

# 机械电子工程学科(一级学科代码: 0802)学术型 硕士研究生培养方案(留学生) (Mechanical and Electronic Engineering)

## 一 . 学科简介(Introduction)

上海大学是一所上海市属重点大学,也是一所教育部与上海市人民政府共建的国家“211工程”重点建设的大学,上海大学机械电子工程学科是国家及上海市重点学科。学科拥有教职工100余名,其中正高级职称28名,国家级人才2名,国家杰出青年基金获得者2名,博士学位以上教师占比80%,超过90%以上的青年教师具有留学访学背景。学科有完善的教学、科研基地条件,为人才培养、科学研究、国际合作与交流提供了基础支撑。学科拥有包括上海机器人研究所、智能装备技术上海高校重点实验室等教学科研基地。经过多年的建设与积累,学科在人才培养、科学研究、国际合作与交流、师资队伍等方面已形成一定的规模、格局与特色,致力于为“一带一路”地区及全世界培养适应智能制造产业发展需要的、具有国际视野的、复合型创新人才。

Shanghai University is a key university under the Shanghai municipal government. It is also a national "211 Project" key university jointly established by the Ministry of Education and the Shanghai Municipal Government. The mechanical and electronic engineering discipline of Shanghai University is a national and Shanghai key discipline. The discipline has more than 100 faculty members. 28 of them have senior professional titles, 2 are national talents, 2 are winners of the National Outstanding Youth Fund, 80% are teachers with doctoral degrees or above, and more than 90% of the young teachers have a background in studying abroad. The discipline has perfect teaching and research conditions, providing basic support for personnel training, scientific research, international cooperation and exchange. The discipline has teaching and research bases including Shanghai Robot Research Institute and Shanghai Key Laboratory of Intelligent Equipment Technology. After years of construction and accumulation, the discipline has formed a certain scale, pattern and characteristics in personnel training, scientific research, international cooperation and exchange, and teaching staff. It is committed to training innovative talents with international vision and compound abilities that meet the needs of the development of intelligent manufacturing industry for "the belt and the road" region and the world.

## 二 . 学位标准(Degree for Require)

见《上海大学机电工程与自动化学院研究生申请学位创新成果要求》。

See requirements for innovative achievements of graduate students in school of Mechatronic Engineering and Automation, Shanghai University.

## 三 . 培养目标(Objectives)

致力于为“一带一路”地区及全世界培养适应智能制造产业发展需要的、具有国际视野的、复合型创新人才。It is committed to training innovative talents with international vision and compound abilities that meet the needs of the development of intelligent manufacturing industry for "the belt and the road" region and the world.

## 四 . 修业年限(Duration)

本学科硕士研究生学制为2.5年,学习年限不超过6年。

Normative Study Period: 2.5 years, but no more than 6 years.

## 五 . 培养方向(Research Areas)

机械电子工程专业主要研究方向包括:

- 1、 机器人技术与自动化应用工程
- 2、 微机电系统
- 3、 康复装备与技术研究
- 4、 骨科手术装备与技术研究
- 5、 机械智能设计与优化设计
- 6、 机电一体化系统及其控制技术
- 7、 精密测量技术与仪器
- 8、 机械振动噪声分析
- 9、 故障诊断技术
- 10、 智能控制、检测与传感技术
- 11、 海上智能运载科学与技术
- 12、 人机智能技术
- 13、 多刚体系统动力学
- 14、 无人值守系统设计与控制

The main research areas of the mechanical and electronic engineering:

1. Robot Technology and Automation Application Engineering
2. MEMs
3. Research on Rehabilitation Equipment and Technology
4. Research on Orthopedic Surgery Equipment and Technology
5. Mechanical Intelligent Design and Optimum Design
6. Electromechanical Integration System and Its Control Technology
7. Precision Measurement Technology and Instruments
8. Mechanical Vibration Noise Analysis
9. Fault Diagnosis Technology
10. Intelligent Control, Detection and Sensing Technology
11. Marine Intelligent Transportation Science and Technology
12. Human-machine hybrid intelligent system
13. Multi-body dynamics
14. Design and control for unmanned system

