华北电力大学（留学生）英语授课

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

应用经济学一级学科硕士研究生培养方案

Master Degree Program in Applied Economics

（学科代码：0202　　授予经济学硕士学位）

一、学科简介

I. Brief Introduction to the Discipline

应用经济学，作为华北电力大学经济与管理学院的重点一级学科，具有鲜明的电力与能源特色。自获批以来，本学科在学科方向凝练、队伍建设、科学研究、人才培养和平台建设等方面，均取得了一定的成绩。

Applied economics, as a key first-level discipline in the School of Economics and Management of North China Electric Power University, has distinct characteristics of electric power and energy.Since the approval, the discipline has made certain achievements in the aspects of discipline orientation simplification, team building, scientific research, talent training and platform construction.

近年来，学科承担了包括国家自然科学基金、国家社科基金、教育部人文社科基金以及北京市人文社科基金等多项国家级或省部级课题，以及多项企业横向课题的研究工作；平均每年在能源经济、产业经济、金融等领域的一流国际、国内学术期刊上发表 SSCI、SCI、CSSCI、EI 等高水平学术论文五十余篇，论文质量名列前茅，在国内外获得较大的学术反响与一致好评。

In recent years, the discipline has undertaken a number of national or provincial projects including the National Natural Science Foundation of China, the National Social Science Foundation of China, the Humanities and Social Science Foundation of the Ministry of Education and the Humanities and Social Science Foundation of Beijing, as well as a number of horizontal research projects of enterprises.On average, more than 50 high-level academic papers, such as SSCI, SCI, CSSCI and EI, are published in first-class international and domestic academic journals in the fields of energy economy, industrial economy and finance every year. The quality of the papers ranks among the best, and the papers have received great academic response and unanimous praise at home and abroad.

长期以来，本学科致力于解决我国国民经济与社会发展的重大经济问题，尤其是在能源经济、产业经济、统计学、金融学等领域开展了卓有成效的系列研究工作,培养了一大批优秀人才，为我国国民经济与社会发展做出了重要贡献。

For a long time, this subject is committed to solve major economic problems of the national

economic and social development in our country, especially in the energy economy, industrial economy, statistics, finance and other fields to carry out a series of fruitful work, has trained a large number of talented people, for the national economy and social development made great contribution.

二、培养目标

II. Training Objectives

应用经济学硕士学位研究生的培养，以面向解决一国国民经济与社会发展的重大经济问题为目标。具体为：

The cultivation of master degree students in applied economics aims at solving the major economic problems in the national economy and social development of a country.Specific as follows:

1. 能够掌握应用经济学学科的相关基础理论与分析方法，针对现代经济问题进行理论与实证研究。

1. Master the basic theories and analytical methods of applied economics, andconduct theoretical and empirical research on modern economic problems.

2. 能胜任本专业或相近专业的科研与教学工作。具有继续学习、创新、提高的素质与能力。

2. Be competent for the scientific research and teaching work of this major or similar major. Have continuous learning, innovation, improve the quality and ability.

3. 能够在国家各级政府经济管理部门、各类企事业单位尤其是能源企业从事相关研究工作。

3.Be able to engage in relevant research work in economic administrative departments of governments at all levels, various enterprises and institutions, especially energy enterprises.

4. 身心健康。掌握一定程度的汉语，具备包容、认知和适应文化多样性的意识、知识、态度和技能，能够在不同民族、社会和国家之间的相互尊重、理解和团结中发挥作用。

4.Physical and mental health. Master a certain level of Chinese language, have the awareness, knowledge, attitude and skills to tolerate, recognize and adapt to cultural diversity, and be able to play a role in mutual respect, understanding and solidarity between different ethnic groups, societies and countries.

