食品科学与工程

来华留学博士研究生培养方案

Food Science and Engineering

Doctoral Degree Cultivation Program for Study Abroad in China

一、学科(专业)简介

食品科学与工程学科源于 1980 年河南省首个"食品工程"专业,2002 年开始招 收硕士研究生,2010 年获得"食品科学与工程"一级学科硕士学位授权点,2021 年获 得"食品科学与工程"一级学科博士学位授权点,2023 年获得博士后科研流动站。该学 科现为河南省优势特色学科(群)、河南省特色骨干学科(群)和第九批河南省重点学 科,全国第五轮学科评估结果为 B-,农业科学 ESI 全球排名进入前 5‰。本学科围绕河 南省食品产业发展重大需求,主要开展肉品、速冻、果蔬加工及食品安全等领域基础理 论和关键技术研究,现设有农产品加工及贮藏工程、食品安全、食品科学和食品生物技 术四个稳定的学科方向。

The discipline of Food Science and Engineering originated from the first "Food Engineering" specialty in Henan Province in 1980, and began to recruit master's students in 2002. In 2010, it got the authorization point of master's degree of "Food Science and Engineering", in 2021, it got the authorization point of doctoral degree of "Food Science and Engineering", and in 2023, it got the post-doctoral research station. The discipline is now the advantageous and characteristic disciplines (group) of Henan Province, the characteristic backbone disciplines (group) of Henan Province and the ninth batch of key disciplines of Henan Province, with the result of the fifth round of national discipline evaluation as B-, and the ESI global ranking of agricultural science in the top 5 ‰. The discipline focuses on the major needs of the development of the food industry in Henan Province, and mainly conducts research on basic theories and key technologies in the fields of meat, frozen foods, fruit and vegetable processing and food safety, etc. It now has four stable disciplines, namely, agricultural product processing and storage technology, food safety, food science and food biotechnology.

二、培养目标

以立德树人为根本,坚持德、智、体、美全面发展方针,培养具有高尚的思想品德, 对我国友好的政治立场,严谨的治学态度,求实的创新精神,良好的职业道德;具有坚 实的基础理论和宽广的专业知识,较强的解决实际问题的能力,能独立从事食品科学与 工程前沿性科学研究和技术开发的高素质创新型人才。

具体要求:

 坚持对华友好的政治立场,拥护中国的外交政策,遵守中国法律法规和国家政策, 尊重中国风俗习惯,理解中国社会主流价值观和公共道德观念,形成良好的法治观念和 道德意识,遵守学校规章制度,对华友好,品行端正。

适应科技进步和社会发展的需要,掌握坚实宽广的基础理论和系统深入的专门知识,深入了解本学科发展方向及国际学术研究前沿;具有良好的科学文化素养和独立从事创新性科学研究及实际工作能力,能够在食品学科或专门技术上做出创新性的成果。

3. 博士学位论文应具有重要的学术价值和一定的社会意义,在本学科领域中的某一 研究方向具有创新,并在理论或工程方面做出创新性的成果。

4. 能较好掌握汉语,较熟练地阅读汉语文献资料,并具有一定的汉语听说和写作能力,能够进行正常的国际学术交流;能独立胜任所学习的食品科学与工程学科领域的科学研究、教学、业务以及技术管理工作。

5. 身心健康,能够胜任学习和工作的要求。

II. Cultivation Objectives

To establish moral character as the foundation, adhere to the policy of comprehensive development of morality, intellectuality, physicality and aesthetics, to cultivate the students with noble ideological character, friendly political attitude to our country, rigorous attitude to study, realistic and innovative spirit, good professional ethics. To be highly innovative talents with solid basic theories and broad professional knowledge, strong ability to solve practical problems, and capable of independently engaging in the cutting-edge scientific research and technological development of food science and technology.

Specific requirements:

1. Adhere to the political position of friendship with China, support China's foreign policy, abide by China's laws and regulations and national policies, respect Chinese customs and habits, understand the mainstream values of Chinese society and public morality, form a good concept of the rule of law and moral consciousness, abide by the rules and regulations of the university, be friendly to China, and be of good character.

2. To adapt to the requirements of scientific and technological progress and social development, to have a sound and broad basic theory and systematic and in-depth specialized knowledge, and to have a profound understanding of the direction of the development of the discipline and the frontiers of international academic research; to have good scientific and cultural literacy and the ability to independently carry out innovative scientific research and practical work, and be able to make innovative achievements in the food disciplines or professional technologies.

3. The doctoral dissertation should be of high scientific value and have a certain social significance, be innovative in a certain research direction in the field of this discipline, and make innovative achievements in theory or engineering.

4. To have a good command of the Chinese language, be proficient in reading Chinese literature and materials, and have a certain level of listening and writing in Chinese, and be able to carry out normal international academic exchanges; be able to independently carry out the scientific research, teaching, business and technical management in the field of food science and engineering studied.

5. Be physically and mentally healthy and able to fulfill the requirements of study and work.

三、主要研究方向简介

1. 农产品加工及贮藏工程:主要开展畜禽肉、速冻食品、特色农副产品等加工贮藏 过程中相关理论、新方法和新技术研究。

 食品安全:主要开展食品原料及加工、贮藏、流通过程中安全危害物快速识别、 检测、控制及溯源技术研究。

3. 食品科学:主要开展食品中组分和功能性多糖在加工中结构及功能特性变化规律研究。

4. 食品生物技术: 主要开展食品配料生物制造理论与技术研究。

III. Introduction of major research directions

1. Agricultural product processing and storage technology: mainly to carry out livestock and poultry meat, frozen food, agricultural speciality and by-products and other processing and storage process related theories, new methods and new technologies.

2. Food safety: mainly to carry out food raw materials and processing, storage, circulation of safety hazards in the process of rapid identification, detection, control and traceability technology research.

3. Food science: mainly to carry out food components and functional polysaccharide in the processing of structural and functional properties of the law of change research.

4. Food biotechnology: mainly to carry out food ingredients biological manufacturing theory and technology research.

四、培养年限与学分

全日制来华留学博士研究生采取弹性学制,基本学习年限 4-6 年,最长学习年限不 超过 6 年。

IV. Cultivation Period and Credits

Full-time doctoral students studying in China follow a flexible academic system, with a basic study period of 4-6 years and a maximum study period of no more than 6 years.

五、课程设置,必修环节及学时、学分分配

学校实行博士生课程学分制。博士生应根据需要,在导师指导下选择适合的课程, 在博士论文答辩前应获得课程学分。本专业的博士研究生应修学分要求如下:最低总学 分18 学分,其中公共必修课4 学分,专业必修课6 学分,开题报告、中期考核、学术 交流、教学实践各1 学分,其余为选修课学分。具体课程设置情况如下:

课程类别		课程编号	课程名称	学时	学分	开课 学期	考核方式
学位课	公共必修课		汉语语言I	32	2	1	考试
			中国概况	32	2	1	考试
	专业必修课	083210011	食品科学 SEMINER	32	2	2	考试
		083210021	食品化学进展	32	2	1	考试
		083210031	食品生物技术进展	32	2	2	考查
	八十次版词		专业汉语	16	1	2	考试
	公共见修床		汉语语言 II	32	2	2	考查
	专业选修课	083210012	食品科学与工程 专题	16	1	2	考查
		083210022	农产品加工理论与技术 专题	16	1	1	考查

课程设置、必修环节及学时、学分分配表

		083210032	冷链食品加工专题	16	1	2	考查
		083210042	食品安全前沿	16	1	1	考查
		083210052	食品物性分析	16	1	1	考查
		083210062	高级仪器分析	32	2	2	考查
其他必修环节			文献综述及		1	3	考查
			开题报告				
			中期考核		1	5	考查
			学术交流		1		考查
			教学实践	≥16	1		考查

V. Curriculum, Compulsory Courses and Allocation of Credit Hours and Credits

The University implements the credit system for doctoral courses. Doctoral students should select courses according to the relevant requirements under the guidance of their supervisor before defending their doctoral dissertations. The requirements for the credits to be taken by doctoral students in this programme are as follows: the minimum total number of credits is 18, of which 4 credits are public compulsory courses, 6 credits are professional compulsory courses, 1 credit each for the confirmation report, mid-term examination, academic exchange and teaching practice, and the rest are elective credits. The specific curriculum is as follows:

