西安交通大學

XI'AN JIAOTONG UNIVERSITY

Graduate Program for International Students

Graduate School

2020.07

能源与动力工程学院/化学工程与技术学院/人居环境与建筑工程学院

School of Energy and Power Engineering/School of Chemical Engineering and Technology/School of Human Settlements and Civil Engineering

能源动力类国际研究生培养方案

International Graduate Programs in Power and Energy

一、培养目标(Objectives)

博士培养目标：培养德、智、体全面发展，具有高水平综合素质的能源动力领域的高级专门人才。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和教学工作的能力；在领域内能做出创造性的成果；具有实事求是、科学严谨的工作作风及协作、奉献、创新的精神，勇于解决科学技术问题。

Doctoral Programs: The programs aim at cultivating all-around qualities of the doctoral candidates, helping them to achieve both academic and moral excellence. Through the training, doctoral candidates have a firm grasp of basic theories and systematic specialized knowledge, and specialized knowledge, be able to conduct independent scientific research and teaching activities, gain innovative achievements in Nuclear Science and Technology, demonstrate scientific attitude, and strive to resolve sci-tech difficulties in a rigorous and pragmatic way.

硕士培养目标：培养德、智、体全面发展，具有高水平综合素质的本领域高级专门人才。在本领域内，掌握坚实的基础理论和系统的专门知识，熟悉所从事的研究方向的科学技术发展动向；具有从事科学研究工作或独立担负专门技术工作的能力。

Masters Programs: The programs aim at cultivating the all-around qualities of the Masters candidates, helping them to achieve both academic and moral excellence. For Masters graduate students, apart from mastering solid basic theories and systematic and specialized discipline knowledge, they should also be familiar with the science and technology developing trends of the research areas they engage in, and should be able to carry out scientific research independently.

二、研究方向 (Areas of Research)

1. 热能工程 Thermal Energy Engineering
2. 动力机械及工程 Power Machinery and Engineering
3. 流体机械及工程 Fluid Machinery and Engineering
4. 工程热物理 Engineering Thermophysics

5. 制冷及低温工程 Refrigeration and Cryogenics Engineering
6. 后续能源与能源新技术 Sustainable Energy and New Energy Technology
7. 能源环境工程 Energy and Environmental Engineering
8. 航空动力与空间环境工程 Aerospace Power and Space Environmental Engineering
9. 核反应堆物理分析 Nuclear Reactor Physics Analysis
10. 核反应堆热工流体力学 Thermal-fluid Dynamics of Nuclear Reactor
11. 核反应堆安全分析 Nuclear Reactor Safety Analysis
12. 核反应堆动力学与控制 Nuclear Reactor Dynamics & Control
13. 核动力设备故障检测与可靠性分析 Fault Detection and Reliable Analysis of Nuclear Power Equipment
14. 辐射物理与技术 Radiation Physics and Technology
15. 核测井技术 Nuclear Logging Technology
16. 瞬态辐射物理过程诊断 Transient Radiation Physical Process Diagnosis
17. 材料辐射效应 Radiation Effects in Materials and Devices
18. 加速器质谱应用 Application of Accelerator Mass Spectrometry
19. 化学工程与技术 Chemical Engineering and Technology
20. 化工过程机械 Chemical Engineering Machinery
21. 地球与人居环境科学及工程 Earth and Built Environment Science and Engineering

三、学校年限 (Length of Programs)

博士研究生为 3-6 年。

The length of programs is s three to six years for doctoral degrees.

硕士研究生为 2-3 年。

The length of studies is two to three years for Masters degrees

四、培养方式 (Program Overview)

在培养方式上采取以指导教师为主的博士生指导小组集体培养的方式，也可以和其他高校、研究所、或工厂企业联合培养，吸收具有高级职称的人员参加指导。培养过程中，导师应根据本方案的要求并结合博士生个人的特点，制定培养计划，指导博士生的论文选题、文献查阅、调研、科研工作、论文的撰写和答辩。加强学生的自学能力、动手能力、表达能力和写作能力的训练和培养。

The major training mode for doctoral students is tutor-led group supervising system. Joint training with other universities, institutes, factories and enterprises can also be adopted to allow senior experts to participate in the guidance. During the process, based on the requirements of the program and students' personalities, supervisors should make individualized plans and direct doctoral candidates in dissertation writing, literature searching , survey, scientific research and dissertation defense. Supervisors should also help students improve their abilities in independent-study, practical hands-on ability, abilities to express

and write.

