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

2020 Part-time PhD Program for Electronic Information

一、基本信息 Basic Information

院系名称 School	(034)电子信息与电气工程学院(电子系) 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

电子与信息领域工程博士研究生培养，依托具备“电子科学于技术”和“信息与通信工程”两个一级学科的电子工程系全面负责学生培养工作。电子工程系师资力量雄厚，现有教职工约 161 人，其中教授及研究员 57 名，特别研究员 10 名。博士生导师 66 名，硕导 129 名，其中科学院和工程院两院院士 1 名，中国工程院院士 1 名， IEEE Fellow 4 名，国家教育部长江特聘教授 3 名，国家杰出青年科学基金获得者 6 名，优青 4 人，千人计划学者 2 名，青年千人 5 人，百千万人才工程国家级人选 3 人，973 首席科学家 2 人，中组部青年拔尖人才 2 人。另外还聘请了 30 多名国内外著名学者为顾问教授或兼职教授。电子工程系还拥有 4 个国家级科研基地：“区域光纤通信网与新型光通信系统”国家重点实验室、“TFT—LCD 关键材料及技术”国家工程实验室、“信息内容安全”国家工程实验室、“数字电视”国家工程研究中心以及 4 个省部级科研基地：“信息安全管理与服务”国家教育部工程研究中心、“电子系统设计与电磁兼容研究”教育部国防科技重点实验室、

“数字媒体处理与传输” 上海市重点实验室、“信息安全综合管理技术研究”上海市重点实验室。与国内外多家知名企业建立了联合实验室。如：上海交大-德州仪器 DSP 联合实验室，上海交大-微软联合实验室，上海交大-IBM 联合实验室等。

Postgraduate training in the field of electronics and Communication Engineering is based on two disciplines of "Electronic Science and technology" and "information and Communication Engineering". The Department of electronic engineering has a strong faculty. There are about 161 members of the staff, of which 57 are professors and researchers, and of which 10 are special researcher. There has 66 PhD supervisors and 129 master tutors, including one academician of the Chinese Academy of Sciences and the Chinese Academy of engineering, one academician of the Chinese Academy of engineering, four IEEE Fellows, three Chang Jiang Distinguished Professors of the Ministry of Education, six winners of National Science Fund for Distinguished Young Scholars,four winners of Outstanding Youth Science Foundation, two candidates of the Thousand Talents Program, five candidates of the Young overseas high-level talents introduction plan, three National candidates of Millions of Talent Projects, two 973 Chief Scientist, two candidates of the Youth support for top talent implemented by the Organization Department of the Central Committee of the CPC.In addition, more than 30 famous scholars at home and abroad were employed as advisors or part-time professors. The Department of electronic engineering also has 4 state-level scientific research bases: state key laboratory of Advanced Optical Communication Systems and Networks National ,National Engineering Lab of TFT-LCD Materials and technologies，National Engineering Lab of Information Security，and the National Engineering Research Center of Digital Television. And it has four provincial and ministerial level research bases: Engineering Research Center of Network Information Security Management and Service, Ministry of Education, the Key Laboratory for research of Design and Electromagnetic Compatibility of High Speed Electronic Systems, Ministry of Education, the Shanghai Key Laboratory of Digital Media Processing and Transmission, the Shanghai Key Laboratory of Integrated Administration Technologies for Information Security (SKLIATIS). And it has established joint laboratories with many well-known enterprises at home and abroad. Such as Texas Instrument － SJTU Technology Center, Microsoft Corporation － SJTU Joint Laboratory, IBM-SJTU Joint Laboratory, etc.

三、培养目标 Program Objective

为电子与通信领域培养基础扎实、素质全面、工程实践能力强，并具备一定创新能力的应用型、复合型高层次工程技术和工程管理人才。学位获得者应掌握电子与信息工程领域坚实的基础理论和宽广的专业知识，并具有较强的计算机和英语应用能力，掌握解决工程问题的先进技术方法和现代技术手段，具有创新意识和独立承担工程技术和工程管理工作的能力，具有良好的职业道德，热爱祖国，积极为我国社会主

义现代化建设服务。

Students will be educated to be applied and compound high-level talents of engineering technology and engineering management with solid foundation, comprehensive quality, strong engineering practice ability and some innovation ability for the field of electronics and communication. People who acquire this degree will grasp the solid basic theory and broad professional knowledge, be in good capacity of computer and English application, grasp the advanced technology and modern method to solve engineering problems, possess innovation thinking and ability to undertake engineering technology and engineering management independently, possess good professional ethics, love the motherland and be willing to serve China’ s socialist modernization actively.

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

工程博士可采取半脱产或不脱产的方式，学习年限为四年，经申请批准，最长可以延期至七年。

The study period is 4 years generally. It can be shortened or lengthened after ratification. The shortest study period can’ t be less than 3 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。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	4		
专业基础课 Program Core Courses	6			

专业前沿课 Program Frontier Courses	4	2		
专业选修课 Program Elective Courses				
任意选修课 Elective Courses				非必需

六、培养过程要求 Training Requirement

《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。

Requirements of "Innovative Engineering Practice":

1. Participate in the teaching or counseling of relevant professional master's practice courses, no less than 16 hours; or give at least 8 important engineering frontier lectures (each time counts 2 hours);

2. During the study period, assist the instructor in the school to guide at least one professional degree master with a workload of not less than 16 hours;

3. Submit the "Summary Report on the Practical Activities of Engineering Doctors of Shanghai Jiaotong University", which will be reviewed and approved by the tutors and colleges inside and outside the school, and the credits of this course will be obtained.

七、学术成果要求 Requirement on Academic Achievements

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。

At least meet one of the following specific requirements:

1. Won one provincial and ministerial level scientific and technological achievement award, the first prize of provincial and ministerial level scientific and technological achievements should be ranked in the top five, and the second prize should be ranked in the top three;

2. A research result based on my contribution forms an industry standard;

3. Obtain at least 2 important invention patent authorizations with the first inventor or first author, and have good applications;

4. Publication of academic papers meets the requirements of the college.

八、学位论文 Thesis/dissertation work

工程博士学位论文的形式可以多样，但必须反映工程博士生在读期间结合国家科技重大专项研究的贡献和创造性成果，以及独立解决重大实际问题的能力。学位论文选题应来源于有重要现实意义和应用价值的工程实践项目。对论文的评价主要从重大工程问题解决方案的系统性、先进性、有效性等方面进行综合评估。

Engineering doctoral dissertations can take various forms, but they must reflect the contributions and creative achievements of engineering doctoral students combined with major national scientific and technological special research, and the ability to solve major practical problems independently. The

topic selection of the dissertation should come from engineering practice projects with important practical significance and application value. The evaluation of the thesis mainly comprehensively evaluates the systematic, advanced and effective aspects of the solutions to major engineering problems.

九、课程设置 Courses

课程类别	课程代码	课程名称 Course Name		学分	授课语言	开课学期	是否必修	可以计算GPA	必须计算GPA	备注 Note
Category	Course Code	中文 Chinese	英文 English	Credit	Language*	Semester				
公共基础课 General Courses	MARX7001	中国马克思主义与当代	Marxism in China	2	中文	春秋季	是	否	否	
	MATH6002	工程数学	Mathematics in Engineering	2	中文	春秋季	是	否	否	
	GE9002	工程科技前沿专题	Selected topics in Engineering Frontiers	1	中文	春秋季	是	否	否	
	GE6001	学术写作、规范与伦理	Scientific writing, integrity and ethics	1	中文	春秋季	是	否	否	
专业基础课 Program Core Courses	GE9001	创新工程实践	Innovative Engineering Practice	2	中文	春秋季	是	否	否	
	MEM6001	定量分析：模型与方法	Quantitative Analysis: Models and Methods	3	中文	春秋季	否	否	否	
	MEM6305	风险管理与高效决策	Risk Management and Efficient Decision Making	2	中文	春秋季	否	否	否	

	MEM6002	工程管理导论	Introduction to Engineering Management	2	中文	春秋季	否	否	否	
	MEM6303	工程管理实践案例分析	Project Management Case Studies	2	中文	春秋季	否	否	否	
	MEM6003	工程经济学	Engineering Economics	2	中文	春秋季	否	否	否	
	MEM6006	工程信息管理	Engineering Information Management	2	中文	春秋季	否	否	否	
	MEM6304	库存与供应链管理	Inventory and Supply Chain Management	2	中文	春秋季	否	否	否	
	MEM6302	领导力	Leadership	2	中文	春秋季	否	否	否	
	MEM6308	名企走访实践	Visiting Practice for Famous Enterprises	1	中文	春秋季	否	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	春秋季	否	否	否	
	MEM6301	人力资源与沟通管理	Human Resource Management & Communication Management	2	中文	春秋季	否	否	否	
	MEM6307	社会创新与创业发展	Social Innovation and Entrepreneurship Development	2	中文	春秋季	否	否	否	

	NIS8011	网络空间安全前沿专题	Topics of Cyberspace Security Frontier	2	中文	春秋季	否	否	否	
	MEM6306	系统创新与工程实践	System Innovation and Engineering Practice	2	中文	春秋季	否	否	否	
	AU7012	先进工程控制导论	Introduction to Advanced Engineering Control	2	中文	春秋季	否	否	否	
	MEM8301	大数据与互联网思维	Big Data and Internet Thinking	2	中文	春秋季	否	否	否	
	MEM8303	人工智能	Artificial Intelligence	2	中文	春秋季	否	否	否	
	MEM8304	网络信息安全理论与技术	Theory and Technology of Network Information Security	2	中文	春秋季	否	否	否	
	MEM8302	物联网技术与发展趋势	Technology and Trends for Internet of Things	2	中文	春秋季	否	否	否	
	MEM8306	新能源技术及应用	New Energy Technology and Application	2	中文	春秋季	否	否	否	
	MEM8305	移动互联网前沿技术	Mobile Internet	2	中文	春秋季	否	否	否	
专业前沿课 Program Frontier Courses	ICE9001	电子信息前沿探索	Electronic information frontier exploration	2	中文	秋季	是	否	否	
	GE6012	学术报告与研讨会	Academic Seminars	2	中文	春秋季	是	否	否	