



北京航空航天大学
BEIHANG UNIVERSITY

北京航空航天大学
留学研究生课程目录

The Curricula for International Postgraduates

北京航空航天大学国际学院

International School, Beihang University

September, 2015

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Common & Basic Courses

公共基础课

No.	Course Title	中文课程名称	Hours	Credits	Semester
253101	Chinese (level I)	汉语(I)	60	2	Fall & Spring
253101	Chinese (level II)	汉语(II)	60	1	Fall & Spring
253103	Introduction to China	中国概况	18	1	Fall & Spring
253201	Theory of Matrix	矩阵理论	54	3	Spring
253202	Numerical Analysis	数值分析	48	3	Fall & Spring
253203	Differential Equations and Dynamical Systems	微分方程和动力系统	48	3	Spring
253206	Probability and Statistics in Engineering	概率统计(工程)	42	3	Fall
253502	Matlab Programming	Matlab 程序设计	32	2	Fall & Spring
253516	Space Environment, Orbit and Satellite Systems	空间环境、轨道与卫星系统	48	3	Fall
253518	Aerospace Materials and Processes	航空航天材料及工艺	32	2	Fall
253519	Introduction to Modern Manufacturing Technology	现代制造技术概论	32	2	Fall
253522	Finite Element Method in Engineering	有限元法在工程中的应用	48	3	Fall
253523	Introduction to Space Flight	宇航概论	18	1	Spring
253802	Scientific Literature Retrieval	科技文献检索与利用	18	1	Fall & Spring

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School of Material Science and Engineering

材料科学与工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
013301	Materials Testing Methods	材料测试方法	48	3	Spring
013303	New Materials	新材料进展	48	3	Spring
013302	Physical Chemistry	物理化学	48	3	Spring & Fall
013504	Failure Analysis	失效分析	48	3	Spring
013501	Modern Electrochemistry	现代电化学	48	3	Fall & Spring
013502	Advanced Technology of Heat Treatment	先进热处理技术	48	3	Fall & Spring
013503	Physical Metallurgy	物理冶金	48	3	Fall & Spring
013505	Aqueous Corrosion	常温腐蚀	48	3	Fall & Spring
013506	Polymer and Advanced Composite Materials	高分子和先进复合材料	48	3	Fall & Spring

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School of Electronic Information Engineering

电子信息工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
023501	Digital Signal Processing	数字信号处理	52	3	Fall
023502	Fundamentals of Information Theory	信息论	48	3	Spring
023503	Stochastic Process Theory	随机过程理论	52	3	Spring
023504	Modern Digital Communications Technology	现代数字通信技术	48	3	Spring
023505	Computer Communication Networks	计算机通信网络	48	3	Fall
023506	Antenna Theory and Design	天线理论与设计	32	2	Spring
023507	Advanced Electromagnetic Theory	高等电磁场理论	48	3	Fall
023508	Computational Electromagnetics	计算电磁学	48	3	Fall
023509	Microwave Engineering	微波工程	48	3	spring
023510	Electronic Design Automation	电子设计自动化(EDA)	48	3	Spring
023511	Principles of Communications and Communication Networks	通信和通信网络原理	48	3	Spring
023512	Telemetry and Telecontrol Systems	遥测遥控系统	48	3	Spring
023513	Satellite Navigation	卫星导航	36	2	Fall
023524	Engineering Electromagnetic Compatibility	电磁兼容技术基础与应用	48	3	fall

School of Electronic Information Engineering

电子信息工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
023525	Cryptography and Network	密码学与网络安全	48	3	fall
023526	Introduction to Information and Systems Security	信息系统安全概论	32	2	Spring
023527	The signal integrity analysis	信号完整性分析方法	48	3	Fall & Spring
023528	Synthesis Aperture Imaging	光学综合孔径成像	48	3	Fall & Spring
023529	Introduction to Fourier Optics	傅立叶光学引论	64	4	Fall & Spring
023530	Optoelectronic and Photonic	光电子与光子学	48	3	Fall & Spring
023531	Modern Optoelectronics	现代光电子学	48	3	Fall & Spring
023532	Synthetic experiment of electromagnetic field & wireless technology	电磁场与无线技术综合实验	18	1	Fall & Spring
023533	Synthetic experiment of optical fiber communication & signal process	光通信与信号处理综合实验	18	1	Fall & Spring
023535	Coding Theory	编码理论	32	2	fall

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School of Automation Science and Electrical Engineering

自动化科学与电气工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
033502	Theory of Linear System	线性系统理论	40	2	Spring
033503	Optimal Control	最优控制	32	2	Fall
033504	Computer Control System	计算机控制系统	32	2	Spring
033506	Inertial Technology	惯性技术	48	3	Spring
033507	Principle of Guidance	制导原理	36	2	Spring
033508	Optimal Estimation	最优估计	40	2	Spring
033509	Navigation Principle	导航原理	36	2	Fall
033510	System Identification	系统辨识	32	2	Fall
033511	Hydraulic Servo Control System	液压伺服控制	32	2	Fall
033512	Reliability Engineering	可靠性工程	32	2	Spring
033514	Computer Interface	计算机接口	34	2	Spring
033515	Micro Computer Theory and Application	微机原理和应用	32	2	Fall
033516	Hydraulic Transmission and Control	液压传动与控制	32	2	Fall
033521	The Modern Control Strategies Applied to Electro-hydraulic Servo Systems	现代电液伺服系统控制	32	2	Spring
033523	Service Computing	服务计算	32	2	Spring

School of Automation Science and Electrical Engineering

自动化科学与电气工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
033599	Robust Control	鲁棒控制	40	2	Spring

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School of Jet Propulsion

能源与动力工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
043404	Fatigue and Fracture of Material	材料疲劳与断裂	32	2	Fall
043535	Flow Measurement Technics	流动测试技术	48	3	Spring
043407	Advanced Combution	高等燃烧学	48	3	Fall
043544	Heat and mass transfer	传热传质学	48	3	Spring
043301	Viscous Fluid Mechanics	粘性流体力学	48	3	Spring
043545	Fundamentals of Acoustics	声学原理	48	3	Spring
043546	Advanced Combustion Diagnostics	先进燃烧测试技术	32	2	Spring
043547	Aviation fuels	航空燃料学	32	2	Spring
043548	Engineering Thermodynamics	工程热力学	32	2	Spring
043549	Science and Technology of Renewable Energy	新能源理论与技术	32	2	Spring

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School of Aeronautical Science and Engineering

航空宇航科学与工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
053102	Man-Machine System and Flying Qualities	人机系统和飞行品质	32	2	Spring
053103	Flight Performance Analysis	飞机性能分析	32	2	Spring
053104	Modern Control Theory	现代控制理论	48	3	Fall
053106	Helicopter Flight Performance Analysis	直升机飞行性能分析	48	3	Spring &fall
053110	Advanced Structural Dynamics	高等结构动力学	48	3	Fall
053112	Mechanics of Composite Materials	复合材料力学	32	2	Fall
053113	Aircraft Structural Analysis and Design	飞机结构分析与设计	32	2	Fall
053115	Flight Theory and Flight Safety	飞行原理与飞行安全	32	2	Spring
053119	Theory and Design of Aeroelasticity	气动弹性理论与设计	32	2	Spring
053120	Aircraft Aerodynamics	飞行器空气动力学	48	3	Spring
053121	Experimental Fluid Mechanics	实验流体力学	32	2	Spring &fall
053122	Computational Fluid Mechanics	计算流体力学	48	3	Fall
053124	Flight Mechanics	飞行力学	32	2	Fall
053125	An Introduction to Complex Flows	复杂流动引论	36	2	Fall
053126	Hypersonic Aerodynamics	高超音速空气动力学	36	2	Spring

School of Aeronautical Science and Engineering

航空宇航科学与工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
053127	Engineering Thermodynamics	高等工程热力学	32	2	Spring
053136	Environmental Simulation and Test	环境模拟与试验	48	3	Spring
053138	Computational Solid Mechanics	计算固体力学	48	3	fall
053139	Aeronautical Engineering Experiment	航空工程实验	16	1	Spring
053140	Aviation Physiology and Protective Equipment	航空生理学与防护装备	32	2	Fall
053141	Flight Dynamics and Control	飞行动力学与控制	48	3	Fall

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School of Computer Science & Engineering

计算机学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
063301	Software Engineering	软件工程	48	3	Fall
063302	Computer Network	计算机网络	48	3	Fall
063303	Artificial Intelligence & Application	人工智能	32	2	Fall
063304	Computer Vision	计算机视觉	32	2	Spring
063305	Data Mining	数据挖掘	32	2	Fall
063308	Object Oriented Programming(Java)	面向对象程序设计 (Java)	48	3	Fall
063309	Digital Image & Video Processing	数字图像与视频处理	32	2	Fall
063311	Data Structure	数据结构	48	3	Spring
063312	Distributed Operating System	分布式操作系统	48	3	Spring
063313	Computer Network Experimental Course	计算机网络实验	48	3	Spring
063314	Operating System	操作系统	48	3	Fall
063315	Scientific Thesis Writing	科技论文写作	18	1	Spring

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School of Mechanical Engineering and Automation

机械工程及自动化学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
073102	Advanced Manufacturing Technology and Systems	先进制造技术与系统	32	2	Spring & Fall
073102	Advanced Manufacturing Technology and Systems	先进制造技术与系统	32	2	Spring & Fall
073103	Geometrical Product Specification for Digital Manufacturing	数字化制造的产品几何定义规范	32	2	Fall
073104	Intelligent Optimization Computing	智能优化计算	32	2	Fall
073109	Modern Product Design Methodology	现代产品设计方法学	32	2	Spring & Fall
073111	Elasticity and Plasticity	弹塑性力学	32	2	Fall
073114	Fluid Power Transmission & Control	流体传动与控制	32	2	Spring & Fall
073115	Basis of Software Technique	软件技术基础	32		Fall
073118	CAD/CAM	CAD/CAM 技术	32	2	Fall
073121	Nano Fabrication Technology and Theory	微纳米制造技术及理论	32	2	Spring
073123	Robot Theory	机器人学	32	2	Spring
073125	Advanced Principle of Mechanics	高等机械原理	32	2	Spring & Fall
073126	Mechanical Vibration	机械振动学	32	2	Spring
073130	Aircraft Digital Manufacturing Engineering	飞机数字化制造工程	32	2	Fall
073132	Sheet Metal Forming Technology	板料成形技术	32	2	Spring
073137	Pneumatic Hydraulics System	气液压伺服系统	32	2	Spring & Fall

School of Mechanical Engineering and Automation

机械工程及自动化学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
073140	Principle of Computed Tomography	计算机断层层析成像原理	32	2	Spring
073141	Laser Processing	激光加工技术	32	2	Spring
073142	Haptic Human-machine Interaction	触力觉人机交互	32	2	Spring &Fall
073151	NC Programming Experiment	数控加工与测量实验	16	1	Spring
073153	Sheet Forming Comprehensive Experiment	板料成形综合实验	16	1	Spring
073154	Experiments on Computer Graphics	计算机图形学实验	16	1	Fall
073155	Experiments on Basis of Software Technique	软件技术基础实验	16	1	Fall
073156	FPTC Experiment	流体传动与控制实验	16	1	Spring &Fall
073157	Academic Writing & Presentation	科技论文写作与学术交流	16	1	Spring

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School of Economics and Management

经济管理学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
083501	Microeconomics	微观经济理论	32	2	Fall
083504	Corporate Finance	公司财务	32	2	Fall
083505	Marketing Management	营销管理	32	2	Fall
083506	Accounting	会计学	32	2	Fall
083507	International Finance	国际金融学	32	2	Fall
083512	Decision Analysis	决策分析	32	2	Fall
083513	Project Management	项目管理	32	2	Fall
083514	Supply Chain Management	供应链管理	32	2	Fall
083515	Operations Management	运作管理	32	2	Fall
083521	Decision Modeling and Analysis with MS Excel	Excel 决策建模与分析	32	2	Fall
083546	Economics of Electronic Commerce	电子商务经济学	32	2	Fall
083551	Engineering Economy	工程经济学	32	2	Fall
083545	Organizational Behavior	组织行为学	32	2	Fall
083509	Statistics	统计学	32	2	Spring
083510	Macroeconomics	宏观经济学	32	2	Spring

School of Economics and Management

经济管理学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
083511	Operational Research	运筹学	32	2	Spring
083516	Investment	投资学	32	2	spring
083519	Econometrics	计量经济学	32	2	Spring
083524	Modern Heuristic Optimization Theory and Algorithms	现代启发式优化理论与算法	32	2	spring
083530	International Trade	国际贸易学	32	2	Spring
083535	Human Resource Management	人力资源管理	32	2	Spring
083538	Retail Management	零售管理	32	2	Spring
083547	Scientific Thesis Writing	科技论文写作	16	1	Spring
083548	International Economics	国际经济学	32	2	spring
083549	Management Information Systems	管理信息系统	32	2	spring

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School of Humanities and Social Sciences

人文社会科学学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
113001	Public Administration	公共管理理论	48	3	Fall
113002	Qualitative method and the study design	定性方法与研究设计	32	2	Fall
113004	Human Resource Management	人力资源管理	32	2	Fall
113005	Theory of Governance	治理理论	32	2	Fall
113006	Government Public Relation	政府公共关系专题研究	32	2	Fall
113014	Social Security	社会保障前沿专题研究	32	2	Fall
113018	Anti-Corruption and Method	廉政建设专题	32	2	Fall
113003	Quantitative method and model	定量研究方法与建模	32	2	Fall
113026	Comparative Higher Education	比较高等教育	32	2	Fall
113025	Theory of Educational Management	教育管理理论	48	3	Fall
113021	Pedagogic Psychology	教育心理学	32	2	Fall
113022	Principles of Higher Education	高等教育原理	48	3	Fall
113023	Qualitative research method of education	教育的质性研究方法	32	2	Fall
113024	Quantitative Research Method of Education	教育的定量研究方法	32	2	Fall
113025	Theory of Educational Management	教育管理理论	48	3	Fall

School of Humanities and Social Sciences

人文社会科学学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
113026	Comparative Higher Education	比较高等教育	32	2	Fall
113007	Public Policy Analysis	公共政策分析	48	3	Spring
113008	Public Project Administration	公共项目管理专题	32	2	Spring
113011	Non Profit Organization	非营利组织研究	32	2	Spring
113015	Administration Management	当代中国行政管理前沿	32	2	Spring
113016	Environment management and policy	环境治理与政策	32	2	Spring
113017	Social Security System	社会保障制度	32	2	Spring
113027	Educational Media Technology and experiment	教育媒体技术及实验	32	2	Spring
113028	Educational Economics	教育经济学	32	2	Spring

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School of Foreign Languages

外国语学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
123101	An Introduction to Chinese Culture	中国文化概况	32	3	Fall
123102	Chinese Literature in English Translation	中国文学英译选读	32	2	Spring

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School of Transportation Science and Engineering

交通科学与工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
133106	Construction project management (2)	建设项目管理	32	2	Fall
133110	Civil engineering labs (3)	土木工程综合实验	32	2	Fall
133207	GIS-Theory and application (3)	地理信息系统原理与应用	48	3	Fall
133101	Advanced concrete structures (2)	高等混凝土结构	32	2	Fall
133546	Soil Dynamincs	土动力学	32	2	Spring
133507	Structure FEM and its Application	结构有限元法与应用	32	2	Spring
133203	Structural concepts and systems (2)	结构概念和体系	32	2	Spring
133213	Health Monitoring and Rehabilitation of Structures (2)	工程结构健康诊治	32	2	Spring
133208	Durability of concrete materials (1)	高性能混凝土耐久性	16	1	Spring
133102	Advanced Soil Mechanics	高等土力学	32	2	Fall