And so on

## 六 . 语言要求(Language Requirements)

本专业来华留学生应当能够顺利使用英语完成本学科、专业的学习和研究任务,并具备使用中文从事本专业相关工作的能力,毕业时达到汉语三级水平。

Students who come to China in this major should be able to successfully use English to complete the subject, study and research tasks, and have the ability to use Chinese to engage in the relevant work of this major, you must reach the third level of Chinese proficiency test (HSK) before graduation.

## 七 . 课程设置与学分要求(Curriculum and Credit Requirement)

研究生的学习实行学分制,根据课程设置,应修满不少于45学分,其中公共课7学分,专业基础课不高于10学分,专业选修课不少于24学时,创新创业课不低于2学分,学术研讨课(Academic Seminar) 2学分。

The credit system shall be implemented for graduate students' study. According to the curriculum, they shall take not less than 45 credits, including 7 credits for public courses, 10 credits for professional basic courses, 24 credits for professional elective courses, 2 credits for innovation and entrepreneurship courses, and 2 credits for 2 academic seminar courses.

## 八 . 培养计划制定(Development of Training Plan)

攻读硕士学位的研究生入学后，应在导师指导下按照本学科当年度培养方案的要求制订培养计划，在入学后1个月内，登录研究生管理系统，输入培养计划，同时，打印的纸质版培养计划报各学位评定分委员会审核批准后，由学院留存备案。凡列入培养计划的课程必须修读合格方可进行答辩。

After the admission, postgraduate students studying for master's degree shall formulate a training plan according to the requirements of the discipline's current annual training plan under the guidance of their tutors. Within one month after the admission, they shall log into the postgraduate management system and fill in the training plan. At the same time, the printed paper-based training plan shall be submitted to each degree evaluation sub-committee for examination and approval, and shall be kept for the record by the college. All courses included in the training plan must be qualified before they have a defense.

## 九 . 必修环节 (Compulsory courses)

列入培养计划的课程必须修读合格方可进行答辩。 All courses included in the training plan must be qualified before they have a defense.

## 十 . 科学研究与学位论文 (Research and Dissertation)

根据学校、学院的相关规定，对研究生的培养过程，对培养质量不达标学生实行分流淘汰管理制度。具体措施为：研究生在正式进入学位论文工作前必须要进行中期考核，中期考核一般在第二学年冬季学期前结束。中期考核实行分流淘汰制，考核的排名结果提交研究生院备案。具体按照《上海大学研究生中期考核及分流淘汰管理办法（试行）》予以执行。

According to the relevant regulations of schools and colleges, the training process for postgraduates will be implemented, and the students who fail to meet the quality standards will be subject to a shunt and elimination management system. The specific measures are: the graduate students must conduct the mid-term assessment before they officially enter the dissertation work, and the mid-term assessment generally ends before the winter semester of the second academic year. The mid-term assessment implements a shunt and elimination procedure, and the ranking results of the assessment are submitted to the graduate school for record. It will be implemented in accordance with the "Administrative Measures for the Mid-term Assessment and Distributary Elimination of Shanghai University (Trial)".

学位论文正式答辩前必须进行预答辩，预答辩通过后，按国家学位条例有关规定进行评审和答辩。

Before the dissertation is formally defended, it must be pre-answered. After the pre-answer is passed, it will be reviewed and defended according to the relevant provisions of the National Degree Regulations.

研究生要求每周至少完成60-70学时的科研工作，具体考察形式由授课教师或者研究生导师安排。鼓励研究生同学参加相关的学术论坛和报告，以及有益的社会调查等工作。

Graduate students are required to participate in the professional teaching practice, including the guidance of undergraduate experiment, marking the lab reports and homework to complete at least 60-70 hours of work. The practice process will be reviewed by the teachers in charge of teaching or supervisor. The graduate students are also required to attend related seminars and experts forum, and if possible, to participate in social investigation and research or technology promotion.

