华北电力大学（留学生）英文授课

North China Electric Power University (International Student) Taught in English

水利工程一级学科博士研究生培养方案

Training Program for Doctoral Students in First-level Discipline of Hydraulic Engineering

（专业代码：0815　授予工学博士学位）

(Major Code: 0815, Degree: Doctoral Degree of Engineering)

一、学科简介

I. Brief Introduction to the Discipline

华北电力大学水利工程学科依托能源电力行业，已发展成国内同类院校一流，具有鲜明能源电力特色的水利工程一级学科。学科起源于合并院校——北京动力经济学院及其前身北京水利电力经济管理学院，上世纪80年代初曾开设的水工结构工程和农田水利工程两个本科专业，并拥有农田水利工程专业硕士学位授予权。华北电力大学自2004年组建水利工程学科，2006年开始在水文学及水资源二级学科硕士点招收研究生，2011年水利工程一级学科硕士点获批，2017年水利工程一级学科博士点获批。水利工程学科是华北电力大学重点打造的培养复合型高级技术人才，解决国民经济建设中水利水电工程、水电能源开发与利用等领域相关问题，具有能源电力特色的重点学科。

Relying on the energy and power industry, the Hydraulic Engineering discipline of North China Electric Power University has developed into a first-level discipline with distinct energy and power characteristics in similar colleges and universities in China. The discipline originated from the merged university -- Beijing Institute of Power Economics and its predecessor, Beijing Institute of Water Conservancy and Electric Power Economics and Management, which had two bachelor's degree programs of Hydraulic Structure Engineering and Farmland Water Conservancy Engineering in the early 1980s, and had the right to grant a master's degree in Farmland and Water Conservancy Engineering. North China Electric Power University established the discipline of Hydraulic Engineering in 2004, and began to enroll postgraduates of the master program in second-level discipline of Hydrology and Water Resources in 2006. The master program in first-level discipline of Hydraulic Engineering was approved in 2011, and the doctoral program in first-level discipline of Hydraulic Engineering was approved in 2017. The discipline of Hydraulic Engineering is a key discipline with the characteristics of energy and electric power, which focuses on training senior compound technical talents, solving related problems in the fields of water conservancy and hydropower engineering, hydropower energy development and utilization in national economic construction.

水利工程是研究自然界水的运动规律以及人类改造自然以防止水患灾害，开发利用和保护水资源的学科。我校水利工程学科成立以来，依托新能源电力系统国家重点实验室、能源的安全与清洁利用北京市重点实验室以及区域能源系统优化教育部重点实验室。先后建成了

水电系统运行模拟与风险分析、水电站与岩土工程、水工与河流模拟 3 个实验中心，14 个实验室。在水资源持续利用与管理、防洪减灾理论及水安全分析、跨流域水电系统开发技术等方面逐步形成以“大电力”为特色的水电能源研究领域。

Hydraulic Engineering is a discipline that studies the movement law of water in nature and that human beings transform nature to prevent flood disasters, develop, utilize and protect water resources. Since the establishment of the Hydraulic Engineering discipline of our school, relying on the National Key Laboratory of New Energy Power System, the Beijing Key Laboratory of Energy Security and Clean Utilization, and the Key Laboratory of Regional Energy System Optimization of the Ministry of Education, our school has built three experimental centers and 14 laboratories for operating simulation and risk analysis of hydropower system, hydropower station and geotechnical engineering, hydraulic engineering and river simulation successively. The research field of hydropower energy characterized by "large power" has been gradually formed in the aspects of sustainable utilization and management of water resources, theory of flood control and disaster reduction and water security analysis, inter-basin hydropower system development technology, etc.

二、培养目标

II. Training Objectives

1．培养对中国有良好认知，理解中国社会主流价值观，具有相应的中文语言能力，具备一定跨文化和全球胜任力，在所在学科具有相当专业知识和学术能力的国际化人才。

1. Cultivate international talents who have a good understanding of China, understand the mainstream values of Chinese society, have corresponding Chinese language skills, have certain cross-cultural and global competencies, and have considerable professional knowledge and academic abilities in the disciplines.

