

# PHD IN ENVIRONMENTAL SCIENCE AND ENGINEERING

## Program Name: International Ph.D. Program in Environmental Science and Engineering

*School of Environment, Beijing Normal University*

### INTRODUCTION

This program is intended to cultivate senior professional talents with the following qualities: with a high level of personal and academic morals; with broad and solid fundamental knowledge and systematic and in-depth expertise in their respective subjects; familiar with latest technologies and methods concerning environmental scientific research and environmental engineering technical R&D; familiar with academic standards as well as history, current conditions, and trends of their respective subjects at home and abroad; with certain international communication experiences; with the capabilities to conduct independent scientific research work or practical work; with intensive studies and innovative research findings in environmental science & engineering and relevant fields; qualified for academic research or teaching work in their respective subjects and relevant disciplines after graduation.

### Subject direction and main research contents

Subject direction	Main research contents
Environmental Science	Basin water ecological process and health; urban ecological simulation and management; regional ecological protection and recovery; environment evaluation, planning, and management; basin water environment process and management; environment pollution chemistry; soil pollution diagnosis and remediation; environmental hydrology geochemistry; interaction between microorganism, water, and rocks; groundwater environment safety and emergency management.
Environmental Engineering	Water quality control engineering; atmospheric pollution control; solid waste handling and reutilization; soil and groundwater pollution control and remediation; groundwater monitoring and water quality safety evaluation; integrated simulation and forecast of groundwater system.

### ENTRY REQUIREMENTS

- A recognized Master's degree or equivalent degree.
- Applicants whose first language is not English need to provide English proficiency certificate: TOEFL 550 points / 80 points or 6.5 for IELTS or have a bachelor degree from an English-taught program.
- In good health with a health certificate issued by the local public hospitals; without diseases with which entry to China is disallowed by China's laws and regulations;

without severe chronic diseases such as serious high blood pressure, cardiovascular/cerebrovascular diseases and diabetes; without mental diseases or epidemic diseases that are likely to cause a serious threat to public health; not in the process of recovering after a major operation or in the process of acute diseases; not seriously disabled or pregnant.

### **DURATION& TUITION**

- Study Duration: 3 years
- Tuition Fee: RMB 98,000 (for 3 years)

### **APPLICATION DEADLINE**

- Please refer to the latest notice issued by BNU Admission Office every year.
- Scholarship applications are subject to the deadline set by the respective funding agencies and organizations

### **CURRICULUM & REQUIRED CREDIT POINTS**

The students must achieve 20 credits from the courses and requirements listed in the table below. The students must defend their thesis to obtain their Ph.D. degrees.

<b>Course type</b>	<b>Subject and courses</b>	<b>Minimum credit points</b>
Public compulsory course	Introduction of China, Basic Chinese	4
Degree fundamental course	Advanced course	3
Degree professional course	Seminar	3
	Methodology course	4
Compulsory contents	Scientific research activities	2
	International experiences	2
	Mid-term examination	2
Minimum Credits		20

Course type		Subject and courses	Minimum credit points
Public compulsory course		Introduction of China	2
		Basic Chinese	2
Degree fundamental course		Advanced Systems Ecology	3
Degree professional course	Seminar	Restoration Ecology and International Conservation	3
		Landscape Ecology	2
		Eco-hydraulics	2
		Atmospheric Environmental Chemistry	2
		Leading Edge in Water Quality Science and Process Engineering	2
		Principles and Applications of Membrane-based Separation	2
		Strategic Environmental Assessment	2
		Ecosystem Assessment and Management	2
		Environmental Toxicology	2
		Special English of Environmental Engineering	2
		Special English of Environmental Science	2
		Environmental Sociology	2
		The Theory of Environmental Science	2
		Energy Economics	1
	Energy Oriented Business Administration	1	
	Methodology course	Water Quality Model and Simulation	2
		Industrial Ecology	2
		Ecological Modeling	2
		Environmental Statistics	2
		Modeling of Aquatic Ecosystems	2
Natural Resource Economics		2	
Environment Accounting and Management		2	
Advanced Environmental Fluid Mechanics		2	
Statistics for Environmental Engineers and Scientists using R	1		
Compulsory contents	Scientific research activities	2	
	International experiences	2	
	Mid-term examination	2	
Minimum Credits for the Program in total			20

### **Scientific research activities of doctoral students**

- Before applying for a thesis defense, a doctoral student should have attended 2 or more international or domestic meetings and have made one oral paper presentation or poster session presentation.
- A doctoral student should participate in at least two large lectures organized by his/her organization, and write an informal essay containing at least 2000 words and submit it to his/her tutor within a week.
- A doctoral student should participate in at least one research topic managed by his/her tutor, and complete the scientific research activities specified by his/her tutor in the talent development plan. The doctoral student should write a summary report, and get 2 points as compulsory credit after the report is signed by his/her tutor.
- A doctoral student has to meet the following conditions before applying for a thesis defense (deadline: April 30 in spring, or October 30 in autumn): ① Completed the preliminary thesis defense organized by the school. For specific requirements concerning preliminary thesis defense and exemption from preliminary thesis defense, see the attachment; ② Had papers published or received by SCI journals as the first author (or as the second author coming next to his/her tutor, with his/her organization being the first unit) with a total impact factor exceeding 4, provided that main topics of such papers shall be closely related to his/her graduation thesis. For doctoral students failing to meet the above criteria, graduation is permitted with suspended degree awarding.
- A doctoral student should also meet other rules related to doctoral thesis defense application established by his/her organization, such as those concerning academic misconduct investigation.

### **Requirements for international communication experiences of doctoral students**

A doctoral student should meet one of the following conditions:

- Pay short-term academic visit to a foreign country for at least 1 month;
- Be designated by the government as a member in a joint training program;
- Submit a paper to an international conference or a SCI journal and the paper should be adopted; Complete study of a Full-English postgraduate course and obtain the corresponding credit;
- Complete study of an elective course taught by a foreign teacher.

### **Requirements for mid-term examination**

The doctoral mid-term examination should cover the following areas:

- Personal and academic moral norm examination
- Course study and general professional knowledge examination
- Opening report and classic and frontier literature reading

The doctoral mid-term examination is managed by the tutor, and should be completed by the end of the third semester. The examination team should consist of at least three Ph.D. student tutors (or professors).

The general examination covers the following fields: degree fundamental courses; professional theoretical knowledge; classic and frontier literature reading, mainly including latest frontier papers published in domestic and foreign leading journals; academic moral norm examination, mainly including compliance of existing research results or submitted coursework with academic moral norms; opening report, mainly including pioneering research topics, scientific research method, reasonable structural arrangement, comprehensive literature review and feasible research plans. For examination results and subsequent procedures, see the Postgraduate Student Manual.

### **CONTACT INFORMATION**

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