课程类别		课程编号	课程名称	学时	学分	开 课 学 期	考核方式
	Compulsory		Chinese Language I	32	2	1	Examination
Degree course	Public Courses		China Overview	32	2	1	Examination
	Specialized Compulsory	083210011	Food Science SEMINER	32	2	2	Examination
	Courses	083210021	Advances in Food Chemistry	32	2	1	Examination
		083210031	Advances in Food Biotechnology	32	2	2	Assessment
	Public		Professional Chinese	16	1	2	Examination
	Electives		Chinese Language II	32	2	2	Assessment
	Specialized Electives	083210012	Food Science and Engineering	16	1	2	Assessment

Curriculum, Compulsory Courses, and Distribution of Hours and Credits

		083210022	Special Topics	16	1	1	Assessment
		083210032	TheoryandTechnologyofAgriculturalProductProcessing	16	1	2	Assessment
		083210042	Cold Chain Food Processing	16	1	1	Assessment
		083210052	Food Safety Frontiers	16	1	1	Assessment
		083210062	Food Physical Analysis	32	2	2	Assessment
Other Sessions	Compulsory		Literature Review and Thesis Statement		1	3	Assessment
			Mid-term Examination		1	5	Assessment
			Academic Exchange		1		Assessment
			Teaching Practice	≥16	1		Assessment

六、培养方式及环节

1. 培养方式

来华留学博士研究生的培养实行导师负责与指导小组集体培养相结合的方式。导师 及指导小组全面负责来华留学博士研究生的培养工作,包括思想教育、学风教育、培养 计划的制定、学位论文的指导等。导师或导师指导小组负责制订和调整博士生个人培养 计划,组织开题报告,指导科学研究和学位论文等,导师还应全面关心博士生的成长成 才。

2. 培养环节

(1) 制定个人培养计划

根据学科培养方案,导师指导博士生制定个人培养计划,包括课程学习计划和论文研究计划。课程学习计划应在入学一个月内提交;论文研究计划一般在第2学期末提交。

(2) 文献综述及开题报告

博士生在学位论文开题前应广泛阅读食品科学与工程学科的国内外相关文献,文献 阅读量不少于 150 篇,其中外文文献不少于 100 篇,并撰写不少于 5000 字的文献综述。 博士生在入学第 3 学期初完成开题报告,论文选题必须与本学科研究领域密切相关,开 题报告经审核通过后方可进入以论文研究为主的学习阶段。

(3) 中期考核

博士生在第5学期进行中期考核,重点检查课程学分是否满足要求、论文研究进展 与阶段性研究成果,并对存在的问题进行整改。 (4) 学术交流

实行博士生学术交流和学术报告制度。博士生在读期间应至少参加本学科专家学术 讲座或国内外学术会议 10 次,至少作 3 次院级以上的学术报告,其中在国内外学术会 议上作学术报告 1 次。

(5) 教学实践

博士生在读期间必须参加一定的教学实践,其中教学工作量不少于 16 学时。教学 实践一般应聘为助教,协助导师或本学科专业任课教师的教学、实验,指导本科生毕业 论文(设计)等,由导师或本学科专业任课教师负责最终考核。

VI. Cultivation Model and Sessions

1. Cultivation Model

The cultivation of doctoral students is carried out by combining the responsibility of the supervisors and the collective cultivation of the supervision team. The supervisor and the supervision group are responsible for the cultivation of the doctoral students, including ideological education, academic style education, the formulation of the cultivation plan, and supervision of the dissertation. The supervisor or the supervision group is responsible for formulating and adjusting the individual cultivation plan of the doctoral students, organizing the topic opening report, guiding the scientific research and the dissertation, and so on. The supervisor should also be concerned with the growth and development of the doctoral students in a comprehensive way.

2. Cultivation Structure

(1) Formulation of Individual Cultivation Plan

According to the cultivation program of the discipline, the supervisor shall guide the doctoral students to formulate an individual cultivation plan, including the course study plan and the dissertation research plan. The course study plan should be submitted within one month after admission; the dissertation research plan is usually submitted at the end of the 2nd semester.