五、课程及必修环节(Course Work and Compulsory Activities)

博士生在校期间至少修满 22 学分。课程学习总学分为 12 学分，其中学位课不少于 8 学分；选修课学分为 4 学分，其中化学工程学院的博士生必须选修 2 学分化工学院课程，人居学院的博士生必须选修 2 学分人居学院课程，其余学分在全校全英文课程范围内任选。必修环节 10 学分，包括学术活动（讲座）2 学分、开题报告 2 学分、中期考核 6 学分。新港报告纳入国际留学生选修课，学生听够 20 场讲座后可记 2 学分。

PhD candidates have to get no less than 22 credits during school studies, including 12 credits in total for course studies, among which at least 6 credits for degree courses are required. Elective courses can be selected from the graduate course catalog in university. The total credits for Compulsory Activities are 10, including 2 credits for seminars, 2 credits for opening report on dissertation topic and 6 credits for mid-term assessment. Innovation Harbour Lectures are included in elective courses for international students, 2 credits will be granted after attending 20 Lectures.

硕士生在校期间至少修满 28 学分。课程学习总学分为 24 学分，其中学位课不少于 12 学分；选修课学分为 12 学分，其中所在学院选修课必选 2 学分，其余学分在全校全英文课程范围内任选。必修环节 4 学分，包括学术活动（讲座）1 学分、中期考核 3 学分。新港报告纳入国际留学生选修课，学生听够 20 场讲座后可记 2 学分。

Masters students have to get no less than 28 credits during the school studies, including 24 credits in total for course studies, among which at least 12 credits for degree courses are required. Elective courses can be selected from the graduate course catalog in the university. The total credits for Compulsory Activities are 4, including 1 credit for attending lectures, and 3 credits for mid-term assessment. Innovation Harbour Lectures are included in elective courses for international students, 2 credits will be granted after attending 20 Lectures.

硕士研究生课程设置与要求

Curriculum Structure for Masters Programs in Power and Energy

课程分类 Course Module	**序号 No.**	**课程编号** Course number	**统一编码** Course Code	**课程名称** Course Title	**学分** Credits	**学分要求** Credit Requirements	**备注** Remarks
公共课 Compulsory Courses	1	272003	LITE610112	中国概况 The Outline of China	2.00	4	
	2	272004	LITE610227	综合汉语 Comprehensive Chinese	2.00		
学位课 Degree Courses	1	031002	ENPO700103	数值传热学 Numerical Heat Transfer	3.00	≥8	

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
	2	071001	MATH600807	计算方法（留学生） Computational Method (foreign students)	3.00		
	3	032072	ENPO611203	高等燃烧学 Advanced Combustion Theory	2.00		
	4	032159	ENPO751103	燃烧化学 Combustion Chemistry	2.00		
	5	032160	ENPO75123	现代燃烧科学与能源利用技术 Modern Combustion Science and Energy Utilization Technology	2.00		
	6	072010	EVNG610603	废水生物处理技术 Biological Treatment of Wastewater	2.00		
	7	033738	NUCL640103	核反应堆严重事故分析进展 Advance in Severe Accident Analysis of Nuclear Reactors	2.00		
	8	033751	NUCL640303	加速器真空技术概论 Introduction to Vacuum Technology in Accelerators	2.00		

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
	9	033749	ENPO84023	制冷低温系统的设计与实现 Design and Implementation of Refrigeration and Cryogenic systems	3.00		
	10	032030	NUCL610903	核反应堆热工数值分析 Numerical Analysis of Thermal Hydraulic in Nuclear Reactor	2.00		
	11	223005	EVNG710822	非点源污染 Nonpoint Source pollution	2.00		人居学院学生必选 Required course for students of School of Human Settlements and Civil Engineering
	12	163004	CENG640316	化学反应工程选论 Selected Topics of Chemical Reaction Engineering	2.00		化工学院学生必选 Required course for students of School of Chemical Engineering and Technology

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
选修课 Elective Courses	1			能动学院学生必从能动学院开设课程选 2 学分 Students in School of Energy and Power Engineering should select 2 credits course from that school		≥12	必修 2 学分 2 credits required
	2			化工学院学生必从化工学院开设课程选 2 学分 Students of School of Chemical Engineering and Technology should select 2 credits from the list of courses offered by the school			
	3			人居学院学生必从人居学院开设课程选 2 学分 Students of School of Human Settlements and Civil Engineering should select 2 credits from the list of courses offered by the school			