2. 在本学科内掌握坚实宽广的基础理论和系统深入的专门知识，具有扎实的自然科学、人文科学基础，具备计算机、外语、经济、管理等方面应用基础，具备独立从事科学研究工作的能力，具有创新精神和实践能力的复合型高级水利工程技术人才。

2. Senior compound hydraulic engineering and technical talents who master solid and broad basic theory and systematic and in-depth specialized knowledge in this discipline, have a solid foundation in natural science and humanities, have a foundation in the application of computer, foreign language, economy, management, etc., have the ability to engage in scientific research independently, the innovative spirit and the practical ability.

三、研究方向

III. Research Direction

水利工程一级学科博士点包括水文学及水资源、水力学及河流动力学、水利水电工程、水工结构工程、港口、海岸与近海工程等 5 个二级学科，主要研究方向包括：

The doctoral program in first-level discipline of Hydraulic Engineering includes five second-level disciplines, namely Hydrology and Water Resources, Hydraulics and River Dynamics,

Water Conservancy and Hydropower Engineering, Hydraulic Structure Engineering, Port, Coastal and Offshore Engineering. The main research directions include:

1. 水文预报与模拟

1. Hydrological Forecast and Simulation

2. 水资源配置与调度

2. Allocation and Dispatching of Water Resources

3. 水力学与河流动力学

3. Hydraulics and River Dynamics

4. 水信息学与数字流域

4. Water Informatics and Digital Watershed

5. 水工结构与岩土工程

5. Hydraulic Structure and Geotechnical Engineering

6. 水利水电工程建设与移民管理

6. Construction and Resettlement Management of Water Conservancy and Hydropower Engineering

7. 水环境与水生态

7. Water Environment and Water Ecology

四、培养方式

IV. Training Method

1．博士生培养实行导师负责制，必要时可设副导师或组成指导小组。导师是研究生培养第一责任人，要了解掌握研究生的思想状况，将专业教育与日常教育有机融合，既做学业导师，又做人生导师，严格要求学生遵守科学道德和学术规范。

1. The training of doctoral students implements supervisor responsibility system, if necessary, a secondary-supervisor or a steering group may be introduced. The supervisor is the person of primary responsibility for postgraduate training. The supervisor shall understand and master the ideological situation of postgraduates and organically integrate professional education with daily life education both as academic mentors and life mentors. The supervisor shall also strictly require students to abide by scientific ethics and academic norms.

2．博士生的培养以科学研究工作为主，重点是培养独立从事科学研究工作和进行创造性研究工作的能力；并根据研究需要继续深入学习一些课程，在拓宽基础、加深专业、掌握学科发展前沿的基础上学会进行创造性研究工作的方法和培养严谨的科学作风。

2. The training of doctoral students is mainly on scientific research work, with emphasis on cultivating the ability to independently engage in scientific research work and creative research work. Doctoral students should continue to study some courses in depth according to the needs of the research; moreover, they should learn the methods of creative research work and cultivate a rigorous scientific style on the basis of broadening the foundation, deepening the specialty and grasping the forefront of discipline development.

3．博士生的培养可在校内进行，也可由国内、国际的高校以及科研院所联合培养。

3. The training of doctoral students can be carried out in the campus of the university as well as in other universities and colleges and the joint academic institutes at home or abroad.

五、学制与学习年限

V. Educational System and Duration of the Program

学制 4 年，学习年限 3-8 年。

The educational system is 4 years, and the duration of the program is 3-8 years.

六、课程学习及学分要求

VI. Course Learning and Credit Requirements

攻读博士学位留学生在校期间，应修最低学分为 20 学分，其中学位课 14 学分，必修环节 6 学分。具体要求如下：

During school, doctoral students shall have the minimum 20 credits, among which 14 credits are degree courses and 6 credits are required links. The specific requirements are as follows:

1．学位课（**14** 学分），其中：

1．Degree courses (14 credits), of which:

公共课：汉语综合(1)：4 学分(64 学时)

Public courses: Chinese Comprehension (1): 4 credits (64 class hours);

汉语综合(2)：4 学分(64 学时)

Chinese Comprehension (2): 4 credits (64 class hours);

中国概况(英文)：2 学分(32 学时)

Introduction to China (English): 2 credits (32 class hours);

基础理论课：2 学分；

Basic theoretical courses: 2 credits;

专业核心课：2 学分。

Specialized core courses: 2 credits.

