

控制科学与工程来华留学博士研究生培养方案

Doctoral Degree Program of Control Science and Engineering

一、适用学科 (Applicable Discipline)

学科名称: 控制科学与工程

学科代码: 0811

Discipline: Control Science and Engineering

Discipline Code: 0811

二、主要研究方向 (Main Research Field)

1. 复杂系统理论与非线性控制/ Complex System Theory and Nonlinear Control
2. 无人飞行器自主控制/ Autonomous Control of Unmanned Vehicle
3. 先进导航与精密定位/ Advanced Navigation and Precise Positioning
4. 现代船舶控制工程/ Modern Ship Control Engineering
5. 智能系统与信息感知测量/ Intelligent Systems and Information Perception Measurement
6. 人工智能理论及应用/Theory and Application of Artificial Intelligence

三、培养方案 (Curriculum)

1. 课程设置与学分要求 (Courses and Credits)						
课程类别 Category	课程编号 Code	课程名称 Course	学时 Hour	学分 Credit	开课学期 Semester	备注 Remark
公共必修课 General Compulsory Courses	202032020900	中国概况 Survey of China	48	3	2	必选 Compulsory
	202032020901	汉语 Chinese	64	3	1	必选 Compulsory
	202032023009	科学与工程计算 Scientific and Engineering Computing	48	2	1	必选 1 门 1 course compulsory
	202032020001	数学物理方法 A Mathematics Method in Physics A	48	2	1	
专业必修课 Professional Compulsory Courses	202010420901	线性系统理论 Linear System Theory	48	3	1	必选 Compulsory
	202010420801	非线性控制系统理论 Nonlinear Control System Theory	32	2	1	
	202010420902	控制理论前沿专题 Frontier Issues of Control Theory	16	1	1	
选修课 Optional Courses	202010420001	论文写作指导 Thesis/Dissertation Writing	16	1	1	选修 Optional
	202032020902	汉语交际 Chinese Communication	64	3	1	选修 Optional
	202032020903	HSK 辅导 HSK Tutoring	48	3	2	选修 Optional

	202010413801	机器人智能化技术与应用 Robot Intelligent Technology and Application	32	2	2	选修 Optional
	202010423901	模式识别与智能系统专题 Lecture on Special Topic of Pattern Recognition and Intelligent Systems	16	1	1	必选 1 门 1 course compulsory
	202010423801	现代船舶智能化技术 Modern Ship's Intelligent Technology	32	2	1	
学分要求 Credit Requirement	应修总学分≥14 学分，其中课程学分≥9 学分，必修环节≥5 学分。 Students should achieve no less than 14 credits totally, including course part 9 credits, compulsory part 5 credits.					
其他要求 Others	<p>1.对于跨学科攻读本学科博士学位的研究生，应由导师根据研究方向需要指定 2-3 门专业核心课程进行补修，只记成绩，不计学分。</p> <p>2.硕士阶段没有修读“论文写作指导”课程的，一般应选其作为选修课。</p> <p>3.毕业前中文能力应当达到《国际汉语能力标准》三级水平。</p> <p>1. The interdisciplinary doctoral candidates are required to take 2 or 3 professional core courses designated by their supervisors. The courses only record grades without any credits.</p> <p>2. Those who have not taken the course of "Thesis/Dissertation Writing" in the master's degree programs are required to study it as a selective course.</p> <p>3. Before the graduation, all international students are required to pass HSK band III (level) at least.</p>					
2.必修环节及要求 (Compulsory Parts and Requirements)						
必修环节名称 Compulsory Part	学分 Credit	开课学期 Semester	考核内容或要求 Assessment Requirement		考核方式 Exam Method	备注 Remark
学术活动 Academic activities	1	5	<p>博士生在答辩前至少应参加 5 次以上由学校组织的学术活动，鼓励参加本专业或相关专业国内、国际会议。</p> <p>每次学术活动要有 500 字左右的总结报告，注明参加学术活动的时间、地点、报告人、学术报告题目，简述内容并阐明自己对相关问题的学术观点或看法，经导师组签字后交学院人才培养办公室公室保留。</p> <p>导师组在研究生培养过程中需对博士生进行学术道德教育和学术规范训练，并对博士生做出明确要求；博士生应参加校、院组织的学术道德和学术规范讲座，同时撰写不少于 500 字的学习报告或心得体会，由导师组审阅同意后交人才培养办公室公室存档。博士生在就读期间要注重培养和提高自身学术道德修养，遵守学术研究的基本规范，自觉抵制学术不端行为。</p> <p>学术活动与学术报告及其考核在博士生学位论文答辩前完成，学院给予相应学分。</p>		由院系负责考核 Assessed by the related college	

<p>学术活动 Academic activities</p>	<p>1</p>	<p>5</p>	<p>The doctoral candidates should participate in 5 academic activities at least organized by the university before the defense of thesis. The students are encouraged to participate in national and international conferences of their majors or related disciplines.</p> <p>For each academic activity, the doctoral candidates should write a summary report about 500 words, indicating the time, place, speaker and the topic of the academic activity, brief description of the contents and the statements of their academic views or views on relevant issues. The report should be signed by the tutor group and submitted to the academic affairs office of the college for archiving.</p> <p>In the process of doctoral candidate's training, the tutor should carry out academic moral education and academic normal training for the doctoral candidates, and make clear requirements for the candidates. The doctoral candidates should participate in the lectures of academic morals and academic norms organized by the university or the college, and write a study report or experience of no less than 500 words, which should be reviewed and approved by the tutor and then submitted to the Academic Affairs Office for filing. Doctoral candidates should attach importance to the cultivation and improvement of their own academic ethics, abide by the basic norms of academic research, and consciously resist academic misconduct.</p> <p>Academic activities and their assessments should be completed before the defense of dissertation, and the corresponding credits should be given to the students by the college.</p>	<p>由院系负责 考核 Assessed by the related college</p>	
<p>创新竞赛与 创业活动 Innovation competition and entrepreneurial activities</p>	<p>1</p>	<p>5</p>	<p>参加“中国研究生创新实践系列大赛”或国家层面组织的创新创业活动等，符合学校有关规定条件的，可获得创新竞赛与创业活动成绩及学分。</p> <p>The doctoral candidates who participate in the "China Postgraduate Innovation & Practice Competitions" or the national innovation and entrepreneurship activities and meet the relevant</p>	<p>由研究生院 学术办公室 考核 Assessed by the Academic Affairs Office of the Graduate School</p>	