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
	4			研究生院开出的全部课程 Students can select any course from the list of courses of the Graduate School			任选 10 学分，10 credits from elective courses
必修环节 Compulsory Activities	1	001997	BXHJ600399	学术活动(讲座)(硕) Lectures（Master）	1.00	4	
	2	001983	BXHJ600799	中期考核 Mid - term Assessment	3.00		

博士研究生课程设置与要求

Curriculum Structure for Doctoral Programs in Power and Energy

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
公共课 Compulsory Courses	1	272003	LITE610112	中国概况 The Outline of China	2.00	4	
	2	272004	LITE610227	综合汉语 Comprehensive Chinese	2.00		
学位课 Degree Courses	1	031002	ENPO700103	数值传热学 Numerical Heat Transfer	3.00	≥4	
	2	071001	MATH600807	计算方法（留学生） Computational Method (foreign students)	3.00		

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
	3	032072	ENPO611203	高等燃烧学 Advanced Combustion Theory	2.00		
	4	032159	ENPO751103	燃烧化学 Combustion Chemistry	2.00		
	5	032160	ENPO751203	现代燃烧科学与能源利用技术 Modern Combustion Science and Energy Utilization Technology	2.00		
	6	072010	EVNG610603	废水生物处理技术 Biological Treatment of Wastewater	2.00		
	7	033738	NUCL640103	核反应堆严重事故分析进展 Advance in Severe Accident Analysis of Nuclear Reactors	2.00		
	8	033751	NUCL640303	加速器真空技术概论 Introduction to Vacuum Technology in Accelerators	2.00		

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
	9	033749	ENPO840203	制冷低温系统的设计与实现 Design and Implementation of Refrigeration and Cryogenic systems	3.00		
	10	032030	NUCL610903	核反应堆热工数值分析 Numerical thermal analysis of Nuclear Reactor	2.00		
	11	223005	EVNG710822	非点源污染 Nonpoint Source pollution	2.00		人居学院学生必选 Required course for students of School of Human Settlements and Civil Engineering
	12	163004	G64CEN0316	化学反应工程选论 Selected Topics of Chemical Reaction Engineering	2.00		化工学院学生必选 Required course for students of School of Chemical Engineering and Technology

课程分类 Course Module	**序号 No.**	**课程编号** Course number	**统一编码** Course Code	**课程名称** Course Title	**学分** Credits	**学分要求** Credit Requirements	**备注** Remarks
选修课 Elective Courses	1			能动学院学生必从能动学院开设课程选 2 学分 Students of School of Energy and Power Engineering should select 2 credits from the list of the courses offered by the school		≥4	必修 2 学分 2 credits required
	2			化工学院学生必从化工学院开设课程选 2 学分 Students of School of Chemical Engineering and Technology should select 2 credits from the list of courses offered by the school			
	3			人居学院学生必从人居学院开设课程选 2 学分 Students of			

课程分类 Course Module	序号 No.	课程编号 Course number	统一编码 Course Code	课程名称 Course Title	学分 Credits	学分要求 Credit Requirements	备注 Remarks
				School of Human Settlements and Civil Engineering should select 2 credits from the list of courses offered by the school			
	4			研究生院开出的全部课程 Students can select any course from the list of courses of the Graduate School			任选 2 学分 2 credits fpr elective course
必修环节 Compulsory Activities	1	001999	BXHJ800399	讲座 Lectures	2.00	10	
	2	001994	BXHJ800199	中期考核 Mid - term Assessment	6.00		
	3	001986	BXHJ800499	开题报告 Opening Report on Dissertation Topic	2.00		

六、学位论文(Thesis / Dissertation)

博士学位论文：在指导教师的指导下，通过阅读文献资料，调查实际情况，确定研究课题及课题范围，并应结合教研室的科研任务，发挥导师和博士生的特长，以便做出创新性的成果。

Doctoral Dissertations: Doctoral dissertation should be completed under the guidance of the

supervisor. The research topic and scope need to be identified through literature reading and investigation. Candidates should draw on the strong points of their supervisor and themselves to make innovative achievement in their research field.