要求博士生在基础理论方面，应进一步掌握现代数学等高层次的宽厚的基础理论，为研究方法的创新提供坚实的理论基础；在专业核心课程的设置中以研究型的专业课程为基础，以加强博士研究生的学术理论训练为主，使学生把握本学科发展的前沿动态，培养学生发现问题、提出问题、分析问题的批判性思维能力和创新思维能力以及解决实际问题的能力。

Doctoral students are required to further master the high-level and broad basic theories such as Modern Mathematics, so as to provide a solid theoretical basis for the innovation of research methods. The setting of the specialized core courses is based on the research-oriented professional basic courses, focusing on strengthening the academic theory training of doctoral students, so as to enable students to grasp the frontier trends of the development of this discipline, cultivate students' critical thinking ability and innovative thinking ability of discovering, raising and analyzing problems as well as the ability to solve practical questions.

2．必修环节（**6** 学分），包括：

2．Required links (6 credits), including:

研究生科学道德与学术规范 1 学分；

Scientific Ethics and Academic Norms for Postgraduates: 1 credit;

研读专业经典名著 1 学分：博士生在学习期间，须在导师的要求与指导下，研读本专业至少 1 本经典名著，完成后记 1 学分；

Professional Classics Studying (1 credit): During the study of doctoral students, they must, under the requirements and guidance of their supervisors, study at least one classic masterpiece of this major, and they shall get 1 credit upon completion;

文献综述与选题报告 2 学分；

Literature Review and Thesis Proposal: 2 credits;

前沿讲座与专题研讨 1 学分：参加前沿讲座与专题研讨是培养博士生综合能力和进入学科前沿的重要环节。博士生在学习期间，应在导师确定的专题领域，至少参加 8 次前沿讲座与专题研讨，完成后记 1 学分；

Cutting-edge Lectures and Seminars (1 credit): Participating in cutting-edge lectures and seminars is an important link to cultivate the comprehensive ability of doctoral students and help them to enter the forefront of the discipline. During the period of study, doctoral students should participate in at least 8 cutting-edge lectures and seminars in the special areas determined by their supervisors, and they shall get 1 credit upon completion;

博士论坛 1 学分：要求博士生至少做 2 次学术报告，完成后记 1 学分。

Doctoral Forum (1 credit): Doctoral students are required to make at least 2 academic reports, and shall be given 1 credit;

3.任选课与补修课程

3. Optional courses and supplementary courses

第二外国语：2 学分。第一外语非英语者，必须选修英语为第二外语，且要达到阅读本学科外文资料的水平；第一外语为英语，第二外语可以免修。

Second Foreign Language: 2 credits. Those whose first foreign language is not English must choose English course as the second foreign language course, and must reach the level of reading foreign materials of the discipline; for those whose first foreign language is English, the second foreign language course can be exempted.

硕士阶段非本学科的博士生应补修由导师指定的若干本学科硕士阶段主干课程。补修课程不计入总学分。

Doctoral student who are not in their own disciplines at the postgraduate stage should take several major courses of postgraduate stage of this discipline designated by their supervisors. Supplementary courses are not included in the total credit.

具体课程设置见附表。

For the specific curriculum, please refer to the Schedule.

七、科学研究及学位论文要求

VII. Requirements for Scientific Research and Degree Thesis

进行科学研究与撰写学位论文，是对博士研究生进行科学研究训练、培养创新能力的主

要途径，也是衡量研究生能否获得博士学位的重要依据之一。博士生在学期间一般要用 2 年的时间完成学位论文。博士学位论文是综合衡量博士生培养质量和学术水平的重要标志，博士生的资格考核、学位论文选题报告、论文中期检查、学位论文预答辩、论文答辩资格审查等，是博士生培养工作的重要环节，本学科的相关具体安排与要求如下：

Conducting scientific research and writing degree thesis is the main way to train doctoral students in scientific research and innovative ability, and it is also one of the important bases to measure whether a postgraduate can obtain a doctoral degree or not. Doctoral students usually take 2 years to complete their dissertations during the period of study. The doctoral dissertation is important supporting evidence which measures the quality of the cultivation outcomes and academic levels of the research. The doctoral qualification examination, topic selection report, mid-term review, pre-defense of dissertation, etc., are important parts for the doctoral training. The specific arrangements and requirements of this discipline are as follows:

1.文献综述与选题报告

1. Literature review and thesis proposal

博士生应在了解本研究领域国内外的现状、发展动态的基础上确定博士学位论文题目，选题要体现学科领域的前沿性和先进性。选题报告时间由博士生导师根据博士生工作进度情况确定，博士开题时间一般最迟不超过博士入学后第 4 学期，开题时间距离申请答辩日期不少于 18 个月。

Doctoral students should determine the title of doctoral dissertation on the basis of understanding the current situation and development trends in this research field at home and abroad, and the topic selection should reflect the frontier and advanced nature of the discipline field. The time for submitting the thesis proposal shall be determined by the supervisor according to doctoral students' progress. Generally, it shall be no later than the 4th semester after admission and no less than 18 months before the application of thesis defense.

博士论文选题报告内容应包含文献综述、论文选题及其意义、主要研究内容、技术路线、预期成果及可能的创新点等。博士生在论文开题时须针对论文选题单独提交一份全面详细的文献综述报告（不少于 1 万字）。选题报告在二级学科范围内相对集中、公开地进行，并由以博士生导师为主体组成的考核小组进行评审。选题报告会应吸收有关导师和研究生参加，跨学科的论文选题应聘请相关学科的导师参加。若学位论文课题有重大变动, 应重做选题报告, 以保证课题的前沿性和创新性。

The doctoral dissertation thesis proposal shall include literature review, topic selection and its significance, main research content, technical route, expected results and possible innovative points, etc. At the beginning of the thesis proposal, doctoral students are required to submit a comprehensive and detailed literature review report (no less than 10,000 words) for the selected topic of the dissertation. The topic selection report is carried out in a relatively intensive and open manner within the scope of the second-level discipline, and reviewed by the assessment team composed of 3-5 doctoral supervisors as the main body. The topic selection meeting should be attended by relevant supervisors and postgraduates, and supervisors of relevant disciplines should

be invited to participate in the meeting for topic selection of interdisciplinary theses. If there is a major change in the topic of the degree thesis, the topic selection report should be carried out once again to ensure the frontier and innovation of the topic.

2．论文中期检查

2. Mid-term review of the thesis

学位论文实行中期检查制度。中期考核是检查研究生学位论文进展状况、帮助学生把握学位论文方向、提高学位论文质量的必要环节。学位论文中期检查应在开题一年后进行，考查小组应由 3-5 名教授（或具备副高职称的博导）组成，对研究生的综合能力、论文进展情况等进行全面考查。

A mid-term review system is adopted for degree thesis. The mid-term review is a necessary process to check the progress of master dissertation, keep students in the right direction and improve the quality of their dissertation. The mid-term review shall be conducted one year after the report of the thesis proposal. The review team shall be composed of three to five professors (or doctoral supervisors with the deputy senior title), and examine the comprehensive abilities of the postgraduate students and the progress of the paper work comprehensively.

3．科研成果要求

3．Requirements for scientific research achievements

博士生应参与省部级及以上科技项目或企业委托重大项目的课题研究，在申请学位论文答辩前应取得 2 项科研成果，包括高水平论文、科研获奖、专利转化或成果鉴定等，要求至少 1 项科研成果为本学科权威学术期刊论文（权威学术期刊见附表 2）（增刊除外），科研成果认定的具体要求如下：

A doctoral student shall participate in subject research of technological projects at provincial and ministerial level or above or of major projects entrusted by enterprises, and obtain two scientific research achievements such as publishing high-level academic papers, winning awards for scientific research, completing patent conversion or achievement identification before applying for thesis defense. In addition, it is required that at least one authoritative academic journal paper shall be included in the scientific research achievements (authoritative academic journals refer to Schedule 2) (except the supplement). Specific requirements for the recognition of scientific research achievements are as follows:

（1）以华北电力大学为第一署名单位，博士生为第一作者（其导师必须是作者之一）或第二作者（其导师必须是第一作者），在本学科权威学术期刊（权威学术期刊见附表 2）（增刊除外）上公开发表学术论文（网络见刊需导师签字）。

（1）Before applying for thesis defense, doctoral students shall, in the name of the first author (the supervisor must be one of the authors) or the second author (the supervisor must be the first author), publish academic papers in the academic authoritative academic journals (authoritative academic journals refer to Schedule 2) (except supplement) according to the following requirements: the first publication affiliation shall be North China Electric Power University (the supervisor’s signature is required for network publication).

（2）博士生作为主要完成人之一，其学位论文工作成果获得省部级及以上科研奖励 1 项（以科研院认证目录为准，署名单位为华北电力大学）。

（2）The doctoral student’s achievements of the degree thesis work, for which the doctoral student is one of the main contributors, have won one scientific research award at the provincial and ministerial level (subject to the catalogue certified by the Scientific Research Institute and with North China Electric Power University as the author affiliation).

（3）获得与博士论文代表性成果相关的国内外发明专利授权 1 项，发明专利要求第一署名单位为华北电力大学，学生排名第一或者学生排名第二（其导师排名第一），且累计成果转化收益到款额不低于 10 万元（以科研院核算为准）。

（3）Obtain authorization for 1 patent for invention at home and abroad related to the representative achievements of the doctoral dissertation. As for the patent for invention, the first author affiliation shall be North China Electric Power University; the student shall be the first author or the second author (with the supervisor being the first author); the cumulative income from the transformation of achievements shall not be less than RMB 100,000 (subject to the accounting of the Scientific Research Institute).

（4）博士生作为主研人（排名前三）完成的科研项目获得一级学会科技成果鉴定 1 项，或获得国家领导人、省部级领导批示、采纳 1 项，成果第一完成单位是华北电力大学。

（4）One scientific research project completed by the doctoral student as a lead researcher (top 3), with North China Electric Power University being the first completion affiliation, has been certified as 1 scientific and technological achievement at first-level institute, or obtained approval and adoption of state leaders and provincial and ministerial leaders.

（5）在职博士生在读期间，如有与华北电力大学合作的科研项目，并且该项目的主要内容将作为其学位论文的组成部分，对博士生本人，获奖、鉴定的署名单位可不作硬性要求，但华北电力大学作为合作方必须在科研成果中有所体现，也应当作为署名单位之一。

（5）If an on-the-job doctoral student has a scientific research project in collaboration with the North China Electric Power University, and the main contents of the project will be part of his or her dissertation, there is no mandatory requirement for the author affiliation in the award and appraisal of the doctoral student, but North China Electric Power University, as a collaborator, must be reflected in the scientific research achievements, and shall also be one of the author affiliations.

凡不符合上述要求体现的成果，在学位申请时将一律不予考虑。

Any other achievements that do not meet the above requirements will not be considered in degree applications.

硕博连读学生在硕士期间发表的论文及取得的科研成果按以上规定同等对待。

The papers published and scientific research achievements obtained by the MD-PhD students of continuous academic program during the master stage shall be treated equally in accordance with the above provisions.

4．学位论文要求

4．Degree thesis requirements

博士生在毕业前应提交博士学位论文。博士学位论文是博士生在导师指导下独立完成的、系统完整的学术研究工作的总结，论文应体现出博士生在所在学科领域所做出的创造性学术成果，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，并具备了独立从事科研工作的能力。

Doctoral students shall submit their doctoral dissertations before graduation. The doctoral dissertation is a summary of the systematic and complete academic research work completed independently by a doctoral student under the guidance of his/her supervisor. The dissertation shall reflect the creative academic achievements made by the doctoral student in his/her discipline. It shall also reflect that the doctoral student has mastered solid and broad basic theories and systematic and in-depth knowledge of the major, and had the ability to engage in scientific research independently.