三、学科研究方向

III. Research Direction

应用经济学是经济学的一个重要学科分支，其主要运用理论经济学的相关思想与基本原理，研究国民经济各个部门、各个产业的基本经济活动与经济关系，或针对非经济活动领域的相关经济问题进行研究。应用经济学，作为华北电力大学经济与管理学院的重点一级学科，具有鲜明的电力与能源特色。本学科的研究方向主要包括：基于理论经济学的相关思想与基本原理，在考虑国民经济与社会发展的现实需求基础上，主要针对国民经济与社会发展中的

相关经济问题并重点针对能源经济领域的相关经济问题进行系统研究。

Applied economics is an important branch of economics. It mainly studies the basic economic activities and economic relations of various sectors and industries of the national economy, or studies related economic problems in the field of non-economic activities, by using relevant ideas and basic principles of theoretical economics. Applied economics, as a key first-level discipline in the School of Economics and Management of North China Electric Power University, has distinct characteristics of electric power and energy. The research direction of this discipline mainly includes: based on the relevant thoughts and basic principles of theoretical economics, on the basis of considering the practical needs of national economy and social development, it mainly conducts systematic research on the relevant economic problems in national economy and social development and focuses on the relevant economic problems in the field of energy economy.

主要研究方向包括：

Main research directions:

1．产业组织理论与应用

1.Theory and Application of Industrial Organization

产业组织理论与应用，着眼于产业发展规律、产业组织政策、产业技术政策、 产业发展、产业结构、产业布局等问题的研究，着重探讨电力、铁路、电信、自来水、煤气、公共交通、邮政行业等网络型基础产业管制理论与政策。

The theory and application of industrial organization, focusing on the study of industrial development law, industrial organization policy, industrial technology policy, industrial development, industrial structure, industrial layout and other issues, focuses on the discussion of power, railway, telecommunications, tap water, gas, public transportation, postal industry and other network based basic industry regulation theory and policy.

2．产业经济统计分析

2.Statistical analysis of industrial economy

主要应用统计学和计量经济学方法，采用各种先进的统计和计量经济软件，探索现代统计方法在经济与产业发展中的科学运用；研究建立宏观经济计量模型、能源经济模型、能源金融模型、区域经济模型、产业经济模型、经济结构模型等；着重探讨能源电力、铁路、 电信、自来水、煤气、公共交通、邮政行业等网络型基础产业统计分析问题。

It mainly applies statistics and econometrics methods and adopts various advanced statistics and econometrics software to explore the scientific application of modern statistical methods in economic and industrial development. To study and establish macroeconomic econometric model, energy economic model, energy financial model, regional economic model, industrial economic model, economic structure model, etc. Mainly discusses the statistical analysis of network basic industries such as energy power, railway, telecommunication, water, gas, public transportation and postal service.

3．能源经济

3.Energy economy

本研究方向主要涉及两个方面：一方面是，能源市场、能源价格、能源供给结构与消费结构、能源效率（能源强度）等理论与现实问题。另一方面是，能源产业的低碳转型、新能源电力产业政策、国民经济与社会的低碳化发展机制以及能源、经济、环境的协调发展路径等。

The research direction mainly involves two aspects: on the one hand, theoretical and practical issues such as energy market, energy price, energy supply structure and consumption structure, and energy efficiency (energy intensity). On the other hand, low-carbon transformation of energy industry, new energy and electric power industry policy, low-carbon development mechanism of national economy and society and coordinated development path of energy, economy and environment, etc.

4．货币金融理论与应用

4.Monetary and financial theory and Application

该方向是以货币、资金为研究对象，具体研究个人、机构、政府如何获取、支出以及管理资金。具体包括：货币流通和信用活动以及与之相联系的经济活动；金融发展与经济增长的相互关系；银行、保险、信托等金融机构在资金配置中的作用和关系；金融体系稳定性和金融危机研究；国际贸易与国际金融问题研究。

The direction takes currency and capital as the research objects, and specifically studies how individuals, institutions and governments acquire, spend and manage funds. Specifically including: currency circulation and credit activities as well as related economic activities; The interrelationship between financial development and economic growth; The role and relationship of banking, insurance, trust and other financial institutions in the allocation of funds; Study on financial system stability and financial crisis; Study on international Trade and International Finance

5．能源金融

5．**Energy finance**

该方向主要基于能源金融领域的前沿发展方向与趋势，应用金融学相关理论与方法针对能源及其相关衍生金融产品的进行研究，如：市场结构、产品设计及在能源风险管理中的应用等。

The direction is mainly based on the frontier development direction and trend in the field of energy finance. It applies relevant theories and methods of finance to study energy and its related derivative financial products, such as market structure, product design and application in energy risk management.