博士生应在第二学期开始收集有关论文选题资料及一切准备工作，第二学期末初步确定论文题目，写出学位论文的选题报告，并在教研室会议上宣读，征求意见。应在第三学期初正式确定论文题目，拟定出学位论文工作计划，包括各阶段的主要内容、要求、完成期限等。博士生在科研工作进行过程中，大约一个学期左右，应在各系安排的会议上，作一次阶段性进展报告。

Doctoral students should collect materials for dissertation proposal at the beginning of the second semester, and identify the dissertation topic by the end of the second semester. The dissertation proposal report must be finished and reported at the conference of corresponding Teaching and Research Section for opinion. At the beginning of the third semester, final topic and paper work plan should be decided and worked out, including main contents in different periods, requirements and completion deadlines, etc. During the process of dissertation scientific research, doctoral candidates should present a Progress Report in a meeting organized by the respective department.

硕士学位论文：在指导教师的指导下，由研究生独立完成。论文应有一定的系统性和完整性，有新见解。学位论文时间一般不少于一年。论文选题应在导师的指导下，通过阅读文献、调查研究后确定。

Masters Theses: Masters Theses should be accomplished under the guidance of their supervisor. The thesis, which should be completed within one a year, must be systematic, complete with new insightful conclusions. The topic should be selected with the help of their supervisor and through literature reading and investigation.

学位论文力求文字简明，分析严谨，理论指导和运算正确无误，在答辩阐述论文时，应有实事求是的科学态度。硕士学位论文评阅人为两名。两名评阅人可均需具有高级专业职称，熟悉论文内容的专家，其中一位必须是其他系（所）的。论文如以软件设计或开发为主，评阅人中应有人熟悉软件，并须进行软件验收。在收到评阅人同意答辩时，方可组织答辩。如遇一名论文评阅人不同意，则增聘一名；如遇两名论文评阅人不同意，则不能答辩，可修改论文后重新申请。学位论文应进行评审和答辩，答辩时，硕士生应能恰当地回答与论文有关的问题，包括与论文有关的专业基础理论和有关专门知识的问题。

The thesis / dissertation should be concise, rigorous and accurate in theoretical basis and computation. The oral presentation of the findings should be conducted with a pragmatic scientific attitude. The anonymous review of the thesis /dissertation requires at least two reviewers with senior titles who are familiar with the research area. The third reviewer should come from other institutions. The oral defense can only be conducted with the approval of the reviewers over the quality of the dissertation. If one reviewer disapproves it, another reviewer should be added; if two reviewers reject the paper, the applicants must revise their thesis / dissertation and go through the review process again before taking oral thesis / dissertation defense. When going through the oral defense, candidates are supposed to answer questions related to the thesis / dissertation and demonstrate their mastery of basic specialized theories and knowledge.

七、培养环节时间节点 (Timeline and milestones)

	课程学习 Course Work	开题报告 Dissertation Proposal	中期考核 Mid - term Assessment	预答辩 Pre-oral defense Reporting	论文答辩 Thesis//Dissertation Defense
硕士 Masters programs	第一学年 First academic	第二学期 Second semester	第三学期 Third Semester	第四学期（最后一个学期） Fourth semester（Last semester）	
博士 Doctoral programs			第四学期 Fourth semester	第六学期（最后一个学期） Sixth semester（Last semester）	

八、能源动力类全英文课程目录 (Graduate Course Catalog in Power and Energy)

课程编号 Course Code	课程名称 Course Title	授课教师 Instructor	学分 Credits	是否学位课 Degree Course or Not	开课季节 Season
ENPO700103	数值传热学 Numerical Heat Transfer	陶文铨	3	Y	秋季 Autumn Term
NUCL610903	核反应堆数值分析 Numerical Analysis of Thermal Hydraulic in Nuclear Reactor	秋穗正	2	Y	秋上 TFirst Half of Autumn Term
ENPO610603	非线性动力系统的稳定性、分岔及其数值分析 Stability Bifurcation and Numerical Analysis for the Nonlinear Dynamic Systems	张家忠	2	N	秋下 The Second Half of Autumn Term
ENPO611203	高等燃烧学 Advanced Combustion Theory	汤成龙,姜雪	2	N	春上 The First Half of Spring Term
EVNG710103	环境工程原理 Principles of Environmental Engineering	郑春莉	2	N	春下 The Second Half of Spring Term
ECND810803	环境经济学 Environmental Economics	冯江涛	2	N	春下 The Second Half of Spring Term

