

# 港口、海岸及近海工程(081505)

学科门类：工学（08）一级学科：水利工程（0815）

## 一、专业描述

港口、海岸及近海工程学科始建于 1952 年，1981 年海岸工程专业成为全国首批博士学位授权点，1988 年近海工程专业成为硕士学位授权点，1990 年港口航道工程专业成为全国首个博士学位授权点，2007 年港口、海岸及近海工程学科被评为国家重点学科，是国家“211 工程”、“全球水循环与国家水安全” 985 优势学科创新平台重点建设学科。所在的一级学科水利工程在 2009 年和 2012 年全国学科评比中获得第一名。

本学科目前拥有水文水资源与水利工程科学国家重点实验室和水资源高效利用与工程安全国家工程研究中心。现有“青年千人”、双聘院士、“教育部新世纪优秀人才”、“江苏省 333 高层次人才”等十余名领军人才。围绕“港航特色，国际一流”建设目标，“十一五”以来，本学科主持与承担了 624 项科研项目，经费总额 2.39 亿元，发表论文 800 余篇，出版著作和教材 30 余部，获部省级以上科技奖 56 项，其中国家科技奖 1 项。研究生就业单位主要有设计院、行业管理部门、科研院所、高等学校等。

## 二、培养目标

具有实事求是的科学态度和端正严谨的诚信学风，理论联系实际，善于钻研与创新，具有良好的团队合作精神；在港口、海岸及近海工

程学科上掌握坚实宽广的基础理论和系统深入的专门知识；具有独立从事科学研究工作的能力，在科学或专门技术上做出创造性成果。

### **三、研究方向**

1. 河口海岸及近海工程水动力环境
2. 海岸风暴灾害与防灾减灾
3. 港口航道工程泥沙与疏浚
4. 工程结构物及其与周围介质的相互作用
5. 水运工程经济、规划与管理

### **四、申请条件**

港口、海岸及近海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。

## **Harbor, Coastal and Offshore Engineering (081505)**

Discipline: Engineering (08)

First-Class Discipline: Water Engineering (0815)

### **1. Discipline Description**

The Harbor, Coastal and Offshore Engineering discipline was founded in 1952 by Yan Kai who was academician of both Chinese Academy of Sciences and Chinese Academy of Engineering. In 1981, Coastal Engineering was granted as one of the first specialties leading to Doctor and Master degrees, and Offshore Engineering was approved as one of the first specialties leading to Master degree. In 1990, Harbor and Waterway Engineering became the very first Doctoral program among the homogeneous subjects in China. In 2007, the discipline was chosen as a national key discipline and one of the key construction disciplines by the 985 Innovative Platforms for Key Disciplines Project.

Based on the State Key Laboratory of Hydrology-Water Resources and Hydraulic Engineering and National Engineering Research Center of Water Resources Efficient Utilization and Engineering Safety, the Harbor, Coastal and Offshore Engineering discipline has more than ten leading talents, including distinguished professors of Recruitment Program of Global Young Experts, joint-appointed academicians, winners of New Century Excellent Talents Supporting Plan of Ministry of Education and awardees of Jiangsu Province 333 High-level Personnel Training Project. Aiming at “harbor and waterway characteristics, international first-level”, the discipline hosted 624 scientific projects of 239 million total funding, published more than 800 academic papers, more than 30 works and teaching materials, won 55 provincial or ministerial Science and Technology Prizes, and 1 National Science and Technology Prize during the 11<sup>th</sup> Five-Year Plan. The main employers of graduate students are design institutions, management agencies, research institutions and universities.

### **2. Program Description**

The program in Harbor, Coastal and Offshore Engineering aims to cultivate high-level talent PhD students in this field. First, graduates in the discipline must ensure an innovating with

down-to-earth attitude and a good team spirit. Then they can master a solid broad basic theory and system of in-depth expertise as well as have the ability to work independently in scientific research. Besides, they can skillfully use modern basic theory and advanced computing methods and experimental techniques to carry out scientific research, and can be expert to make innovative achievements.

### **3. Research Directions**

The PhD program in Harbor, Coastal and Offshore Engineering is mainly oriented (but not limited) to the following research areas:

- Hydrodynamics of estuarine, coastal and offshore engineering
- Coastal storm disaster and its mitigation
- Sedimentation and dredging in harbor and navigation engineering
- Engineering structure and its interaction with surrounding medium
- Economy, planning and management of waterway transportation engineering

### **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 Harbor, Coastal and Offshore Engineering is listed below.

## 港口、海岸及近海工程全英文留学博士研究生课程设置

### Courses for Doctoral Students of Harbor, Coastal and Offshore 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 RequiredCo urse
		2015LXS03	*中国概况 Introduction to China	2	2	秋 fall	
	基础 课程 Basic Courses	2015JC06	应用泛函分析 Applied Functional Analysis	48	3	秋 fall	选修 4 学分 4 Credits at least
		2015JC05	偏微分方程近代方法 Modern Methods in Partial Differential Equations	32	2	秋 fall	
		2015JC07	可靠性分析 Reliability Analysis	32	2	秋 fall	
	专业 课程 Major Courses	2015GH01	*学科前沿专题 Special Topic on Harbor, Coastal and Offshore Engineering	16	1		必修 RequiredCo urse
		2015GH02	高等海岸动力学 Advanced Coastal Dynamics	32	2	秋 fall	选修 2 学分 2 Credits at least
		2015GH03	工程结构分析的高等理论与方法 Advanced Theory and Method of Structure Analysis	32	2	春 spring	
	非学位课程 4 学分 Non-required course of the degree 4 Credits	2015GH04	港口海岸及近海工程模拟技术 Simulation Technology of Port Coastal and Offshore Engineering	32	2	秋 fall	选修 2 学分 2 Credits at least
2015LXS07		英文科技写作 The Art of Scientific Presentation and Writing in English	32	2	春 spring		
2015LXS04		*第二外国语 (除母语与汉语外) Second Foreign Language	32	2	春 Spring	必修 RequiredCo urse	
教学环节 Academic Activities	学术活动 Seminar and Conferences						必修 RequiredCo urse
	科学研究 Scientific Research						
	文献阅读与综述 Literature Reading and Reviewing						