博士学位论文的撰写规范参照《华北电力大学博士学位论文撰写规范及范例》。

For the writing norms of doctoral dissertation, please refer to the *Norms and Examples for the Doctoral Dissertation Writing of North China Electric Power University*.

5．学位论文预答辩

5．Pre-defense of dissertation

博士生在完成博士学位论文初稿，经导师审核认为符合要求的，要进行博士学位论文的预答辩。预答辩的目的在于进一步修改、完善博士学位论文。博士生预答辩时间距离申请答辩日期不少于 3 个月，预答辩由学院统一组织，原则上按照学科专业分组考核，考核分组名单及专家组由学院统一安排。预答辩报告也同时视作博士生最终学术报告，面向所有博士生开放。学位论文预答辩通过者，方可申请论文送审的资格审查。

If the doctoral student completes the first draft of the doctoral dissertation and the first draft is deemed to meet the requirements after review of the supervisor, the doctoral student will make a pre-defense for its doctoral dissertation. The purpose of pre-defense is to further revise and improve the doctoral dissertation. The pre-defense time of doctoral students is not less than 3 months before the date of application for defense. The pre-defense shall be uniformly organized by the college. In principle, it will be assessed in groups of disciplines and majors, and the list of assessment groups and expert groups shall be uniformly arranged by the college. The pre-defense report is also regarded as the final academic report of doctoral students and is open to all doctoral students. The students who pass the pre-defense can apply for the formal defense of dissertation.

博士研究生申请论文送审的资格审查

Qualification review of the submitted dissertation applied by doctoral students

博士论文资格审查由指导教师或博士生指导小组以及学院和研究生院负责进行。博士研究生申请论文送审的基本条件：

The doctoral dissertation qualification examination is conducted by the supervisor or doctoral steering group, and colleges and graduate school. Basic application conditions of doctoral students' dissertation submission are as below:

(1) 修完所规定的学分要求；

(1) To meet the credit requirements;

(2) 完成论文选题报告；

(2) Complete the thesis proposal;

(3) 完成论文中期检查；

(3) To complete the mid-term review of the dissertation;

(4) 满足学术论文发表与科研成果要求；

(4) To meet the requirements of academic thesis publication and scientific research achievements;

(5) 通过学位论文的预答辩；

(5) To pass the pre-defense of the dissertation;

(6) 完成学位论文的撰写并通过学位论文撰写规范审查。

(6) To complete the dissertation and pass the review of the dissertation.

7. 博士学位论文的评审与答辩

7. Review and defense of doctoral dissertation

博士生在通过论文送审的资格审查后即可进行学位论文的送审与答辩，具体要求按照《华北电力大学研究生学位论文评审和答辩的有关规定》、《华北电力大学学位授予工作实施细则》等相关规定执行。毕业生的答辩时间一般安排在 6 月，延期毕业和提前毕业的研究生的答辩时间一般安排在 6 月或 12 月。

Doctoral students can submit their degree theses for examination and make the theses defense after passing the qualification examination for their degree theses, which are required to be specifically carried out in accordance with the relevant provisions of the Relevant Provisions on the Review and Defense of Master Dissertation of North China Electric Power University and the Detailed Rules for Degree Awarding of North China Electric Power University. The defense time for postgraduates is generally arranged in June, while that for postgraduates of postponed graduation and early graduation is generally arranged in June or December.

八、提前毕业条件

VIII. Conditions for Early Graduation

博士研究生学业优秀者可以申请提前 1 年毕业，但必须满足以下条件中的 2 条，其中第（1）条为必备项。

Excellent doctoral students can apply for graduation one year ahead of schedule, but two of the following conditions must be met, of which Article (1) is a prerequisite.