(2) Literature Review and Dissertation Proposal

Before starting the dissertation topic, doctoral students must read extensively related scientific papers in the discipline of food science and engineering, with at least 150 pieces of papers, including at least 100 pieces of SCI papers, and write a literature review of at least

5000 words. Doctoral students are required to complete the dissertation report at the beginning of the 3rd semester of admission, and the topic of the dissertation must be closely related to the research field of the discipline, and the dissertation report must be examined and approved before entering into the study stage mainly based on the dissertation research.

(3) Mid-term Examination

Doctoral students have a mid-term examination in the 5th semester, which focuses on checking whether the course credits meet the requirements, the progress of the dissertation research and the results of the stages, and on discussing the existing problems.

(4) Academic Exchange

A system of academic exchange and academic reports is implemented for doctoral students. During the study period, doctoral students should attend at least 10 academic seminars, symposiums, domestic and international conferences related to their research topics, and make at least 3 presentations at the faculty level or above, inclusing 1 presentation at a domestic and international conference.

(5) Teaching Practice

Doctoral students are required to undertake a certain amount of teaching practice during their studies, of which the teaching workload should not be less than 16 hours. Teaching practice should generally be carries out as a teaching assistant, assisting the supervisor or the teachers of the discipline in teaching, experiments, supervising thesis writing of undergraduates, etc. The supervisor or the lectures of the discipline are responsible for the final assessment.

七、学位论文

 博士学位论文应体现研究生创新能力、综合运用所学知识发现问题、分析问题和 解决问题的能力。博士学位论文应在导师指导下由博士生独立完成,撰写要求参照《郑 州轻工业大学研究生学位论文撰写手册》。

 来华留学博士研究生学位论文应是系统完整的学术论文,应在科学上或专门技术 上作出创新性的学术成果,鼓励来华留学研究生进行跨学科或交叉学科的研究工作,论 文应能反映出博士生已经掌握了坚实宽广的基础理论和系统深入的专门知识,观点鲜 明,理论正确,思路清晰,具有突出的创新性和先进性。

3. 博士生在正式撰写博士学位论文前, 应取得一些创新性科研成果, 并在国内外期

刊上发表一定数量的高水平学术论文。博士学位论文应在博士生已发表或待发表的有关 论文或已取得的其他科研成果基础上,进行汇总、概括、深化和提高。

VII. Dissertation

1. The doctoral dissertations generally reflect the candidates' innovation abilities and their ability to discover, analyze and solve problems by comprehensively applying the knowledge they have learned. The dissertations are required to be written independently by the doctoral students under the guidance of the supervisors, and the writing requirements must refer to the "Handbook of Dissertation Writing for Postgraduates of Zhengzhou University of Light Industry".

2. The dissertation of foreign doctoral students studying in China, should be a systematic and complete academic paper, which makes innovative academic achievements in science or technology, and encourages the students to carry out interdisciplinary or cross-disciplinary research work, and the dissertation should be able to reflect that the doctoral students have grasped solid and broad basic theories and systematic and in-depth professional knowledge, with clear viewpoints, sensible theories, clear ideas, and outstanding innovation and advancement. The dissertation should be innovative and advanced.

3. Before formally writing the doctoral dissertation, the doctoral candidate should have achieved some innovative scientific research results and published a certain number of high-level academic papers. The doctoral dissertation should be summarized, generalized, deepened and improved on the basis of the relevant dissertations published or to be published by the doctoral candidates or other scientific research achievements they have achieved.

八、毕业和学位授予要求

博士学位论文答辩及学位申请工作包括预答辩资格申请、预答辩、答辩资格申请、 论文(双盲)评阅、答辩、学位授予及学位公示等环节。其具体要求参照《郑州轻工业 大学硕士、博士学位授予实施细则》执行。

VIII. Requirements for Graduation and Degree Conferment

The work of doctoral dissertation defense and degree application includes pre-defense qualification application, pre-defense, defense qualification application, dissertation (double-blind) evaluation, defense, degree conferral and degree public announcement. The specific requirements are implemented according to the Implementing Rules for the Conferment of Master's Degree and Doctoral Degree of Zhengzhou University of Light Industry.

九、参加编写人员

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