环境科学与工程（0830）

学科门类：工学（08）一级学科：环境科学与工程（0830）

一、专业描述

河海大学环境工程为国家重点（培育）学科和江苏省重点学科，环境科学与工程专业是以水资源保护与水环境修复等为鲜明特色的省级重点学科。现有中国工程院院士 1 名，教育部“长江学者”特聘教授 1 名、国家杰出青年科学基金获得者 1 名、国家“百千万工程”人选 2 名。现有教授 15 名，副教授（含副研究员）17 名。拥有博士生导师 11 名、硕士生导师 53 名，专任教师中具有博士学位比例 95%。

近五年来获国家及部省级科技进步奖 20 余项，出版专著及教材 20 余部，获国家专利 80 项，发表三大检索学术论文 300 余篇。该学科围绕国民经济建设和社会发展所遇到的水环境问题，紧密结合国家经济发展和学科发展方向，在水资源保护理论及技术，环境与生态水力学及应用，流域水污染控制和水环境质量改善，固体废弃物处置与资源化技术，污水处理及废水回用技术等方面开展了深入的研究，获得了大量的科技成果，取得了显著的社会、经济和环境效益。

二、培养目标

本学科专业培养环境科学与工程方面的高级专业技术人才，能够胜任高等教育、科学研究、科技开发、技术管理与工程应用等方面工作，培养具有坚实的数学、化学、生物、力学、计算机应用方面的基础理论知识；能掌握环境学科的发展趋势，针对我国环境领域存在的

主要问题开展研究，熟练阅读环境科学与工程相关外文资料，可用外语撰写科技论文和进行技术交流；培养严谨求实、勇于探索的科学态度和作风，能熟练应用现代基础理论和先进的计算、实验技术手段独立开展环境保护方面的科研工作，具有一定的创新实践能力。

三、研究方向

1. 水资源保护与生态修复 (Water Resource Protection and Bioremediation)
2. 环境水利与生态水力学 (Environmental Water Conservancy and Ecological Hydraulics)
3. 环境系统规划与综合评价(Environmental System Planning and Complex Assessment)
4. 水污染控制与水处理工程 (Water Pollution Control and Water Treatment Engineering)
5. 固体废弃物处置与资源化利用(Solid Waste Disposal and Resourced Utilization)

四、申请条件

环境科学与工程全英文专业博士生申请人需要满足以下条件:

1．已在我国认可的海内外高校或学术机构获得硕士学位者。

2．能够用英语进行课程学习、阅读文献和进行学术写作，能够用英语进行日常交流。

五、培养年限

攻读博士学位的标准学制为 4 年，实行弹性学制，学习年限最短

不低于 3 年，最长不超过 6 年。

六、学分要求和课程设置

本专业博士留学研究生课程总学分为 15 学分，其中学位课程为 11 学分，非学位课程为 4 学分。另设教学环节。具体开设课程见附表。

Environmental Science and Engineering（0830）

Discipline：Engineering（08）

First-Class Discipline：Environmental Science and Engineering（0830）

1. Discipline Description

Environmental Science and Engineering at Hohai University is the national key subject. The education and research here are mostly about the treatment of water and wastewater, the protection of water resources and water environment restoration. The scholarship troop consists of a member of Chinese Academy of Engineering, one special engaged professor of "Yangtze River Scholar", one person of the “National Outstanding Youth Fund”, 11 doctoral supervisors, 53 postgraduate supervisors, 15 professors and 17 associate professors (associate research fellow).

Over the past five years, this discipline of Environmental Science and Engineering has obtained more than 20 National and Provincial Science and Technology Progress Awards, published more than 20 monographs and teaching materials, acquired 80 national patents and published over 300 academic papers. The Environmental Science and Engineering at Hohai University has obtained a large number of achievements and made significant social and environmental contributions in the field of water resource protection and water environment remediation.

2. Program Description

The program in the Environmental Science and Engineering aims at cultivating high-level individuals with solid fundamental knowledge in the theory of mathematics, chemistry, biology, mechanics and computer application. After graduation, the students are capable of handling complex technical problems in environmental protection, undertaking research and development project in engineering companies or teaching and research work in academic institutions.

The program is designed to provide students with an intellectual environment to explore the knowledge and principles in Environmental Science and Engineering through research project under guidance of an established professor (PhD supervisor).

Through the program, students have opportunities to develop their problem-solving ability with new knowledge and skills, and to make their own contributions to their research field.

3. Research Directions

- Water Resource Protection and Bioremediation
- Environmental Water Conservancy and Ecological Hydraulics
- Environmental System Planning and Complex Assessment
- Water Pollution Control and Water Treatment Engineering
- Solid Waste Disposal and Resourced Utilization

4. Application Requirements

(1) You have received the master degree from the domestic and overseas universities or academic institutions accredited by the Ministry of Education.

(2) You have the ability to read and write academic papers and communicate in English.

5. Educational System and Duration

The doctorate program is 4 years, the duration is minimum 3 years and no more than 6 years.

6. Credits and Courses

A doctoral student must take at least 15 credits of courses, including 11 credits of Required course of the degree and 4 credits of Non-required course of the degree.Module structure of the doctorate program of Environmental Science and Engineering is listed below.

环境科学与工程全英文留学博士研究生课程设置

Courses for Doctoral Students of Environmental Science and Engineering

课程类别 Categories		课程编号 No	课程名称 Course	学时 hours	学分 credit	开课学期 Term	备注 Note
学位课程 11 学分 Required course of the degree 11 Credits	公共课程 General Courses	2015LXS01	汉语 I Chinese Language	32	2	秋 fall	必修 RequiredCourse
		2015LXS03	中国概况 Introduction to China	32	2	秋 fall	
	基础课程 BasicCourses	2015JC02	应用数学 Applied Mathematics	32	4	秋 fall	选修 2 学分 2Credits at least
		2015JC05	偏微分方程近代方法 Modern Methods in Partial Differential Equations	32	2	秋 fall	
	专业课程 MajorCourses	2015HJ07	环境科学与工程前沿专题讲座 Special Topic on Environmental Science and Technology	16	1	春 spring	必修 RequiredCourse
		2015HJ06	生态修复理论与技术 Bioremediation Theory and Technology	32	2	秋 fall	选修 4 学分 4Credits at least
		2015HJ04	水污染控制工程 Water Pollution Control Engineering	32	2	秋 fall	
非学位课程 4 学分 Non-required course of the degree 4 Credits		2015LXS07	英文科技写作 The Art of Scientific Presentation and Writing in English	36	2	春 spring	必修 RequiredCourse
		2015LXS05	跨一级学科选修博士课程 A course in other disciplines	36	2		
教学环节 Academic Activities		学术活动 Seminar and Conferences					必修 RequiredCourse
		科学研究 Scientific Research					
		文献阅读与综述 Literature Reading and Reviewing					