四、培养方式

IV. Training Method

1.来华留学硕士生培养一般采取全日制培养方式。

1.The training of master students in China generally takes the mode of full-time training.

2.来华留学硕士生的培养采取导师负责制，课程学习和科学研究可以相互交叉。课程学习实行学分制，要求在申请答辩之前修满所要求的学分。

2.The training of master students in China adopts the tutor responsibility system, and the course study and scientific research can cross each other. The course study implements the credit system and requires the required credits to be completed before the application for defense.

3.采用理论学习与科学研究相结合的方法，使硕士生掌握坚实的基础理论和系统的专业知识，掌握科学研究的基本方法和技能，培养独立分析和解决问题的能力，并注重创新能力的培养。

3.Adopt the method of combining theoretical learning with scientific research, master students can master solid basic theory and systematic professional knowledge, master basic methods and skills of scientific research, cultivate the ability of independent analysis and problem solving, and pay attention to the cultivation of innovation ability.

五、学制与学习年限

V. Educational System and Duration of the Program

学制 3 年，学习年限 2-4 年。

The educational system is 3 years, and the duration of the program is 2-4 years.

六、课程设置与学分

VI. Curriculum and Credit Requirements

课程学习实行学分制，学位课不少于 18 学分,总学分应不少于 31 学分。课程体系如下：

The course study of postgraduates implements credit system.The total credits should be no less than 32 credits, including no less than 22 credits for degree courses. The curriculum framework is as follows:

1．学位课（不少于 18 学分），其中：

1． Degree courses (no less than 22 credits), of which:

（1）公共课：10 学分。

(1) Public courses: 10 credits.

（2）数学基础课或基础理论课：不少于二门课程，不少于 4 学分。

(2) Basic mathematics courses or basic theoretical courses: No less than 2 courses, 4 credits.

（3）学科基础课：不少于 4 学分。

(3) Basic courses of disciplines: No less than 4 credits.

（4）学科专业课：不少于 4 学分。

(4) Specialized courses of disciplines: No less than 4 credits.

学位课程均为考试课程。除马克思主义理论课中的社会实践学分外，学位课必须采用课堂授课的方式进行；学位课应全部在课程学习阶段完成。

All degree courses are examination courses. In addition to the social practice in Marxist theory course, the degree course must be conducted by classroom teaching. Degree courses should be completed entirely at the course stage.

2．必修课程与必修环节（6 学分），其中：

2．Compulsory courses and required links (6 credits), of which:

（1）研究生科学道德与学术规范：1 学分。

(1) Scientific Ethics and Academic Norms for Postgraduates: 1 credit;

（2）专题课程/seminar 课程：1 学分

(2) Program Course/Seminar Course: 1 credit.

专题课程/seminar 课程结合本领域学术前沿和研究生学位论文的选题进行设置，采用教师讲授与研究生研讨相结合的方法进行学习。

Program course/seminar course shall be set up in combination with the academic frontiers in this field and the topic of master dissertation. The courses can be conducted by the combination of professor teaching with postgraduate discussion.

（3）实践环节：1 学分

(3) Practice Links: 1 credit

实践环节包括实验教学、专业生产实践以及教学实践等。在第二、第三学期各院（系）及导师应安排研究生参加实践，如讲授大学本科课程的部分章节，参与指导课程设计、实习、实验、辅导答疑、课堂讨论等教学环节，或结合科研课题到生产单位参加调研或项目研发等实践工作，总工作量应达到 80 学时或 10 个工作日。

The practice links include experimental teaching, professional production practice and teaching practice, etc. In the second and third semesters, schools (departments) and supervisors shall arrange postgraduates to participate in practice. For example, teach some chapters of undergraduate courses, guide curriculum design, take an internship, do experiments, supervise and answer questions, and participate in classroom discussion and other teaching links, or participate in practical work such as research or project research and development in the production unit in combination with scientific research tasks. The total workload shall reach 80 class hours or 10 working days.