(1) 已按博士生个人培养计划的要求学完全部课程，无不及格课程；

(1) All courses have been completed in accordance with the requirements of the training plan for individual doctoral student, without failing course;

(2) 以第一作者（其导师必须是作者之一）或第二作者（其导师必须是第一作者），华北电力大学为第一发表单位，发表（或网络见刊）权威期刊学术论文不少于 4 篇。

(2) The doctoral student, as the first author (the supervisor must be one of the authors) or the

second author (the supervisor must be the first author), has published 4 authoritative academic journal theses or more (or publish on the Internet) with North China Electric Power University as the first publishing unit.

(3) 以第一作者（其导师必须是作者之一）或第二作者（其导师必须是第一作者），华北电力大学为第一发表单位，发表（或网络见刊）权威期刊学术论文不少于 3 篇；同时作为主研人（排名前三）完成的科研项目获得省部级及以上科研奖励 1 项（以科研院认证目录为准，署名单位为华北电力大学）。

(3) The doctoral student, as the first author (the supervisor must be one of the authors) or the second author (the supervisor must be the first author), has published 3 or more authoritative academic journal theses (or publish on the Internet) with North China Electric Power University as the first publishing unit; at the same time, the scientific research project which are completed by the doctoral student as the lead researcher (the doctoral student is among the top three) has won one award at provincial and ministerial level or above (subject to the catalogue certified by the Scientific Research Institute, with North China Electric Power University as the author affiliation).

附表：水利工程一级学科博士生培养方案（留学生）课程设置表（英语授课）

Schedule: Curriculum (Taught in English) of Training Program for Doctoral Students (International Students) in First-level Discipline of Hydraulic Engineering

课程性质 **Category**	课程属性 **Attribute**	课程名称 **Course name**	学时 **Class hour**	学分 **Credit**	考核方式 **Assessment mode**	开课学期 **Semester of the course**	备注 **Remarks**
学位课 Degree courses ((≥14 学分) (≥14 credits)	公共课 Public courses 10 学分 10 credits	汉语综合(1) Chinese Comprehension (1)	64	4.0	考试 Exam	1	
		中国概况(英文) Introduction to China (English)	32	2.0	考试 Exam	1	
		汉语综合(2) Chinese Comprehension (2)	64	4.0	考试 Exam	2	
	基础理论课 Basic theoretical courses ≥2 学分 ≥2 credits	现代数学基础与方法 Fundamentals and Methods of Modern Mathematics	32	2.0	考试 Exam	1	
		高等泛函分析 Advanced Functional Analysis	32	2.0	考试 Exam	1	
		高等数值分析 Advanced Numerical Analysis	32	2.0	考试 Exam	1	
	专业核心课 Specialized core courses ≥2 学分 ≥2 credits	水资源系统规划与管理 Water Resources System Planning and Management	32	2.0	考试 Exam	1	
		高等水工结构 Advanced Hydraulic Structure	32	2.0	考试 Exam	1	
		水-能源-环境关系 Water-Energy-Environment Relationship	32	2	考试 Exam	1	
必修环节 Required links (≥6 学分) (≥6 credits)		研究生科学道德与学术规范 ScientificEthics and Academic Norms of Postgraduates		1.0	考查 Review of performance		
		研读专业经典名著 Professional Classics Studying		1.0	考查 Review of performance		
		文献综述与选题报告 Literature Review and Thesis Proposal		2.0	考查 Review of performance		
		前沿讲座 Cutting-edge Lectures	8 次 8 times	1.0	考查 Review of performance		
		博士论坛 Doctoral Forum	2 次 2 times	1.0	考查 Review of performance		
任选课		第二外国语 Second Foreign Language	72	2.0			附注一 Note 1

Optional courses		补修课程 Supplementary courses					附注二 Note 2

附注一：一外或母语为非英语专业的要求必修英语二外

Note 1: For those whose first foreign language and native language are not English, they must choose English as the second foreign language.