			requirements of the university can obtain the scores and credits of innovation & Practice competition and entrepreneurship activities.		
文献综述与 开题报告 Literature review and thesis proposal	2	4	<p>博士研究生入学后即开始阅读本学科国内外有关文献资料，总数不少于 50 篇，近五年英文文献不少于 30%，并于第二学期写出不少于 8000 字的文献综述报告。文献综述报告应反映国内外本领域的研究历史、现状、前沿、发展动态、发展趋势、存在的问题及自己的见解等。文献综述报告必须经过导师组评审，通过后给予相应学分。</p> <p>博士生开题以答辩方式进行，答辩通过的研究生取得学分。</p> <p>The doctoral students are required to read the relevant literatures in this field under the guidance of their tutors after enrollment, with a total of no less than 50 articles, and literatures required in the past five years should be no less than 30%. The literature review report of no less than 8000 words should be finished in the second semester.</p> <p>The literature proposal should reflect the research history, current situation, frontier, developing trend, existing problems and their own views in this field in China and abroad. The literature proposal must be reviewed by the tutor group and the students are given corresponding credits after the validation of the tutor group.</p> <p>The thesis proposal should be carried out in the way of defense, and the doctoral candidates who have passed the defense will get credits.</p>	由开题报告小组负责考核 Assessed by the thesis/dissertation proposal group.	必选 Compulsory
中期检查 Process assessment	1	6	<p>中期检查一般最迟于开题后一年内进行，通过中期检查的博士生取得相应学分。</p> <p>The mid-term examination is generally carried out no later than one year after the proposal report. Doctoral candidates who pass the mid-term examination will obtain the corresponding credits.</p>	由中期检查小组负责考核 Assessed by process assessment group	必选 Compulsory

3.学位论文要求 (Degree Thesis Requirements)

对学位论文的学术道德、学术水平、创新性成果、论文撰写、预答辩以及答辩等方面的具体要求:

The degree thesis requirements with the contents of academic ethics, academic level, creative outcome, thesis writing, pre-defense and final defense of graduation:

学术道德: 博士生在攻读学位期间, 首先要注重培养和提高自身学术道德修养, 遵守学术研究的基本规范, 自觉抵制学术不端行为。应参加学校和学院组织的学术道德和学术规范讲座, 同时撰写不少于500字的学习报告或心得体会, 由导师审阅同意后交学院人才培养办公室存档。在发表学术论文和撰写学位论文等有关工作中, 应严格按照《哈尔滨工程大学研究生学术道德规范管理办法》要求, 恪守职业道德, 维护科学诚信。博士生导师在博士生培养过程中需对博士生进行学术道德教育和学术规范训练, 并对博士生做出明确要求。

学术水平: 应掌握本学科坚实宽广的基础理论和系统深入的专门知识, 具有独立分析及解决本学科领域关键技术问题的能力, 并符合《哈尔滨工程大学自动化学院关于博士学位申请者发表学术论文的规定》中要求。

创新性成果: 学位论文应对所研究的课题有新的见解, 对学术发展、经济建设和社会进步有一定的促进作用。具体要求按照学校和学院的相关文件执行。

论文撰写: 博士学位论文撰写的要求按学校及学院相关文件执行。

论文预答辩及答辩: 博士学位论文预答辩及答辩的要求按学校及学院相关文件执行。

Academic ethics: During the period of studying for the doctor degree, doctoral candidates should first attach importance to cultivating and improving their own academic ethics, abide by the basic norms of academic research, and consciously resist academic misconduct. Doctoral candidates should attend lectures on academic ethics and academic norms organized by the university or the college, and write a study experience report of no less than 500 words, which should be reviewed and approved by the tutor and submitted to the Academic Affairs Office of the college for archiving. In publishing academic papers and writing academic thesis, the students should be strictly abided by the professional ethics and scientific integrity in accordance with the Administrative Measures for the Codes of Academic Ethics for Postgraduates of Harbin engineering university. Doctoral supervisors should carry out academic ethics education and academic norms training for doctoral candidates in the process of doctoral training, and make clear requirements for them.

Academic level: Have solid and broader basic theories, systematic and comprehensive expertise in the discipline. Have the ability and competency to analyze and solve key technical problems independently in the subject area, and meet the requirements on publishing papers for getting doctor degree of the College of Automation, Harbin Engineering University.

Creative outcome: The dissertation should have new views on the subject studied and have certain theoretical or practical significances for the academic development, economic construction and social progress. The specific requirements for the dissertation can be seen in the relevant documents of the university and college.

Dissertation writing: The requirements for the doctoral dissertation writing shall be implemented in accordance with the relevant documents of the university and college.

Dissertation pre-defense and defense: The requirements for doctoral dissertation pre-defense and defense shall be implemented in accordance with the relevant documents of the university and college.