学院根据各学科特点和人才培养目标，依托本学科重点实验室、实践教学基地等开设具有特定主题的系列实验课或以实验为主的专题课；或与学科应用技术相关的硬件、软件设计或系统设计；或在本学科重点实验室、实践教学基地等进行工程设计、实验设备安装调试或协助实验室教师指导本科生完成实验教学等实验工作，以提高研究生的科研实践能力。

The school shall set up a series of experimental courses or experiment-based seminars with specific topics according to the characteristics of each discipline and the goal of personnel training and relying on the key laboratories and practical teaching bases of the discipline; or set up hardware and software design or system design related to the applied technologies of the discipline; or carry out engineering design, installation and debugging of experimental equipment in key laboratories and practical teaching bases of this discipline, or assist laboratory teachers to

guide undergraduates to complete experimental teaching, so as to improve the practical ability of postgraduates in scientific research.

（4）学术活动：1 学分，要求硕士生至少参加 6 次学术报告；

(4) Academic Activities: 1 credit, postgraduates are required to participate in at least 6 academic reports.

（5）文献综述与开题报告：1 学分；

(5) Literature Review and Thesis Proposal: 1 credit.

（6）论文中期检查：1 学分。

(6) Mid-term Review of the Thesis: 1 credit.

3．非学位选修课：学生可根据本人情况，可选修其他学科专业课和研究生课程目录上的课程，使总学分不少于 31 学分。

Postgraduates can take specialized courses of other disciplines and courses in the catalog of postgraduate courses according to their own situation, and the total credits shall not be less than 31 credits.

具体课程设置见附表。

For the specific curriculum, please refer to the Schedule.

七、科学研究与学位论文要求

VII. Requirements for Scientific Research and Degree Thesis

科学研究与学位论文工作是研究生培养的重要组成部分，是培养硕士研究生独立思考、勇于创新的精神和从事科学研究或担负专门技术工作能力的重要手段，使研究生的综合业务素质在系统的科学研究或工程实际训练中得到全面提高。

Scientific research and degree thesis are important parts of postgraduate training, and important ways to cultivate postgraduates' independent thinking, innovative spirit and the ability to undertake scientific research or specialized technical work.So that the comprehensive professional quality of graduate students in the system of scientific research or engineering practical training to be comprehensively improved.

1.文献综述与开题报告

1. Literature Review and Thesis Proposal

硕士生入学后应在导师指导下，查阅文献资料，了解学科现状和动态，尽早确定论文方向，完成论文选题。学位论文的选题一般应结合本学科的研究方向和科研项目，鼓励基于国民经济与社会发展的现实需要选择能源经济与能源金融领域的研究性论文。确定学位论文工作的内容和工作量时应全面考虑硕士研究生的知识结构、工作能力和培养年限等方面的特点。

After the enrollment, postgraduates should consult the literature, understand the current situation and trends of the discipline, determine the research direction as soon as possible, and complete the topic selection of the thesis under the guidance of their supervisors. The topic selection of degree thesis should generally be combined with the research direction and scientific

research projects of this discipline, and the selection of applied topics meeting the needs of national economic and social development is encouraged. When determining the content and workload of the degree thesis work, the supervisor should fully consider the knowledge structure, work abilities and training duration of postgraduates.

硕士开题由院系统一组织，一般要求在第二学期期末前完成，开题时间距离答辩日期一般不少于一学年。包括的主要内容：研究背景和意义；研究现状与发展动态；论文的主要研究内容；研究方案及进度安排，预期达到的目标；为完成论文已具备和所需的条件和经费；预计研究过程中可能遇到的困难和问题以及解决的措施；主要参考文献。文献综述与开题报告的基本要求为：字数应在 5000 字以上；阅读的主要参考文献在 50 篇以上且必须有近三年的相关文献，其中，外文文献不少于 25 篇。

The thesis proposal is uniformly organized by the department and generally required to be completed before the end of the second semester, the time for submitting thesis proposal is generally not less than one academic year from the date of defense.The main contents include: research background and significance; Research status and development trend; The main research content of this paper; The research plan and schedule, and the target to be achieved; The conditions and funds available and required for the completion of the thesis; Anticipate the difficulties and problems that may be encountered in the research process and the measures to solve them; Main references. The basic requirements of literature review and thesis proposal are: more than 5000 words; The main references to be read should be more than 50 and must be related to the last three years of literature, of which no less than 25 are in foreign languages.

开题报告在二级学科范围内进行集中、统一地公开答辩，并由以硕士生导师为主体组成的审查小组（3～5 人组成）评审。学位论文开题不合格者，不得进入论文研究，但可以在一个月后重新开题。学位论文研究中途改题者，必须重新开题并通过评审。凡重新开题而未通过评审者，终止对其培养。

The thesis proposal shall be publicly defended in a centralized and unified manner within the scope of the second-level disciplines, and shall be evaluated by the master tutor as the main body of the review group (3 to 5 people). If the dissertation proposal fails, the dissertation research will not be allowed, but the dissertation proposal can be restarted one month later. If the dissertation is changed halfway through the research, the dissertation must be rewritten and passed the evaluation. If a new proposal fails to pass the review, its cultivation shall be terminated.

对文献综述与开题报告工作的具体要求见《华北电力大学硕士研究生必修环节实施细则》。开题报告通过者给予 1 学分。

For the specific requirements of literature review and thesis proposal, please refer to the Detailed Rules for the Implementation of Required Links for Postgraduates in North China Electric Power University.Those who pass the thesis proposal review shall be given 1 credit.

2.论文中期检查

2. Mid-term Review of the Thesis

硕士研究生的学位论文中期检查一般在第四学期末完成，其中申请两年毕业的研究生要求在第四学期的前三周内完成。中期检查的主要内容为：论文工作是否按开题报告预定的内容及进度进行；已完成的研究内容及结果；目前存在的或预期可能会出现的问题；论文按时完成的可能性等。对学位论文工作中期检查的具体要求见《华北电力大学硕士研究生必修环节实施细则》。

The mid-term review of master dissertation is usually completed at the end of the fourth semester, and postgraduates applying for two-year graduation are required to complete it at the first three weeks of the fourth semester. The main contents of the mid-term review include whether the thesis work is consistent with the contents and schedule of the thesis proposal; the completed research contents and results; the existing or expected problems; and the possibility of completing the dissertation on time.For the specific requirements of dissertation work mid-term review, please refer to the Detailed Rules for the Implementation of Required Links for Postgraduates in North China Electric Power University.

论文中期检查通过者给予 1 学分。

Those who pass the mid-term review of the dissertation shall be given 1 credit.

3．学术论文发表与科研成果要求

3.Requirements of academic papers and research achievements

来华留学硕士研究生攻读硕士学位期间，鼓励其公开发表与研究工作相关的学术论文。

During the postgraduate study in China, students are encouraged to publish academic papers related to their research work.

硕士生在学期间应积极参加本学科的学术交流活动、撰写和发表学术论文或研究报告，硕士研究生在论文答辩前必须达到以下条件之一，方可参加学位论文答辩：

During their school period, postgraduates shall actively participate in the academic exchange activities at home and abroad of their disciplines, write and publish academic papers. A postgraduate with master's degree candidate can only participate in the thesis defense after meeting one of the following conditions:

（1）以第一作者身份（如果是第二作者，其导师必须是第一作者）发表一篇及以上北大中文核心期刊或 CSSCI、SSCI、SCI、EI 期刊检索论文。

(1)Publish 1 or more journal search papers in the core journals of Peking University or CSSCI, SSCI, SCI and EI in the name of the first author (or the supervisor as the first author and the graduate student as the second author).

（2）积极参与导师的科研工作，并能基于相关科研工作独立撰写研究报告一篇（2 万字以上）。

(2)Actively participate in the tutor's research work, and independently write a research report (more than 20,000 words) based on relevant research work.

所有申请学位人员，在学期间所发表的与学位论文相关的学术论文，其署名单位必须是华北电力大学。

All academic papers related to degree theses published by degree applicants during their school period must be affiliated with North China Electric Power University.

4.学位论文撰写

4.Degree thesis writing

硕士学位论文是硕士生科学研究工作的全面总结，是描述其研究成果、反映其研究水平的重要学术文献资料，是申请和授予硕士学位的基本依据。学位论文撰写是硕士生培养过程的基本训练之一，必须按照规范认真执行，具体要求见《华北电力大学研究生学位论文撰写规范》。

Master dissertation is a comprehensive summary of postgraduates' scientific research work, is an important academic literature that describes their research results and reflects their research level, and is the basis for applying for and awarding master's degrees. Degree thesis writing is one of the basic training in the training process of postgraduates, which must be carried out conscientiously in accordance with the norms. For specific requirements, please refer to Norms and Examples for the Writing of Postgraduate Dissertation in North China Electric Power University.

5．学位论文评审与答辩

5.Review and defense of degree thesis

学位论文答辩申请一般在硕士研究生入学后的第五学期提出。提前毕业的答辩申请一般在第三学期提出。研究生在申请论文答辩前，必须达到本学科对研究生的学术论文发表与科研成果的基本要求。

The dissertation defense application is generally submitted in the fifth semester after the admission of master students. The defense application for early graduation is generally submitted in the third semester. Before applying for dissertation defense, graduate students must meet the basic requirements of this discipline for their academic paper publication and scientific research achievements.

硕士学位论文的评审与答辩按照《华北电力大学研究生学位论文评审和答辩的有关规定》等进行。

The review and defense of master dissertation shall be carried out in accordance with the Norms and Examples for the Doctoral Dissertation Writing of North China Electric Power University.

八、提前毕业条件

VIII. Conditions for Early Graduation

硕士研究生学业优秀者可以申请 2 年毕业，必须符合以下条件：

Particularly outstanding postgraduates can apply for graduation after 2 years of study on the basis of meeting the following conditions:

（1）硕士生提前完成培养计划中规定的课程学习、论文工作及其它培养环节，可提出进行学位论文答辩的申请，经经济与管理学院批准后，可提前答辩和申请学位。学习年限不得少于 2 年。

（1）Postgraduate who have completed the course study, thesis work and other training links stipulated in the training plan in advance may apply for thesis defense. After being approved by the School of Economics and Management, they can defend and apply for a degree in advance. The duration of program shall not be less than 2 years.

（2）至少在本学科中文核心期刊 CSSCI 检索（扩展版来源期刊除外）上发表 1 篇及以上学术论文（网络见刊或提供录用证明需导师签字）。

Publish 1 or more academic papers (the supervisor's signature is required for papers published online or acceptance certificate) in the CSSCI retrieval of Chinese core journals in this discipline (except extended edition source journals).

（3）由学院安排论文盲审，三份盲审论文的分数均在 85 以上。

（3）3 papers all scored above 85 in the blind review arranged by the school.

附表：应用经济学一级学科学术学位硕士研究生培养方案（留学生）课程设置表（英语授课）

Schedule:Curriculum (Taught in English) of Training Program for Postgraduates (International Student) in First-level Discipline of Applied Economics