附表 **2**： 水利工程一级学科权威期刊目录

Schedule 2: Catalogue of Authoritative Journals for Publishing Academic Papers by Doctoral Students in the First-level Discipline of Hydraulic Engineering

序号 **No.**	刊物名称 **Publication name**	**ISSN**	序号 **No.**	刊物名称 **Publication name**	**ISSN**
1	科学通报 Chinese Science Bulletin	0023-074X	28	环境科学 Environmental Science	0250-3301
2	中国科学（A、D、E 辑） Science China (Series A, D, E)	1006- 9232 1006-9267 1006-9275	29	建筑学报 Architectural Journal	0529-1399
3	水利学报 Journal of Hydraulic Engineering	0559-9350	30	水土保持学报 Journal of Soil and Water Conservation	1009-2242
4	力学学报 Chinese Journal of Theoretical and Applied Mechanics	0459-1879	31	土壤学报 Acta Pedologica Sinica	0564-3929
5	工程力学 Engineering Mechanics	1000-4750	32	海洋学报 Acta Oceanologica Sinica	0253-4193
6	建筑结构学报 Journal of Building Structures	1000-6869	33	自然资源学报 Journal of Natural Resources	1000-3037
7	岩土工程学报 Chinese Journal of Geotechnical Engineering	1000-4548	34	地震学报 Acta Seismologica Sinica	0253-3782
8	土木工程学报 China Civil Engineering Journal	1000-131X	35	矿物学报 Acta Mineralogica Sinica	1000-4734
9	岩土力学与工程学报 Chinese Journal of Rock Mechanics and Engineering	1000-6915	36	空气动力学学报 Acta Aerodynamica Sinica	0258-1825
10	地质学报 Acta Geologica Sinica	0001-5717	37	管理科学学报 Journal of Management Sciences in China	1007-9807
11	岩土力学 Rock and Soil Mechanics		38	系统工程理论与实践 Systems Engineering-Theory & Practice	1000-6788
12	水科学进展 Advances in Water Science	1001-6791	39	管理世界 Management World	1002-5502
13	应用基础与工程科学学报 Journal of Basic Science and Engineering	1005-0930	40	数量经济技术经济研究 The Journal of Quantitative & Technical Economics	1000-3894
14	农业工程学报 Transactions of the Chinese Society of Agricultural Engineering	1002-6819	41	中国软科学 China Soft Science	1005-0566
15	工程科学与技术 Advanced Engineering Sciences	2096-3246	42	中国管理科学 Chinese Journal of Management Science	1003-207X
16	中国环境科学 China Environmental Science	1000-6923	43	系统工程学报 Journal of Systems Engineering	1000-5781
17	电力系统自动化 Automation of Electric Power Systems	1000-1026	44	系统管理学报 Journal of Systems &	1005-2542

				Management	
18	电网技术 Power System Technology	1000-3673	45	管理评论 Management Review	1003-1952
19	工程科学学报 Chinese Journal of Engineering	2095-9389	46	管理工程学报 Journal of Industrial Engineering and Engineering Management	1004-6062
20	中国电机工程学报 Proceedings of the CSEE	0258-8013	47	南开管理评论 Nankai Business Review	1008-3448
21	地理学报 Acta Geographica Sinica	0375-5444	48	公共管理学报 Journal of Public Management	1672-6162
22	地球物理学报 Chinese Journal of Geophysics	0001-5733	49	管理科学 Journal of Management Science	1672-0334
23	振动工程学报 Journal of Vibration Engineering	1004-4523	50	预测 Forecasting	1003-5192
24	机械工程学报 Journal of Mechanical Engineering	0577-6686	51	运筹与管理 Operations Research and Management Science	1007-3221
25	水力发电学报 Journal of Hydroelectric Engineering	1003-1243	52	中国工业经济 China Industrial Economics	1006-480X
26	固体力学学报 Chinese Journal of Solid Mechanics	0254-7805	53	农业经济问题 Issues in Agricultural Economy	1000-6389
27	灌溉排水学报 Journal of Irrigation and Drainage	1672-3317			
备注 Remarks	SCI、EI 收录的其他本领域相关期刊 Other related journals in the field included in SCI and EI				

附注二：对非本学科入学的博士生，应补学由导师指定的本学科主干硕士课程

Note 2: For the doctoral student who was not in this discipline when enrolled, he/she should make up for the main courses of this discipline in master stage designated by the supervisor.