课程编号 Course Code	课程名称 Course Title	授课教师 Instructor	学分 Credits	是否学位课 Degree Course or Not	开课季节 Season
EVNG810203	环境工程中的高级氧化技术 Advanced Oxidation Technology in Environmental Engineering	饶永芳	2	N	秋上 The First Half of Autumn Term
ENPO612003	热工与流体基础 Fundamental of Thermodynamics And Heat Transfer	杨卫卫	2	N	春上 The First Half of Spring Term
ENPO240603	流体力学 Fluid Mechanics	孙金菊	2	N	春上 The First Half of Spring Term
ENPO612103	能源战略与能源经济 Energy strategy and Energy economics	王树众, 徐东海	2	N	春下 The Second Half of Spring Term
ENPO060103	电子器件冷却及数据中心制冷技术 Thermal Management and Cooling Technology of Electronic Packages and Data Centers	陈良,侯予	2	N	秋下 The Second Half of Autumn Term
NUCL810603	核燃料材料学基础 Fundamentals of Nuclear Reactor Fuels – A Materials Perspective	恽迪,柳文波	2	N	秋下 The Second Half of Autumn Term
ENPO071003	电力电子设备热管理技术 Thermal management for electronics	余小玲	2	N	春上 The First Half of Spring Term
ENPO811003	生物医学纳米机电系统导论 Introduction to Biomedical Nano-Electromechanical Systems	范士冈	2	N	春下 The Second Half of Spring Term

课程编号 Course Code	课程名称 Course Title	授课教师 Instructor	学分 Credits	是否学位课 Degree Course or Not	开课季节 Season
ENPO810903	燃气轮机冷却 Fundamental Basis and Applications of Advanced Cooling Technology in Gas Turbines	晏鑫,刘钊	2	N	春下 The Second Half of Spring Term
ENPO811103	传递现象 Transport Phenomena	陈一东	2	N	春下 The Second Half of Spring Term
ENPO690103	先进测量技术在能源工程中的应用 Applications of advanced measurement technologies on energy engineering	王珍珍 Yoshihiro Deguchi	2	N	春下 The Second Half of Spring Term
ENPO611803	燃烧与流动光学诊断技术 Optical diagnostics on Combustion and Flow	王金华, 李倩倩	2	N	秋上 The First Half of Autumn Term
ENPO751103	燃烧化学 Combustion Chemistry	张英佳, 魏衍举	2	Y	秋下 The Second Half of Autumn Term
ENPO751203	现代燃烧科学及能源利用技术 Modern Combustion Science and Energy Utilization Technology	王学斌, 熊小鹤	2	Y	秋下 The Second Half of Autumn Term
NUCL810803	中子技术及其应用 Neutron Technology and Its Application	王盛, 王洁	2	N	春下 The Second Half of Spring Term
NUCL810703	核电厂控制系统设计 Control System Design for Nuclear Power Plants	孙培伟, 魏新宇,等	2	N	秋下 The Second Half of Autumn Term

课程编号 Course Code	课程名称 Course Title	授课教师 Instructor	学分 Credits	是否学位课 Degree Course or Not	开课季节 Season
ENPO713003	容积式压缩机 Positive-displacement Compressor	冯健美, 彭学院, 吴华根	2	N	秋下 The Second Half of Autumn Term
ENPO611903	高效低污染能源转化原理 Principle of Efficient Energy Conversion with Low Emissions	刘银河, 王长安	2	N	秋上 The First Half of Autumn Term
ENPO840103	建筑热能动力学及其应用 Thermodynamic Cycles and Applications in Buildings	赖天伟,侯予	2	N	春上 The First Half of Spring Term
ENPO640103	储能系统与技术 Energy Storage System and Technology	孙中国	2	N	秋下 The Second Half of Autumn Term
ENPO640303	气溶胶/纳米颗粒工程 Aerosol/Nanoparticle Engineering	David Y.H.Pei	2	N	春下 The Second Half of Spring Term
ENPO640403	光催化 Photocatalysis	陈玉彬, 刘茂昌	2	N	秋下 The Second Half of Autumn Term
ENPO640503	新能源材料及器件的现代分析测试技术 Modern Analysis and Testing Technology of New-energy Materials and Devices	师进文, 敬登伟	2	N	秋下 The Second Half of Autumn Term
ENPO640603	计算流体动力学基础及其应用 Fundamental of Computational Fluid Dynamics and its Application	雷贤良, 刘向阳	2	N	秋下 The Second Half of Autumn Term