类别 Category		课程名称 Course name	学时 Class hour	学分 Credit	考核方式 Assessment mode	开课学期 Semester	备注 Remarks
学位课(不少于18学分)	公共课 Public courses	汉语综合(1) Chinese Comprehension (1)	64	4.0	考试 Exam	1	必修 compulsory
		中国概况(英文) Introduction to China (English)	32	2.0	考试 Exam	1	必修 compulsory
		汉语综合(2) Chinese Comprehension (2)	64	4.0	考试 Exam	2	必修 compulsory
	基础理论课 Basic theoretical courses	应用统计学 Applied Statistics	32	2.0	考试 Exam	1	不少于4学分 No less than 4 credits
		管理运筹学（二） Managerial Operations Research (2)	32	2.0	考试 Exam	1	
		矩阵论 Matrix Theory	32	2.0	考试 Exam	1	
		模糊数学 Fuzzy Mathematics	32	2.0	考试 Exam	1	
	学科基础课 Basic courses of disciplines	中级微观经济学 Intermediate Microeconomics	32	2.0	考试 Exam	1	不少于4学分 No less than 4 credits
		中级宏观经济学 Intermediate Macroeconomics	32	2.0	考试 Exam	2	
		中级计量经济学 Intermediate Econometrics	32	2.0	考试 Exam	2	
		产业组织经济学 Economics of Industrial Organization	24	1.5	考试 Exam	1	
		管制经济学 Economics of Regulation	24	1.5	考试 Exam	2	
		货币金融学 Monetary Finance	32	2.0	考试 Exam	2	
	学科专业课 Specialized courses of disciplines	金融市场 Financial Market	32	2.0	考试 Exam	2	不少于4学分 No less than 4 credits
		项目投融资方法与实务 Methods and Practice of Project Financing	32	2.0	考试 Exam	1	
		产业经济学前沿问题 Frontier Issues of Industrial Economics	24	1.5	考试 Exam	2	
		电力市场理论与实务 Theory and Practice of Electricity Market	24	1.5	考试 Exam	2	
		电力负荷预测方法 Power Load Forecasting Method	24	1.5	考试 Exam	2	

		金融衍生产品 Financial Derivative Products	32	2.0	考试 Exam	2	
		投资学 Theory of Investment	24	1.5	考试 Exam	2	
		现代能源经济学 Modern Energy Economics	24	1.5	考试 Exam	2	
		能源金融 Energy Finance	16	1.0	考试 Exam	1	
		综合评价方法 Comprehensive Evaluation Method	32	2.0	考试 Exam	2	
		能源规划与系统分析 Energy Planning and System Analysis	24	1.5	考试 Exam	2	
必修课程与必修环节 Compulsory courses and required links （5 学分） (5 credits)		专题课程/seminar 课程 Program Course/Seminar Course		1.0	考查 Review of performance	2	
		实践环节（实验、实践） Practice Links (Experiment, Practice)		1.0	考查 Review of performance	答辩前 defense before	
		学术活动 Academic Activities		1.0	考查 Review of performance	答辩前 Defense before	
		文献综述与选题报告 Literature Review and Thesis Proposal		1.0	考查 Review of performance	3	
		论文中期检查 Mid-term Review of the Thesis		1.0	考查 Review of performance	4	
		新制度经济学 New Institutional Economics	24	1.5	考试 Exam	2	
		风险管理理论及方法 Theory and Method of Risk Management	24	1.5	考试 Exam	2	
		能源市场与政策专题 Energy Market and Policy Topics	24	1.5	考试 Exam	1	
		多目标决策理论 Multi-Objective Decision Making Theory	24	1.5	考试 Exam	2	
		高级财务会计理论及实务 Advanced Financial Accounting Theory and Practice	32	2.0	考试 Exam	2	
		电力生产管理 Power Production Management	24	1.5	考试 Exam	2	

	高级财务管理理论与实务 Theory and Practice of Advanced Financial Management	32	2.0	考试 Exam	1	
	可选修其它学科专业课程和“研究生课程目录”上课程 Students can take specialized courses of other disciplines and courses in the catalogue of postgraduate courses.					
补修课 Supplementary courses	微观经济学 Microeconomics			考试 Exam	1	
	宏观经济学 Macroeconomics			考试 Exam	1	
	统计学 Statistics			考试 Exam	1	

注：学科基础课与学科专业课统筹设置，要求两项之和不少于 **10** 学分。

Annotation: Each discipline shall have an overall planning of basic courses and specialized courses, and require that the total credits of the two shall be no less than10 credits.