

Educational Program for the Doctoral Candidate of Environmental Science and Engineering (International students)

一、 Training Objectives

According to the social needs of international environmental protection and sustainable development, we cultivate innovative talents in the field of environmental science and engineering with a high sense of social responsibility and all-round development of morality, intelligence, and physique.

1. Degree recipients should have an attitude of seeking truth from facts and good academic ethics, have a highly comprehensive environmental knowledge and the ability to solve practical environmental problems, and grasp the frontier research trends of the discipline.
2. Degree recipients should skillfully use the research means of modern environmental science and engineering-related fields, and can independently engage in theoretical research, technology development achievement transformation, and innovation work in the discipline field.
3. Degree recipients should take solving major international needs as the direction of their future study and work and should make creative achievements in scientific research or specialized technology.

二、 Research area

1. Environmental pollution and control chemistry
2. Energy and environmental catalysis
3. Comprehensive assessment of environmental / disaster risk and coordinated safety prevention and control
4. Recycling and storage of urban sewage
5. Environmental pollution control and resource recovery
6. Environmental ecology and wetland conservation
7. Animal ecology and conservation biology
8. Ecosystem ecology and soil biology

三、 Length of schooling

The basic length of schooling for PhD students is 4 years. During the study period, the Ph.D. must be officially published (with the employment certificate or online) 2 SCI papers or 1 SCI paper impact factors (IF) at or above the second district of the Chinese Academy of Sciences as the first author, or meet the graduation requirements of domestic students in the PhD program of Environmental Science and Engineering, School of Environment, Northeast Normal University, can apply for a PhD degree. The basic length of study for master's and doctoral students is 5 years.

四、 Cultivation mode

1. Adopt the training method of combining collective training and tutor responsibility. We set up the Ph.D. student guidance group, and the members are the Ph.D. supervisors and associate professors with doctoral degrees, The number is generally 3-5, and set up one group leader. The supervisor is the first person in charge of Ph.D. training, and the Ph.D. guidance group participates in the whole guidance of Ph.D. students.

2. The Ph.D. course study should be completed within one year, and the teaching form should be mainly special lectures and academic seminars.

3. PhD students should complete each training part independently. Within 2 months after admission, the research direction will be determined under the guidance of the supervisor, personal research and study plans should be formulated, and they should be submitted to the school for the record after being examined and approved by the Ph.D. guidance group. PhD students should report their study and research progress to their supervisors at the end of each semester.

4. Implement the academic exchange and reporting system. PhD students should attend at least one national or international academic conference submit and read papers, and make academic reports twice within the school.

5. Implement the PhD student teaching assistant system. Ph.D. students can apply for teaching assistants in the college and participate in the construction of English courses to improve their teaching ability and accumulate teaching experience.

五、 Course learning

1. The list of Courses

Course category	Course title	Class hour	Credit	Class semester	remarks
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Commonly required course	Survey of China		3	Autumn
	Public Chinese		4	
Professional course	Organic pollution and control of chemical frontiers and progress	36	2	Spring
	Energy and environmental catalysis frontier and progress	36	2	Spring
	Ecological environment security and risk frontier and progress	36	2	Spring
	Frontier and progress of environmental and ecological restoration technology	36	2	Spring
	Frontier and progress of environmental ecology and wetland conservation	36	2	Spring
	Frontiers and advances in animal ecology	36	2	Spring
	Biodiversity frontiers and advances	36	2	Spring
	Literature reading and review	36	2	Autumn

Note: The professional courses are organized by the team academic leaders of the major, including the subject theory, research methods, and paper writing, which are jointly undertaken by the team members.

2. Assessment requirements

According to the nature of the course, the written test, oral test, course paper, research report, professional practical skills test, and other appropriate assessment methods can be selected, and the content should pay attention to the detection of doctoral students' various comprehensive abilities. Course assessment is calculated on a 100 percent system. Compulsory courses above 75 points are qualified, and Elective courses above 60 points are qualified.

3. Credit requirements

At least 12 credits should be obtained, including no less than 6 credits for public courses and no less than 6 credits for professional courses.

六、Dissertation

Dissertation is an important part of Ph.D. training and is the key to cultivating Ph.D. scientific research ability and writing ability link. Under the guidance of the supervisor, frontier topics related to environmental science, environmental engineering, and ecology should be

selected, and dissertation research and writing should be conducted according to the research plan. Ph.D. dissertation research must pass the preliminary review, mid-term review and after Period review three reviews.

1. Preliminary review

Based on the proposal report, we review the topic selection and research design of the dissertation. PhD students should determine the direction of the thesis topic in the first academic year, and the topic must be carried out under the guidance of the supervisor and approved by the PhD guidance group. The opening report is conducted at the end of the second semester or the beginning of the third semester. See the details of the requirements and standards of the opening report "Detailed Rules for Graduate Student Management of School of Environment, Northeast Normal University".

2. Mid-term review

The progress and completion of the dissertation were mainly based on the implementation of the experiment. PhD students should conduct dissertation research according to the thesis research plan, and complete dissertation progress reports not less than 2 times before entering the mid-term review. PhD students who fail the mid-term examination will apply for the mid-term review of the paper again after half a year. See the specific requirements and standards for interim examinations "Detailed Rules for Graduate Student Management of School of Environment, Northeast Normal University".

3. Late-review

Mainly based on the pre-defense and defense of the dissertation, a comprehensive review of the quality and level of the Ph.D. dissertation. Before the formal defense, the doctoral student should have the pre-defense organized by the supervisor's defense committee. After the application of the pre-defense, he can submit the formal defense, and the defense can be conducted after the approval of the degree evaluation sub-committee of the college. In the Ph.D. dissertation defense, the premise is to publish academic papers, published academic papers in principle a part of the dissertation. The specific requirements and standard reference of graduation defense "Detailed Rules for Graduate Student Management of School of Environment, Northeast Normal University".

七、 Graduation and degree awarding

The Ph.D. student shall complete the course study and complete the required credits within the prescribed number of years, pass the ideological and moral assessment and dissertation defense, meet the relevant provisions of the Regulations of the People's Republic of China, meet the degree awarding standards of our university, and receive the doctoral degree of engineering through the examination of the Academic Degree Evaluation Committee.

Note: This program will be implemented for the doctoral students of Grade 2023. If there is any contradiction with the relevant regulations of the higher level unit of the school, the relevant regulations of the higher level unit shall be implemented.