课程编号 Course Code	课程名称 Course Title	授课教师 Instructor	学分 Credits	是否学位课 Degree Course or Not	开课季节 Season
NUCL640103	核反应堆严重事故分析进展 Advance in Severe Accident Analysis of Nuclear Reactors	张斌,李良星	2	Y	春下 The Second Half of Spring Term
ENPO640703	叶轮机械原理与进展 Fundamentals and the recent developments of turbomachinery	李景银	2	N	秋下 The Second Half of Autumn Term
ENPO640803	交通运输替代燃料 Alternative Fuels for Transportation	王金华, 李倩倩	2	N	秋上 The First Half of Autumn Term
ENPO640903	制冷系统仿真技术及应用 Simulation of Refrigeration Systems and Its Applications	鱼剑琳, 钱苏昕	2	N	春下 The Second Half of Spring Term
EVNG640103	高级热化学转化技术 Advanced thermal-chemical technologies	全翠,高宁博	2	N	秋下 The Second Half of Autumn Term
ENPO740103	纳流控学 Nanofluidics	孙成珍	2	N	秋上 The First Half of Autumn Term
ENPO641003	蒸汽发生器热工水力学 Thermal Hydraulics in Steam Generators	王长安	2	N	春下 The Second Half of Spring Term
ENPO740203	喷雾与液滴流体动力学与输运 Fluid Dynamics and Transport of Droplets and	周致富,陈斌	2	N	秋上 The First Half of Autumn

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	Sprays				Term
AASP840103	太阳能利用 Solar Energy Utilization	刘立军,李早阳	2	N	秋下 The Second Half of Autumn Term
ENPO641103	湍流第一课 A First Course in Turbulence	张洋,郭朋华	2	N	秋下 The Second Half of Autumn Term
ENPO641203	生物传热学基本理论与方法 Principle and methods in bio-heat transfer	李东,陈斌	2	N	春下 The Second Half of Spring Term
ENPO840203	制冷低温系统的设计与实现 Design and Implementation of Refrigeration and Cryogenic systems	侯予,黄东,陈良	3	N	春季 Spring Term
NUCL640303	加速器真空技术概论 Introduction to Vacuum Technology in Accelerators	曹良志	2	Y	春上 The First Half of Spring Term
ENPO641303	复杂界面多相流的数值模拟 Numerical Simulation of Multiphase Flow with Complex interface	骆政园	2	N	春下 The Second Half of Spring Term
NUCL740103	先进电子显微镜实验室 Advanced Electron Microscopy Laboratory	臧航	2	N	秋下 The Second Half of Autumn Term
NUCL740203	乏燃料后处理技术 The reprocessing Technology of Spent nuclear fuel	张清民	2	N	春上 The First Half of Spring Term

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NUCL640403	核腐蚀科学与工程 Nuclear Corrosion Science and Engineering	柳文波	2	N	秋上 The First Half of Autumn Term
EVNG610603	废水生物处理技术 Biological Treatment of Wastewater	梁继东	2	Y	春上 The First Half of Spring Term
CENG810216	多相流计算方法 Computational methods for multiphase flow	周强	2.5	N	秋季 Autumn Term
CENG810416	太阳能热利用技术 Solar Thermal Utilization Technologies	孙杰	2	N	秋季 Autumn Term
CENG640216	化工流体计算动力学基础 Fundamentals of Computational Dynamics for Chemical Fluid	王斯民	2	N	春季 Spring Term
CENG640316	化学反应工程选论 Selected Topics of Chemical Reaction Engineering	段培高	2	Y	秋季 Autumn Term
EVNG710822	非点源污染 Nonpoint Source pollution	吴一平	2	Y	春季 Spring Term
EVNG711022	大气气溶胶监测与防治 Atmospheric Aerosol	程燕	2	N	秋季 Autumn Term
EVNG711122	GIS 在环境管理中的应用 GIS for Environmental management	张猛	2	Y	春季 Spring Term
EVNG711222	地理信息系统导论 Geographic Information systems	张猛	2	N	春季 Spring Term
EVNG711322	数理统计与数据分析 Mathematical Statistics and Data Analysis	吴一平	2	N	春季 Spring Term

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EVNG611222	水色遥感原理与应用 Quantitative Remote Sensing	郭伟	2	N	春季 Spring Term
EVNG711522	计算环境流体力学新方法 New Methods in Computational Environmental Fluid Dynamics	张云伟	2	N	春季 Spring Term