对硕士学位论文答辩申请工作，应严格按照我国学位授予实施办法、上海大学研究生院相关管理与规定，经过校外评审和学校学位委员会审议通过。

The application for the respondent of the master thesis including the reviewing and defense should be strictly in accordance with the requirements of

the "Interim Implementation Measures of the Regulations Concerning Academic Degrees of the People's Republic of China", as well as adopted by the Academic Degrees Committee of the degree-granting work rules and other related documents and regulations.

留学硕士研究生，可以用汉语或英语撰写学位论文和进行论文答辩。使用非汉语接受学历教育的留学硕士研究生，学位论文摘要应当用汉语撰写。留学硕士研究生的学位论文答辩必须在我校进行。

Both Chinese and English can be used in write dissertations and thesis defense. Graduate students who have received academic degrees using non-Chinese should translate the abstract of the thesis from English to Chinese. The thesis defense must be carried out in Shanghai University.

本专业毕业生达到上海大学硕士学位要求者，将获得工学硕士学位证书。

Graduates who meet the requirements of SHU will receive the degree (Master of Engineering) from Shanghai University.

## 十一 . 培养方式(Training Methods)

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### 附表. 课程与必修环节

机械电子工程学科攻读硕士学位研究生课程与必修环节

类别	课程编号	课程名称 (Course Name)	学时	学分	开课学期	备注
公共平台课	公共平台课作为学校面向全校开设的公共课程，学生可在导师指导下选择公共平台课程列入培养计划，课程学分计入总学分					
公共课	0CS000027	公共体育(Public Physical Education)	20	1.0	01	必修
	0LY000001	中国概况(General Situation of China)	60	3.0	03	必修 Compulsory
	0LY000002	综合汉语B(Comprehensive Chinese B)	60	3.0	02	必修 Compulsory
专业基础课	3XSL09128	微机电系统(英文) (Micro-Electro-Mechanical System)	40	4.0	02	必修
专业选修课	3XSL09119	智能机器人建模与分析(Modeling and analyzing of intelligent robot)	40	4.0	02	
	3XSL09120	程序设计与工程应用(Program design and engineering application)	40	4.0	02	
	3XSL09121	传感器技术及应用(Sensor technology and Application)	40	4.0	02	
	3XSL09122	Modern control theory (Modern control theory)	40	4.0	02	
	3XSL09123	MEMS (MEMS)	40	4.0	01	
	3XSL09124	智能结构与主动控制 (英文) (Smart Structures and Active Contro)	40	4.0	02	
	3XSL09125	机器人技术应用 (英文) (Robotics Technology and Application)	40	4.0	03	
	3XSL09126	现代光学测试技术(英文) (Modern optical measurement technology)	40	4.0	01	

专业 选修课	3XSL09127	机器视觉与图像处理(英文)(Machine Vision and Image Processing)	40	4.0	02	
	3XSL09129	微纳米系统工程(Micro nano systems engineering)	40	4.0	03	
学术规范 与写作课	2ZS095002	专业英语与写作(Professional English and Writing)	20	2.0	02	必修
创新 创业课	4XSL09101	创新方法学(Innovation Methodology)	20	2.0	01	必修 Compulsory
学术 研讨课	6XSL00001	学术研讨课(Academic Seminars)	20	2.0	02	必修 Compulsory
跨专业或学 院选修课	学生可根据自身情况在导师指导下跨专业、学院选取非本专业课程列入培养计划, 课程学分计入总学分。					
补修课	根据学生具体情况由导师指定选修本科生主干课2-3门(不计入总学分)					
必修 环节	课程考核				03	须通过考核 后方可进入 下一环节
	学位论文开题				04	
	中期考核				05	
	学位论文预答辩				08	

学位委员会主席签字:

学院盖章: