, including GPA credits and GPA point are not required.

各类课程具体要求如下：

课程类别 Course Type	学分要求 Min Credits	门数要求 Min Courses	GPA 学分要求 Min GPA Credit	备注 Note
公共基础课 General Courses	6	/	/	
专业基础课 Program Core Courses	/	/	/	
专业前沿课 Program Frontier Courses	/	/	/	
专业选修课 Program Elective Courses	/	/	/	
任意选修课 Elective Courses	/	/	/	

六、培养过程要求 Training Requirement

工程博士的资格考试原则上应在入学后第二学年第一学期内完成；

博士生学位论文开题工作应该在通过资格考试后，工程博士生一般应该在第二学年结束前完成；

全日制工程博士要求在读期间在合作单位业界导师指导下从事科研工作1年以上,完成后递交《上海交通大学工程博士实践活动总结报告》,由校内外导师、学院审核通过后,视为实践环节通过。

《创新工程实践》的要求:

- 1、参与相关专业硕士实践类课程的教学或辅导,不少于16学时;或作重要工程前沿讲座至少8次(每次计2个学时);
- 2、在读期间协助校内导师指导至少1名专业学位硕士,工作量不少于16课时;
- 3、递交《上海交通大学工程博士实践活动总结报告》,由校内外导师、学院审核通过,获得本课程学分。

In principle, the qualification examination of Professional Regular Doctoral Students shall be completed within the first semester of the second academic year after enrollment;

The opening work of doctoral dissertation should be completed by the end of the second academic year after passing the qualification examination;

It is required to engage in research work for more than one year under the guidance of the both supervisors, and to submit the Summary Report on the Practical Activities of the Doctor of Engineering of Shanghai Jiao Tong University after completion, which will be examined and approved by the both supervisors.

2.Practice Training

① Participate in the teaching or tutoring of relevant professional practice courses, not less than 16 hours, or give at least 8 lectures at the forefront of important engineering (2 hours at a time);

② Assist in the guidance of at least one master of professional degree during the course of study, with a workload of not less than 16 hours;

③ Submit the Summary report of practical activities of Engineering Ph.D. of Shanghai Jiaotong University, which is examined and approved by the tutor and college of Shanghai Jiaotong University, and obtains the credit of this course.

七、学术成果要求 Requirement on Academic Achievements

工程博士生在读期间应做出创造性成果,成果应与学位论文密切相关,且以上海交通大学博士研究生身份署名,成果形式包括科技奖励、行业标准、发明专利、学术论文等,至少满足以下具体要求之一:

1. 获省部级以上科技成果奖1项,省部级科技成果一等奖需排名前5位、二等奖需排名前3位;
2. 以本人贡献为主的研究成果形成行业标准1项;

3. 以第一发明人或第一著作人获得重要发明专利授权或软件著作权至少 2 项，并有良好的应用；

4. 发表学术论文达到本学院的规定。

During their study, engineering doctoral students should make creative achievements, which should be closely related to their dissertations and signed as doctoral students of Shanghai Jiaotong University in the form of scientific and technological awards, industry standards, invention patents, academic papers, etc., which should meet at least one of the following specific requirements:

1. One science and technology achievement award above the provincial and ministerial level, the first prize of the provincial and ministerial level scientific and technological achievements should be ranked in the top 5, and the second prize should be ranked in the top 3;

2. One industry standard has been formed based on the research results mainly contributed by myself;

3. Obtain at least two important invention patents or software copyrights with the first inventor or the first author, and have good application;

4. Publishing academic papers should meet the requirements of our college.

八、学位论文 / Dissertation

博士研究生应选择学科前沿领域或对科技进步、经济建设和社会发展有重要意义的课题开展研究。博士学位论文能够表明作者具有独立从事科学研究工作的能力，反映作者在本门学科上掌握了坚实宽广的基础理论和系统深入的专业知识。博士学位论文具体要求详见《研究生工作手册》中以下章节：

上海交通大学关于申请授予博士学位的规定

上海交通大学博士、硕士学位论文撰写指南

PhD students should choose research topics in the frontier areas of the discipline or on issues of importance to scientific and technological progress, economic construction and social development. The doctoral thesis can show that the author has the ability to work independently in scientific research, reflecting that the author has mastered a solid and broad basic theory and systematic and in-depth professional knowledge in this subject. The specific requirements of the doctoral thesis are detailed in the following sections of the Graduate Workbook:

Shanghai Jiao Tong University's regulations on applying for a doctoral degree.

Shanghai Jiao Tong University Ph.D., Master's Thesis Writing Guide.

九、课程设置 Courses

课程类别 Category	课程代码 Course Code	课程名称 Course Name		学分 Credit	授课语言 Language*	开课学期 Semester	可以计算 GPA	必须计算 GPA	备注 Note
		中文 Chinese	English 英文						
公共基础课 General Courses	MATH6002	工程数学	Mathematics in Engineering	2	中文 in Chinese	春秋季	否	否	必修 Compulsory
	GE9002	工程科技前沿专题	Selected topics in Engineering Frontiers	1	中文 in Chinese	春秋季	否	否	必修 Compulsory
	MARX7001	中国马克思主义与当代	Marxism in China	2	中文 in chinese	秋季	否	否	必修 Compulsory
	GE6001	学术写作、规范与伦理	Scientific writing, integrity and ethics	1	中文 in chinese	秋季	否	否	必修 Compulsory
专业基础课 Program Core Courses	AU7012	先进工程控制导论	Introduction to Advanced Engineering Control	2	中文 in Chinese	春秋季	否	否	
	EE7006	能源互联网前沿理论与工程	Frontier Theories and Engineering Advances of Energy Interconnection Network	2	中文 in chinese	春秋季	否	否	
	NIS8011	网络空间安全前沿专题	Topics of Cyberspace Security Frontier	2	中文 in chinese	春秋季	否	否	
专业前沿课 Program Frontier Courses	GE6012	学术报告与研讨会	Seminar	2	中文 in chinese	春季	否	否	
	GE9001	创新工程实践	Innovative Engineering Practice	2	中文 in chinese	春秋季	否	否	必修 Compulsory
	CS8701	软件理论概要	Fundamental theory for software	3	中文 in chinese	春季	否	否	
	CS8702	应用软件技术	Application software technology	3	中文 in chinese	春季	否	否	
	CS8703	系统软件方法	System software methodology	3	中文 in chinese	春季	否	否	
	CS8704	沉浸式计算	Immersive Computing	3	中文 in chinese	春季	否	否	

	CS8705	可扩展计算与系统	Scalable Computing Systems	3	中文 in chinese	春季	否	否	
专业选修课 Program Elective Courses	MEM8301	大数据与互联网思维	Big Data and Internet Thinking	2	中文 in chinese	秋季	否	否	
	MEM8302	物联网技术与发展趋势	Technology and Trends for Internet of Things	2	中文 in chinese	春秋季	否	否	
	MEM8303	人工智能	Artificial Intelligence	2	中文 in chinese	春秋季	否	否	
	MEM6306	系统创新与工程实践	System Innovation and Engineering Practice	2	中文 in chinese	春秋季	否	否	
	MEM8304	网络信息安全理论与技术	Theory and Technology of Network Information Security	2	中文 in chinese	春秋季	否	否	
	MEM8305	移动互联网前沿技术	Mobile Internet	2	中文	春秋季	否	否	
	MEM8306	新能源技术及应用	New Energy Technology and Application	2	中文	春秋季	否	否	
	任意选修课 Elective Courses								