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School of Astronautics

宇航学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
153101	Conceptual Design of Launch Vehicle and Spacecraft	运载及空间飞行器概念设计	64	4	Spring
153102	Structural Analysis and Optimization	结构分析与优化	50	3	Fall
153104	Practice of MSC Patran/Nastran	Patran/Nastran 软件应用	16	1	Spring
153105	Structural Dynamics	结构动力学	32	2	Spring
153106	Aerodynamics Used in Design of Flight Vehicles	飞行器空气动力学	50	3	Fall
153107	Integrated Navigation System	组合导航系统	48	3	Spring
153108	Modern Control Theory	现代控制理论	48	3	Spring
153110	Fundamentals of Rocket Propulsion	火箭推进基础	48	3	Fall
153111	Combustion Theory	燃烧理论	48	3	Spring
153112	Computational Fluid Dynamics	计算流体力学	48	3	Fall
153117	Introduction of Solid Propellant	固体推进剂概论	48	3	Spring
153122	Pattern Recognition	模式识别	50	3	Spring
153123	Digital Image Processing	数字图像处理	50	3	Spring
153141	Orbital Mechanics	轨道力学	48	3	Fall
153142	Ramjet Theory and Technology	冲压发动机原理及技术	32	2	Fall
153144	Spacecraft Control	航天器控制	48	3	Spring

School of Astronautics

宇航学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
153145	Target Sensing Technology	引信安全性设计思想	20	1	Spring
153146	Target Sensing Technology	探测与识别技术	40	2	Spring
153147	Fuze Design	引信设计	40	3	Spring

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School of Instrumentation Science and Opto-Electronics

仪器科学与光电工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
173504	Theory of Inertial Navigation	惯性导航原理	48	3	Fall
173520	Sensors Technology & Applications	传感器技术与应用	48	3	Fall
173524	Design and Fabrication of Microelectromechanical Devices	微机电器件的设计与制造	36	2	Spring
173518	Modern control Theory and Application	现代控制理论及应用	48	3	Spring
173523	Integrated Navigation Technology	组合导航技术	32	2	Fall
173521	Computer Application Technology in MEMS	计算机辅助设计技术在微机电系统中的应用	48	3	Fall
173525	Image Processing and Analysis	图像处理与分析	48	3	Spring

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School of Physics and Nuclear Energy Engineering

物理科学与核能工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
191503	Computational Physics	计算物理	32	2	Fall
191508	Integrated Optics	集成光学	32	2	Fall
191808	Soft Matter Physics	软物质物理	32	2	Fall
191509	Nanoscale Physics (MS)	纳米物理学 (硕)	32	2	Spring
191309	Nanoscale Physics (PHD)	纳米物理学 (博)	48	3	Spring
191307	Nuclear theory (MS)	原子核理论 (硕)	48	3	Spring
191312	Nuclear theory (PHD)	原子核理论 (博)	48	3	Spring
191302	Advanced Statistical Physics	高等统计物理	48	3	Spring
191802	Introduction to semiconductor physics	半导体物理导论	32	2	Spring

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School of Chemistry and Environment

化学与环境工程学院

No.	Course Title	中文课程名称	Hours	Credits	Semester
273401	Nanoscience and Nanotechnology	纳米科学与技术	48	3	Spring
273402	Preparation and Characterization of Nanomaterials	纳米材料的制备及表征	48	3	Spring
273403	Environmental Chemistry	环境化学	48	3	Spring
273405	Nanomaterials Chemistry	纳米材料化学	48		fall
273406	Surface and Interface Chemistry	表面与界面化学	48	3	Spring
273407	Supramolecular Chemistry	超分子化学	48	3	fall
273408	Environmental Biotechnology	环境生物技术	48	3	fall
273411	Waste Treatment and Recycling	固体废物处理处置与资源化工程	48	3	fall

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